CITY COUNCIL

WORKSHOP AND REGULAR MEETING AGENDA

June 1, 2022
7:00 PM
202 Railroad Avenue, Rifle, CO

5:30 PM - Workshop Meeting

Discussion and Review

a. Review Council Chamber Plans

b. Present Design for Council Chamber Improvements, and Schematic Design Estimate, for Rifle City Hall Phase 3 Improvements.

7:00 PM - Regular Meeting

1. Call to Order

2. Pledge of Allegiance

3. Roll Call

4. Public Comment *(maximum time permitted for Public Comment is 3 minutes per person)

5. Consent Agenda

5.a. Consider Minutes of the May 18, 2022, Regular Meeting

5.b. Consider Liquor License Renewal for TEDREX, Inc. dba Choice Liquors

5.c. Consider Final Plan and PUD Request for Last Chance Commons

5.c.i. Consider Request for Community Service PUD Zoning for the Last Chance Commons Subdivision - Ordinance No. 9, Series of 2022 - 2nd Reading

5.c.ii. Consider Request for Final Plan Approval for Last Chance Commons - Ordinance No. 10, Series of 2022 - 2nd Reading and Subdivision Improvements Agreement

5.d. Consider Amending Section 10-3-50 of the City of Rifle Municipal Code Setting Forth the Definition of the Municipal Offense of Harassment - Ordinance No. 11, Series of 2022 - 2nd Reading

5.e. Designating Persons Authorized to Sign Checks - Resolution No. 6, Series of 2022

6. Action, if any, on Workshop Items

7. Regular Agenda

7.a. Consider Awarding Contract to Frontier Paving, Inc. for the Construction Services on the 2022 Street and Asphalt Improvements

7.b. Consider Awarding Contract to Andale Construction for Construction Services on the 2022 High-Density Mineral Bond Coatings

7.c. Consider Awarding Contract to Armor Proseal for Construction Services on the 2022 Crack Sealing

7.d. Consider Awarding Contract to Velocity Constructors Inc., for Construction Services on the Rifle Airport 0.5MG Water Tank

8. Administrative Reports

8.a. Report to City Manager

9. Comments from Mayor and Council

10. Adjournment

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #a.

Agenda Item Name:
Review Council Chamber Plans

Presenter:
Tom Whitmore, Parks & Recreation Director

Item Description:
Review plans for updates to the Council chambers and provide feedback.

Recommended Action:
Requesting Council direction

Fiscal Impact:
Changes to the proposed plan may affect pricing.

Operational Impact:
None

Prior Board Motions:
None

Background Information:
Phase 3 construction planning for City Hall officially began on March 17, 2022.

Executive Summary:
Phase 3 construction planning for City Hall officially began on March 17, 2022. Part of the plan is to make modifications to the Council chambers. Phil Vaughn and Jeff Johnson will present information on updates that are planned for the chambers and they will request feedback from the Council.

Notification Requirements:
None

Prepared By:
Tommy Klein, City Manager

Attachments:
None

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #b.

Agenda Item Name:
Present Design for Council Chamber Improvements, and Schematic Design Estimate, for Rifle City Hall Phase 3 Improvements.

Presenter:
Tom Whitmore, Parks & Recreation Director

Item Description:
Council will receive information regarding Council Chamber upgrade plans, and will discuss the Schematic Design cost estimate for City Hall, Phase 3 improvements.
A number of project team members will be present. Phil Vaughan of Phil Vaughan Construction Management Inc., Jeff Johnson of Jeff Johnson Architectural, design team members, and team members from PNCI, will be present to discuss related aspects of the project.

Recommended Action:
No action required at this time.

Fiscal Impact:
The overall project will require a sizable investment from the City Capital Fund. This SD estimate is preliminary to the final Guaranteed Maximum Price (GMP) submittal, which will be presented to City Council for consideration in September. At that time, if approved, the GMP will be included in budget planning for 2023-2024.

Operational Impact:
Development of this estimate is a milestone in the project design and planning process. This is a planned update point in the project timeline.

Prior Board Motions:
Approval of construction management and design team services expenditures and pre-construction services for PNCI.

Background Information:
The project team has been working through design and pre-construction services and is at the point in the process to update Council with Schematic Design cost estimates.

Executive Summary:
None

Notification Requirements:

None

Prepared By:
Tom Whitmore, Parks & Recreation Director

Attachments:
1. PNCI Project Team Rifle City Hall
2. 2203C-Chamber Improvements-05-23-22
3. 2022-05-17-Rifle City Hall Ph 3- SD Budget UPDATED-Cover sheet
4. 2022-05-23-Rifle City Hall Ph 3-Master Project Budget-Lease spaces

Rifle City Hall Phase 3 Team Profile

Frank P. DeSantis

President

Tyler Schreiner

Director

Kimberly Rowe Stark

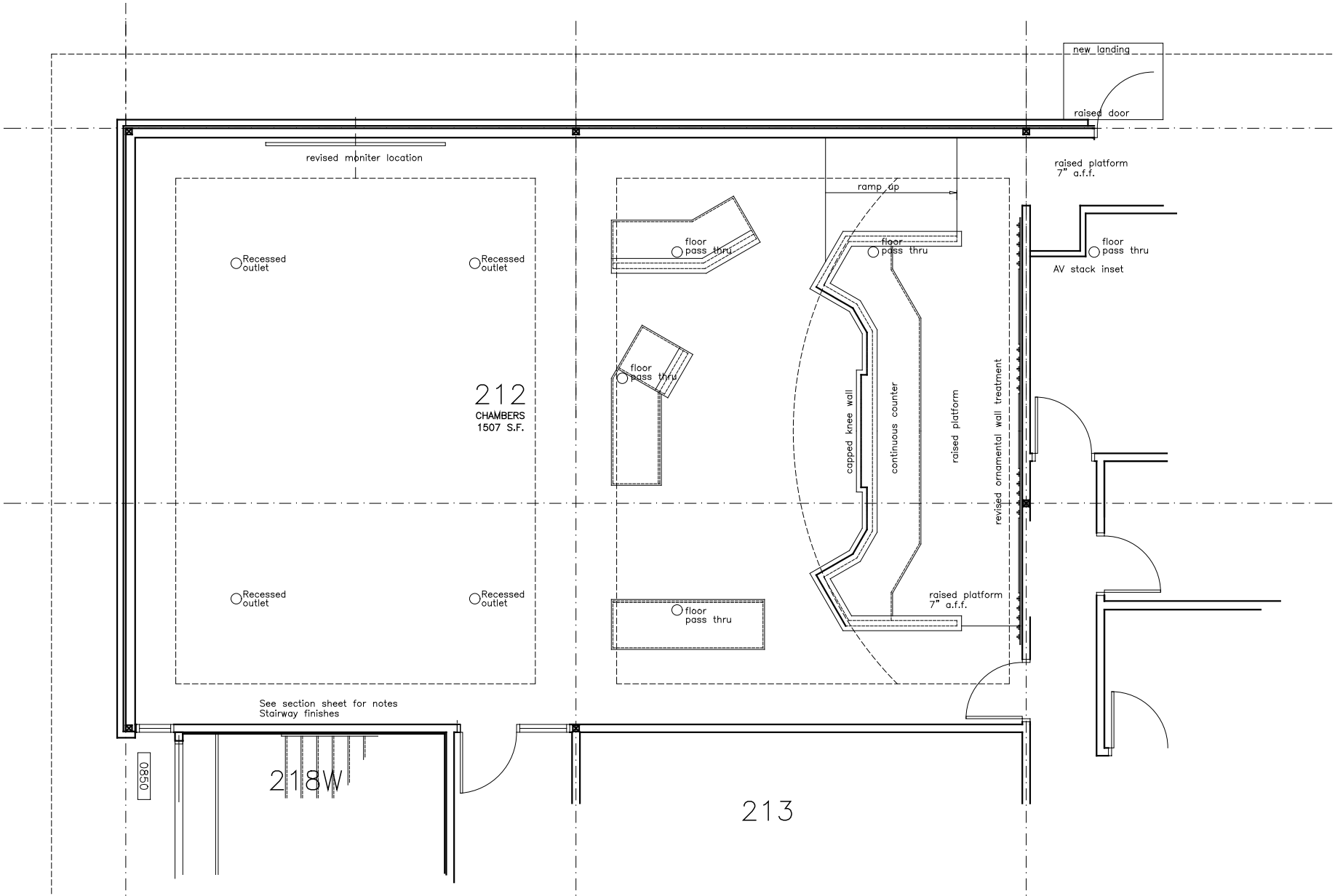
Project Manager

Rick Roberts

Estimator

Eric Anderson

Project Superintendent

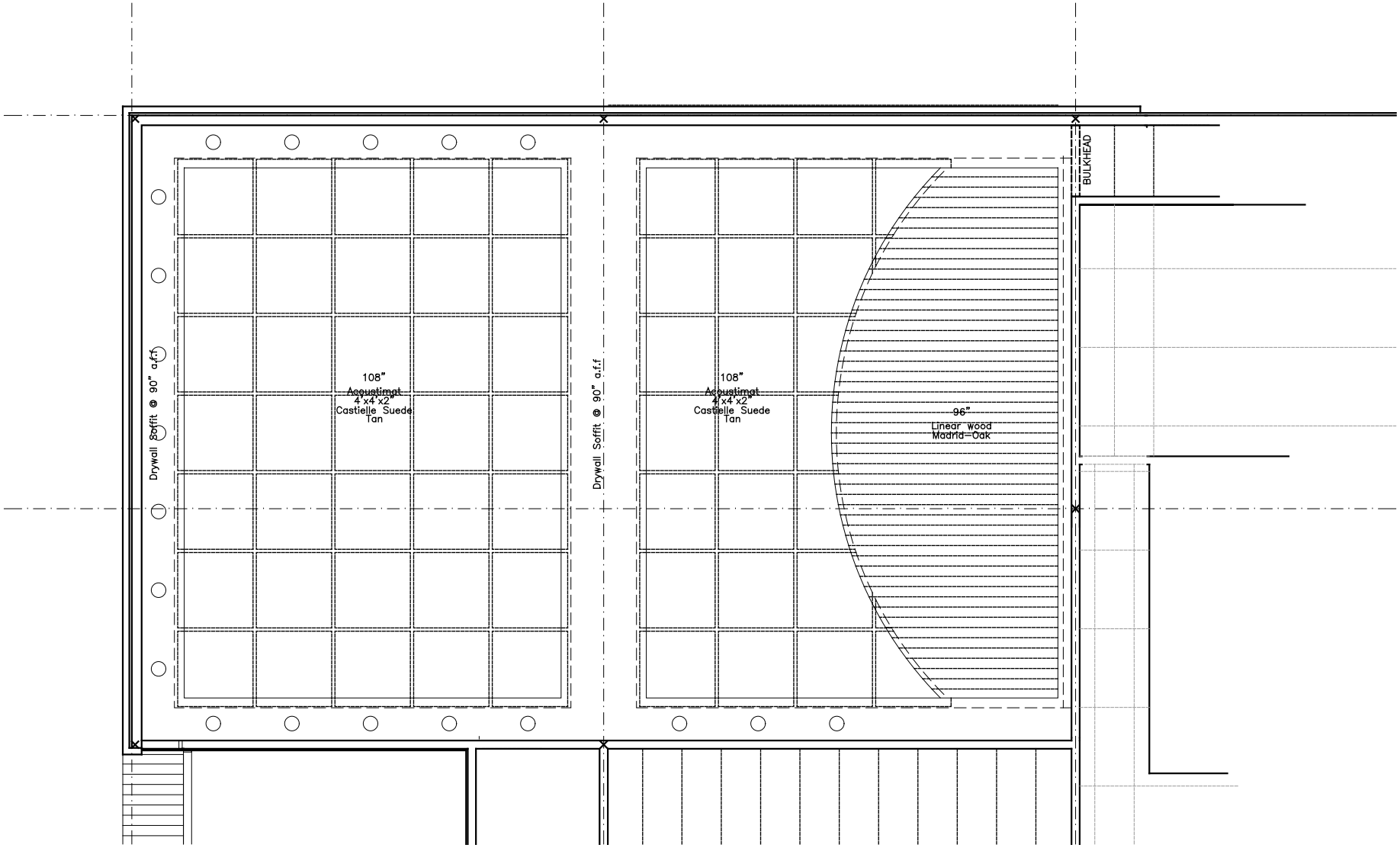


05-23-22

Jeff Johnson

Rifle City Hall Phase 3
Council Chambers Improvements
Floor Plan

0 3 6 9 15

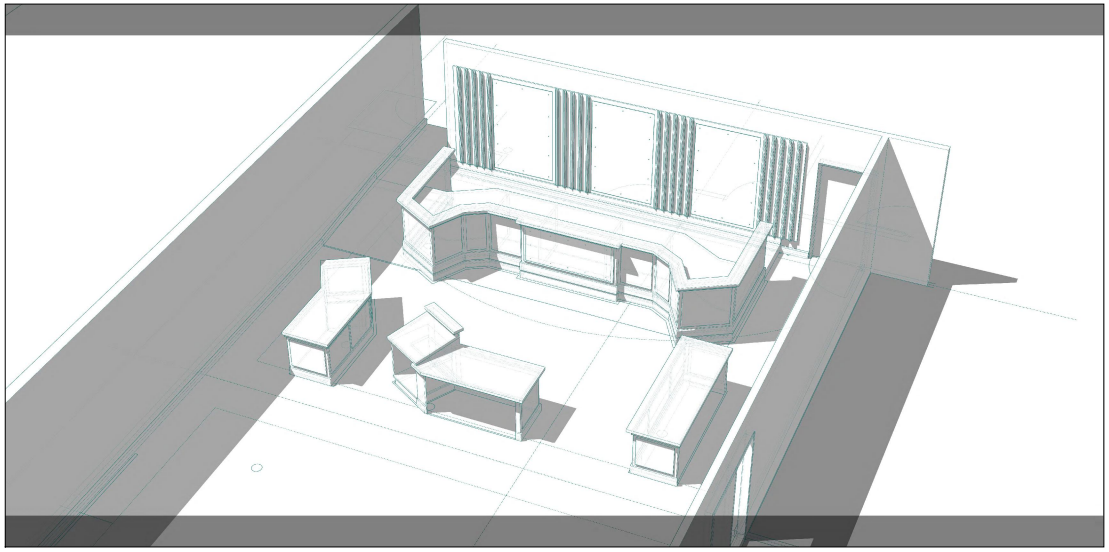


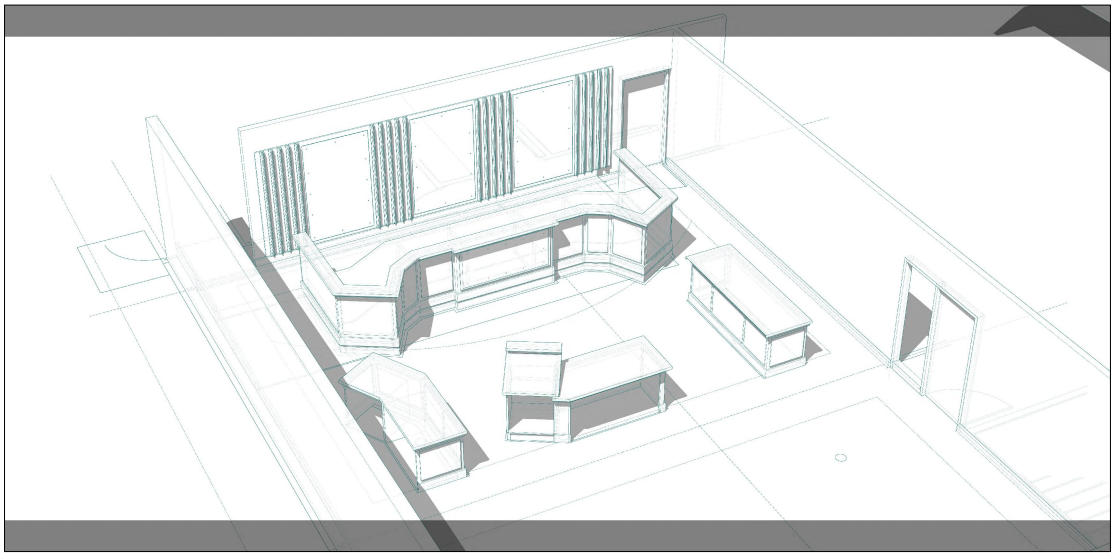
05-23-22

Jeff Johnson

Rifle City Hall Phase 3
Council Chambers Improvements
Reflected Ceiling Plan

0 3 6 9 15

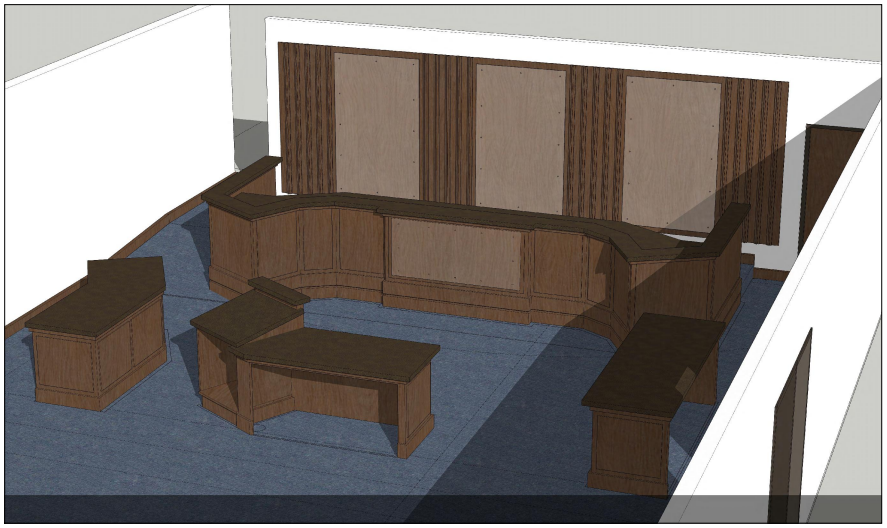


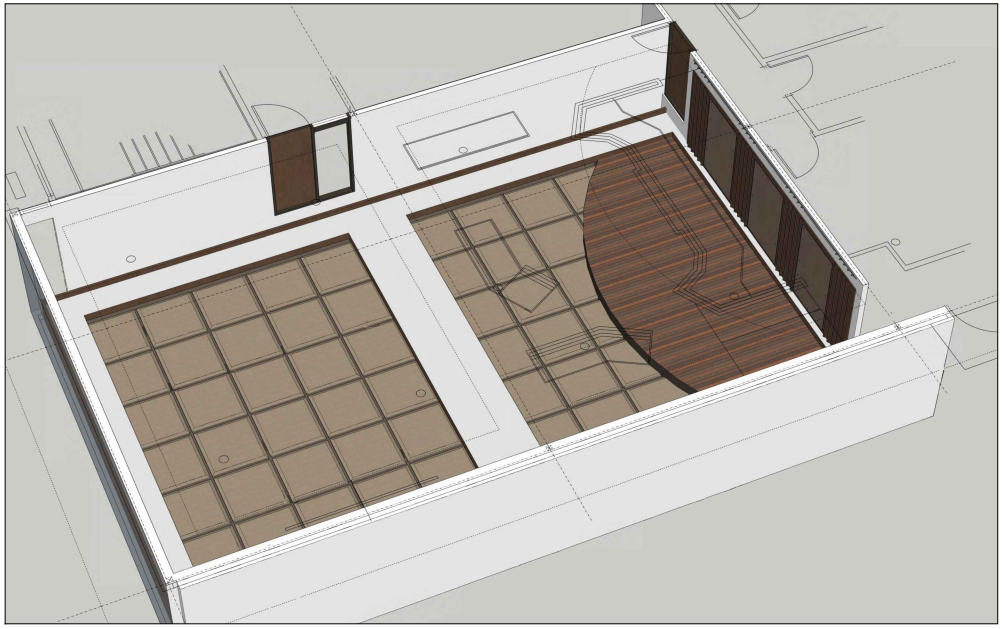


05-23-22

Jeff Johnson

Rifle City Hall Phase 3
Council Chambers Improvements
Casework Isometrics





05-23-22

Jeff Johnson

Rifle City Hall Phase 3
Council Chambers Improvements
Color Renderings

Rifle City Hall Ph 3 Renovation Project- SD Budget

PNCi Construction Inc.

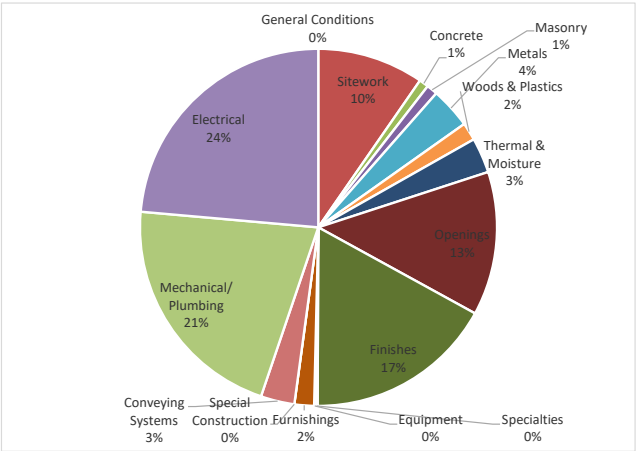
Cover Sheet

Project No.: 22056
Address: 202 Railroad Ave
Rifle, CO 81650

Date: 5/17/2022 **Update**
Estimator: TDS/RR
Project Duration: 15 mo +/-

Division	Description	Labor Totals	Materials Totals	Subcontractor Totals	Total
Div 1	General Conditions	$0.00	$0.00	$0.00	$0.00
Div 2	Sitework	$183,436.35	$46,186.20	$143,243.10	$372,865.65
Div 3	Concrete	$3,340.00	$2,485.00	$27,850.00	$33,675.00
Div 4	Masonry	$0.00	$0.00	$37,940.00	$37,940.00
Div 5	Metals	$30,960.00	$45,600.00	$67,163.00	$143,723.00
Div 6	Woods & Plastics	$10,460.00	$8,805.00	$43,185.00	$62,450.00
Div 7	Thermal & Moisture	$0.00	$0.00	$122,980.00	$122,980.00
Div 8	Openings	$43,550.00	$294,800.00	$165,990.00	$504,340.00
Div 9	Finishes	$283,361.05	$251,491.35	$126,408.40	$661,260.80
Div 10	Specialties	$1,550.00	$5,236.00	$0.00	$6,786.00
Div 11	Equipment	$300.00	$5,500.00	$0.00	$5,800.00
Div 12	Furnishings	$0.00	$0.00	$68,085.00	$68,085.00
Div 13	Special Construction	$0.00	$0.00	$0.00	$0.00
Div 14	Conveying Systems	$504.00	$750.00	$117,000.00	$118,254.00
Div 15	Mechanical/ Plumbing	$0.00	$0.00	$821,388.00	$821,388.00
Div 16	Electrical	$0.00	$0.00	$913,984.00	$913,984.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
		Labor	Materials	Vendor / Sub	Total
Subtotals		**$557,461.40**	**$660,853.55**	**$2,655,216.50**	**$3,873,531.45**
					$3,873,531.45

Summary Direct Cost of Work



Excludes Temp Office Provisions

Direct Cost of the Work	$3,873,531.45
Insurances 1.2%	$46,482.38
Bonding Premium 1.5%	$58,102.97
Subtotal	$3,978,116.80
General Condtitions 9%	$358,030.51
Subtotal	$4,336,147.31
Contractor's Fee 4%	$173,445.89
Total:	**$4,509,593.20**
Bidding Contingency 6%	$270,575.59
Construction Contingency 6%	$286,810.13
Project Total:	**$5,066,978.92**

City of Rifle- Rifle City Hall Phase 3- Master Project Budget- Temp City Hall- Lease spaces

Date: 5/23/22

PROJECT COSTS:				**Notes:**	
			Value		
Rehabilitation					
	Phase 3	CM/GC Renovation- PNCI Const. Schematic Design estimate dated 5/17/22	5,066,978.92	Original CM/GC Contract Sum: without temp City Hall	
	Phase 3	Access Control/IT	20,000.00	$5,066,978.92	
	Phase 3	Lease Space A-10 personnel. 5/16/22 Jeff Johnson Architectural dwgs. $3,000/mnth x 21 months.	63,000.00		
	Phase 3	Lease Space B- $4,137/mnth x 21 months. 15 personnel. 5/22/22 Jeff Johnson Architectural dwgs	86,877.00		
	Phase 3	Lease Space B- Tenant Improvements remodel budget- PNCI Const. dated 5/23/22	56,908.27		
	Phase 3	Lease Space C- 12 personnel. Estimated	90,000.00		
		Owner Hard Cost Contingency/Inflation Contingency	1,266,744.73	City of Rifle- 25% contingency	
		Furniture, Fixtures, & Equipment- Temp office spaces	40,000.00		
		Furniture, Fixtures, & Equipment- Newly renovated City Hall	75,000.00		
		Building Permits/ Plan Review Fee	0.00	City of Rifle	
		Subtotal	$6,765,508.92		
Professional Fees					
	Phase 3- Design- Construction Manager as Adviser Architect, Mechanical Engineer, Electrical Engineer. Does not include construction administration.		226,070.00		
		Construction Administration	261,850.00		
		Construction Accounting	0.00		
		Other (Specify)			
		Other (Specify)			
		Other (Specify)			
		Subtotal	$487,920.00		
Construction Interim Costs					
		Hazard & Liability Insurance	0.00		
		Builder's Risk Insurance	0.00		
		Perform. & Pymt Bonds	0.00		
		Construction Interest	0.00		
		Constr. Origination Fees	0.00		
		Tap Fees (Water/Sewer)	0.00		
		Impact fees	0.00		
		Materials Testing/Special Inspection	32,000.00	City of Rifle	
		Power and Telecom Provider fees	0.00		
		3rd Party/Bank Inspections/Admin			
		Title & Recording			
		Construction Lender Legal Fees			
		Natural Gas and Telecommunications relocation costs	0.00		
		Other (Specify)			
		Other (Specify)			
		Subtotal	$32,000.00		
Permanent Financing					
		Bond Premium			
		Bond Issue 30-day lag reserve			
		Bond Cost of Issuance			
		Discount Points			
		Perm Loan Origination	0.00		
		Title & Recording			
		Legal Fees			
		Prepaid MIP			
		Forward Rate Lock			
		Conversion Fee			
		Other (Specify)			
		Other (Specify)			
		Other (Specify)			
		Subtotal	$0.00		
Soft Costs					
		Geotechnical/Soils Study	0.00		
		Environmental Study (Phase 1, Phase 2, Lead, Asbestos, etc.)			
		Other Studies (traffic, wetlands, etc.)			
		Green Certification Fees (LEED Certification, etc.)			
		Relocation			
		Soft Cost/Professional Fees Contingency	51,992.00	City of Rifle- 10% contingency	
		Other (Specify)			
		Other (Specify)			
		Other (Specify)			
		Subtotal	$51,992.00		
		TOTAL PROJECT COSTS:	$7,337,420.92		

Add Alternates Chosen for Inclusion in the project			**Amount**	**Total with 5% Contingency**
1	0		$0.00	$0.00
2	0		$0.00	$0.00
3	0		$0.00	$0.00
4			$0.00	$0.00
5			$0.00	$0.00
Total Add Alternates included in the project				$0.00
TOTAL PROJECT COSTS WITH ADD ALTERNATES CHOSEN FOR INCLUSION		**$7,337,420.92**		

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #5.a.

Agenda Item Name:
Consider Minutes of the May 18, 2022, Regular Meeting

Presenter:
Misty Williams, City Clerk

Item Description:
Consider Minutes of the May 18, 2022, Regular Meeting

Recommended Action:
Move to approve the minutes of the May 18, 2022, City Council Regular Meeting

Fiscal Impact:
N/A

Operational Impact:
N/A

Prior Board Motions:
N/A

Background Information:
N/A

Executive Summary:
Minutes of the May 18, 2022, Regular Meeting

Notification Requirements:
N/A

Prepared By:
Misty Williams, City Clerk

Attachments:
1. 05.18.2022 DRAFT Minutes

RIFLE CITY COUNCIL

REGULAR MEETING

May 18, 2022
7:00 p.m.
202 Railroad Avenue, Rifle, CO

CALL TO ORDER & ROLL CALL
A regular meeting of the Rifle City Council was called to order at 7:00 p.m. by Mayor Ed Green.

Present at Roll Call:
Mayor Ed Green, Councilor Alicia Gresley, Councilor Joe Carpenter, Councilor Chris Bornholdt and Councilor Sean Strode.

Councilor Sean Strode motioned to excuse Councilor Clint Hostettler and Councilor Brian Condie; seconded by Councilor Alicia Gresley.

Roll Call: Yes - Joe Carpenter, Alicia Gresley, Ed Green, Chris Bornholdt and Sean Strode.
No - None.

Others Present:
City Manager Tommy Klein, City Clerk Misty Williams, City Attorney Jim Neu, Rifle Community Television (RCTV) Salvador Tovar-Guzman, Parks and Recreation Director Tom Whitmore, Planning Director Patrick Waller, Court Administrator/PIO Kathy Pototsky, Chief of Police Debra Funston, Police Department Office Manager Robin Steffen, Police Department Officers, John Kuersten, Brian Stowell, Fernando Argiro, Terry Davis and Harold Martinez.

SWEARING-IN of NEW POLICE OFFICERS

A. Swearing-In of New Officers David Adkins, Nathan Roos and Ethan Turner
B. Present Proclamation Recognizing National Police Week

Chief of Police Debra Funston introduced new officers David Adkins, Nathan Roos and Ethan Turner. City Clerk Misty Williams administered Oath of Office to new police officers Adkins, Roos and Turner.

Councilor Alicia Gresley moved to approve Proclamation for National Police Week; seconded by Councilor Sean Strode.
Roll Call: Yes - Ed Green, Alicia Gresley, Joe Carpenter, Chris Bornholdt and Sean Strode.
No – None.

PUBLIC COMMENT
No public comment was heard.

CONSENT AGENDA – CONSIDER APPROVING THE FOLLOWING ITEMS:

A. Consider Minutes of the May 4, 2022, Regular Meeting

B. Consider Buy Back of Cemetery Space

Councilor Sean Strode moved to approve Consent Agenda Items A and B; seconded by Councilor Joe Carpenter.
Roll Call: Yes - Sean Strode, Joe Carpenter, Chris Bornholdt, Alicia Gresley and Ed Green.
No – None.

PRESENTATION

Receive Presentation from Eco Dwelling LLC. Regarding Rifle Area Development Proposals

Planning Director Patrick Waller, John Kuersten and Eco Dwelling LLC. Owner Fernando Argiro presented the Rifle Area Development Proposal. 14th Street Marketplace and 301 West 16th Street have been purchase by a developer that is looking to subdivide both properties and install, small locally manufactured housing units built by Eco Dwelling LLC. The applicant plans to construct the approximately 900 square foot units in the factory and then install the units on 3,000 square foot lots in the proposed parcels. Construction of the unit can also be done out in the lot location, as an option. Eco Dwelling LLC is implementing a combination of green and modern technology, creating building materials to provide a more eco-friendly housing option to the community. The developer's preliminary plan includes the sale of the unit along with the lot. The applicant has not submitted an official development application.

Council addressed potential concerns and provided feedback.

PUBLIC HEARING

Consider Final Plan and PUD Request for Last Chance Commons

Planning Director Patrick Waller and Applicant Brian Stowell presented Final Plan and PUD Request for Last Chance Commons. Applicant Stowell requests approval of Final Plan and PUD zoning for a development of twelve units on 1.911 acres, currently zoned Community Service (CS). The property consists of Lots 15 and 16 of the Grand River Plaza Subdivision located south of Airport Road, west of Grand River Hospital and east of Colorado River Fire Rescue Station #43 on the south side of Last Chance Drive. The proposal includes a request for a PUD that allows smaller setbacks for certain lots and a decrease in the minimum lot size. Applicant met notification requirements. Planning Commission approved the Preliminary Plan for the project and recommended approval of the PUD Application to City Council. The conditions of the preliminary plan have been met.

Staff suggests the following conditions for Final Plan/PUD approval:

1. All representations made by the Applicant in the application and during public hearings shall be conditions of approval, unless specifically altered by City Council.
2. The applicant shall resolve any outstanding referral comments as part of the submittal of final construction plans to the satisfaction of the City of Rifle.
3. Building elevations shall vary for the lots fronting Last Chance Drive. The same building elevation shall not be repeated for four consecutive lots.
4. The applicant shall provide required GIS information before the Final Plat is recorded.
5. The applicant shall update the final plat as required by Planning Department and the Rifle Municipal Code, prior to the recording of the Final Plat.
6. The applicant shall provide a finalized set of Covenants for the property that demonstrates the homeowners association will maintain the access driveways, prior to recording the Final Plat.

Consider Request for Community Service PUD Zoning for the Last Chance Commons Subdivision – Ordinance No. 9, Series of 2022 – 1st Reading

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO, REZONING LOTS 15 AND 16, GRAND RIVER PLAZA, FROM COMMUNITY SERVICE BUSINESS DISTRICT (CS) ZONE DISTRICT TO COMMUNITY SERVICE BUSINESS DISTRICT PLANNED UNIT DEVELOPMENT (CS-PUD).

Councilor Alicia Gresley moved to approve Ordinance No. 9 Series of 2022, on first reading as presented, and order it to be published as required by Charter; seconded by Councilor Sean Strode.
Roll Call: Yes - Ed Green, Sean Strode, Alicia Gresley, Chris Bornholdt and Joe Carpenter.
No - None.

Consider Request for Final Plan Approval for Last Chance Commons – Ordinance No. 10, Series of 2022 – 1st Reading and Subdivision Improvements Agreement

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO, APPROVING A FINAL SUBDIVISION PLAN AND FINAL SUBDIVISION PLAT FOR LAST CHANCE COMMONS

Councilor Alicia Gresley moved to approve Ordinance No. 10 Series of 2022, on first reading as presented, and order it to be published as required by Charter; seconded by Council Sean Strode.
Roll Call: Yes - Chris Bornholdt, Ed Green, Alicia Gresley, Joe Carpenter, and Sean Strode.
No – None.

REGULAR AGENDA

Consider Amending Section 10-3-50 of the City of Rifle Municipal Code Setting Forth the Definition of the Municipal Offense of Harassment – Ordinance No. 11, Series of 2022 – 1st Reading

Court Administrator/PIO Kathy Pototsky presented the request to consider amending Section 10-3-50 of the Rifle Municipal Code. The amendment is to clarify language in the harassment code as well as update the term "telephone" to "phone" to assure that our definitions are keeping up with technological developments.

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO AMENDING SECTION 10-3-50 OF THE CITY OF RIFLE MUNICIPAL CODE SETTING FORTH THE DEFINITION OF THE MUNICIPAL OFFENSE OF HARASSMENT

Councilor Sean Strode moved to approve Ordinance No. 11 Series of 2022, on first reading as presented, and order it to be published as required by Charter; seconded by Council Chris Bornholdt.
Roll Call: Yes - Alicia Gresley, Sean Strode, Chris Bornholdt, Ed Green and Joe Carpenter.
No – None.

Consider Increasing Rose Hill Cemetery Fees

Parks and Recreation Director Tom Whitmore presented updated fee schedule for Rose Hill Cemetery, based on the April 20th, 2022 council meeting discussion. Increasing cemetery fees will help offset increasing operational and future expansion expenses. Legal staff will draft the related ordinance with guidelines to clarify qualifications for local and non-local status. Staff recommends cemetery fees to be increased as presented and authorize City Attorney to draft changes to the related ordinance.

Council provided direction to City Staff to move forward on creating ordinance with presented Rose Hill Cemetery fee schedule to update the Rifle Municipal Code. Legislative action will take place.

Report to City Manager
Reports were heard from City Manager Tommy Klein.

Comments from Mayor and Council
Comments were heard from Councilor Chris Bornholdt, Council Alicia Gresley, Councilor Sean Strode and Mayor Ed Green.

Adjournment
Meeting adjourned at 8:49 p.m.

Misty Williams City Clerk	Ed Green Mayor

Agenda Item #5.b.

Agenda Item Name:
Consider Liquor License Renewal for TEDREX, Inc. dba Choice Liquors

Presenter:
Misty Williams, City Clerk

Item Description:
Consider Liquor License Renewal for TEDREX, Inc. dba Choice Liquors

Recommended Action:
Move to approve the Liquor License Renewal for TEDREX, Inc. dba Choice Liquors

Fiscal Impact:
None

Operational Impact:
None

Prior Board Motions:
None

Background Information:
TEDREX, Inc. dba Choice Liquors located at 680 Wapiti Court, Rifle, CO has submitted a Liquor Store Liquor License Renewal Application.

The application is complete and the appropriate fees have been paid.

Executive Summary:
None

Notification Requirements:
None

Prepared By:
Misty Williams, City Clerk

Attachments:
1. 2022 REDACTED Choice Liquors Renewal Application

DR 8400 (03/10/22)
COLORADO DEPARTMENT OF REVENUE
Liquor Enforcement Division

Submit to Local Licensing Authority

CHOICE LIQUORS
680 WAPITI CT
Rifle CO 81650

RECEIVED
MAY 20 2022
City Clerk
City of Rifle

Fees Due	
Renewal Fee	277.50
Storage Permit $100 X _____	$
Sidewalk Service Area $75.00	$
Additional Optional Premise Hotel & Restaurant $100 X _____	$
Related Facility - Campus Liquor Complex $160.00 per facility	$
Amount Due/Paid	$

Make check payable to: Colorado Department of Revenue. The State may convert your check to a one-time electronic banking transaction. Your bank account may be debited as early as the same day received by the State. If converted, your check will not be returned. If your check is rejected due to insufficient or uncollected funds, the Department may collect the payment amount directly from your banking account electronically.

Retail Liquor or Fermented Malt Beverage License Renewal Application

Please verify & update all information below **Return to city or county licensing authority by due date**

Licensee Name TEDREX INC		Doing Business As Name (DBA) CHOICE LIQUORS	
Liquor License # 07-71438-0000	License Type Liquor Store (city)		
Sales Tax License Number 07714380000	Expiration Date 07/20/2022	Due Date 06/05/2022	
Business Address 680 WAPITI CT Rifle CO 81650			Phone Number 9709483420
Mailing Address 680 WAPITI CT Rifle CO 81650		Email	
Operating Manager	Date of Birth	Home Address	Phone Number

1. Do you have legal possession of the premises at the street address above? ☒ Yes ☐ No
   Are the premises owned or rented? ☐ Owned ☒ Rented* *If rented, expiration date of lease April 2023

2. Are you renewing a storage permit, additional optional premises, sidewalk service area, or related facility? If yes, please see the table in upper right hand corner and include all fees due. ☐ Yes ☒ No

3a. Are you renewing a takeout and/or delivery permit? (Note: must hold a qualifying license type and be authorized for takeout and/or delivery license privileges) ☐ Yes ☒ No

3b. If so, which are you renewing? ☐ Delivery ☐ Takeout ☐ Both Takeout and Delivery

4a. Since the date of filing of the last application, has the applicant, including its manager, partners, officer, directors, stockholders, members (LLC), managing members (LLC), or any other person with a 10% or greater financial interest in the applicant, been found in final order of a tax agency to be delinquent in the payment of any state or local taxes, penalties, or interest related to a business? ☐ Yes ☒ No

4b. Since the date of filing of the last application, has the applicant, including its manager, partners, officer, directors, stockholders, members (LLC), managing members (LLC), or any other person with a 10% or greater financial interest in the applicant failed to pay any fees or surcharges imposed pursuant to section 44-3-503, C.R.S.? ☐ Yes ☒ No

5. Since the date of filing of the last application, has there been any change in financial interest (new notes, loans, owners, etc.) or organizational structure (addition or deletion of officers, directors, managing members or general partners)? If yes, explain in detail and attach a listing of all liquor businesses in which these new lenders, owners (other than licensed financial institutions), officers, directors, managing members, or general partners are materially interested. ☐ Yes ☒ No

6. Since the date of filing of the last application, has the applicant or any of its agents, owners, managers, partners or lenders (other than licensed financial institutions) been convicted of a crime? If yes, attach a detailed explanation. ☐ Yes ☒ No

7. Since the date of filing of the last application, has the applicant or any of its agents, owners, managers, partners or lenders (other than licensed financial institutions) been denied an alcohol beverage license, had an alcohol beverage license suspended or revoked, or had interest in any entity that had an alcohol beverage license denied, suspended or revoked? If yes, attach a detailed explanation. ☐ Yes ☒ No

8. Does the applicant or any of its agents, owners, managers, partners or lenders (other than licensed financial institutions) have a direct or indirect interest in any other Colorado liquor license, including loans to or from any licensee or interest in a loan to any licensee? If yes, attach a detailed explanation. ☐ Yes ☒ No

Affirmation & Consent
I declare under penalty of perjury in the second degree that this application and all attachments are true, correct and complete to the best of my knowledge.

Type or Print Name of Applicant/Authorized Agent of Business	Title
Julie Wernsman	Manager
Signature: Julie Wernsman	Date: 5-19-22

Report & Approval of City or County Licensing Authority
The foregoing application has been examined and the premises, business conducted and character of the applicant are satisfactory, and we do hereby report that such license, if granted, will comply with the provisions of Title 44, Articles 4 and 3, C.R.S., and Liquor Rules.
Therefore this application is approved.

Local Licensing Authority For		Date
Signature	Title	Attest

DR 8495 (07/23/19)
COLORADO DEPARTMENT OF REVENUE
Liquor Enforcement Division

Tax Check Authorization, Waiver, and Request to Release Information

I, Julie Wernsman am signing this Tax Check Authorization, Waiver and Request to Release Information (hereinafter "Waiver") on behalf of Ted Rex Inc dba Choice Liquors (the "Applicant/Licensee") to permit the Colorado Department of Revenue and any other state or local taxing authority to release information and documentation that may otherwise be confidential, as provided below. If I am signing this Waiver for someone other than myself, including on behalf of a business entity, I certify that I have the authority to execute this Waiver on behalf of the Applicant/Licensee.

The Executive Director of the Colorado Department of Revenue is the State Licensing Authority, and oversees the Colorado Liquor Enforcement Division as his or her agents, clerks, and employees. The information and documentation obtained pursuant to this Waiver may be used in connection with the Applicant/Licensee's liquor license application and ongoing licensure by the state and local licensing authorities. The Colorado Liquor Code, section 44-3-101. et seq. ("Liquor Code"), and the Colorado Liquor Rules, 1 CCR 203-2 ("Liquor Rules"), require compliance with certain tax obligations, and set forth the investigative, disciplinary and licensure actions the state and local licensing authorities may take for violations of the Liquor Code and Liquor Rules, including failure to meet tax reporting and payment obligations.

The Waiver is made pursuant to section 39-21-113(4), C.R.S., and any other law, regulation, resolution or ordinance concerning the confidentiality of tax information, or any document, report or return filed in connection with state or local taxes. This Waiver shall be valid until the expiration or revocation of a license, or until both the state and local licensing authorities take final action to approve or deny any application(s) for the renewal of the license, whichever is later. Applicant/Licensee agrees to execute a new waiver for each subsequent licensing period in connection with the renewal of any license, if requested.

By signing below, Applicant/Licensee requests that the Colorado Department of Revenue and any other state or local taxing authority or agency in the possession of tax documents or information, release information and documentation to the Colorado Liquor Enforcement Division, and is duly authorized employees, to act as the Applicant's/Licensee's duly authorized representative under section 39-21-113(4), C.R.S., solely to allow the state and local licensing authorities, and their duly authorized employees, to investigate compliance with the Liquor Code and Liquor Rules. Applicant/Licensee authorizes the state and local licensing authorities, their duly authorized employees, and their legal representatives, to use the information and documentation obtained using this Waiver in any administrative or judicial action regarding the application or license.

Name (Individual/Business)		Social Security Number/Tax Identification Number
Ted Rex Inc dba Choice Liquors		07-71438
Address: 680 Wapiti Ct		
City: Rifle	State: CO	Zip: 81650
Home Phone Number: 970 618 1013	Business/Work Phone Number: 970 625 8480	
Printed name of person signing on behalf of the Applicant/Licensee: Julie Wernsman		
Applicant/Licensee's Signature (Signature authorizing the disclosure of confidential tax information): [signature]		Date signed: 5-19-22

Privacy Act Statement

Providing your Social Security Number is voluntary and no right, benefit or privilege provided by law will be denied as a result of refusal to disclose it. § 7 of Privacy Act, 5 USCS § 552a (note).

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #5.c.

Agenda Item Name:
Consider Final Plan and PUD Request for Last Chance Commons

Presenter:
Patrick Waller, Planning Director

Item Description:
The applicant requests approval of a Final Plan and PUD application to subdivide two parcels into 12 single-family residential lots. The proposal includes a request for a PUD that allows smaller setbacks for certain lots and a decrease in the minimum lot size.

Recommended Action:
Recommended motions are included for the specific PUD and Final Plan agenda items.

Fiscal Impact:
Minimal

Operational Impact:
Minimal additional utility maintenance will be required by the City. The applicant will be responsible for maintenance of the driveway accesses.

Prior Board Motions:
None

Background Information:
The applicant requests approval of a Final Plan and PUD Zoning for a development consisting of twelve units on 1.9-acres, currently zoned Community Service (CS).

Executive Summary:
The proposal consists of twelve units on 1.9 acres. The applicant is proposing to use three separate accesses from Last Chance Drive. The proposed lot sizes vary from 9,727 square feet to 5,798 square feet. The PUD requests smaller minimum lot sizes (the zone district requires 6,000 square feet) and decreased Front Yard setbacks on lots 7-12 (the applicant is requesting 5 feet instead of 15 feet).

Notification Requirements:
The applicant was required to mail, publish, and post the property for the PUD request as required by the Rifle Municipal Code.

Prepared By:

Misty Williams, City Clerk

Attachments:

1. Last Chance Commons - Staff Memo & Exhibits

DEPARTMENT OF PLANNING & DEVELOPMENT
202 Railroad Avenue, Rifle, CO 81650
Phone: 970-665-6490

MEMORANDUM

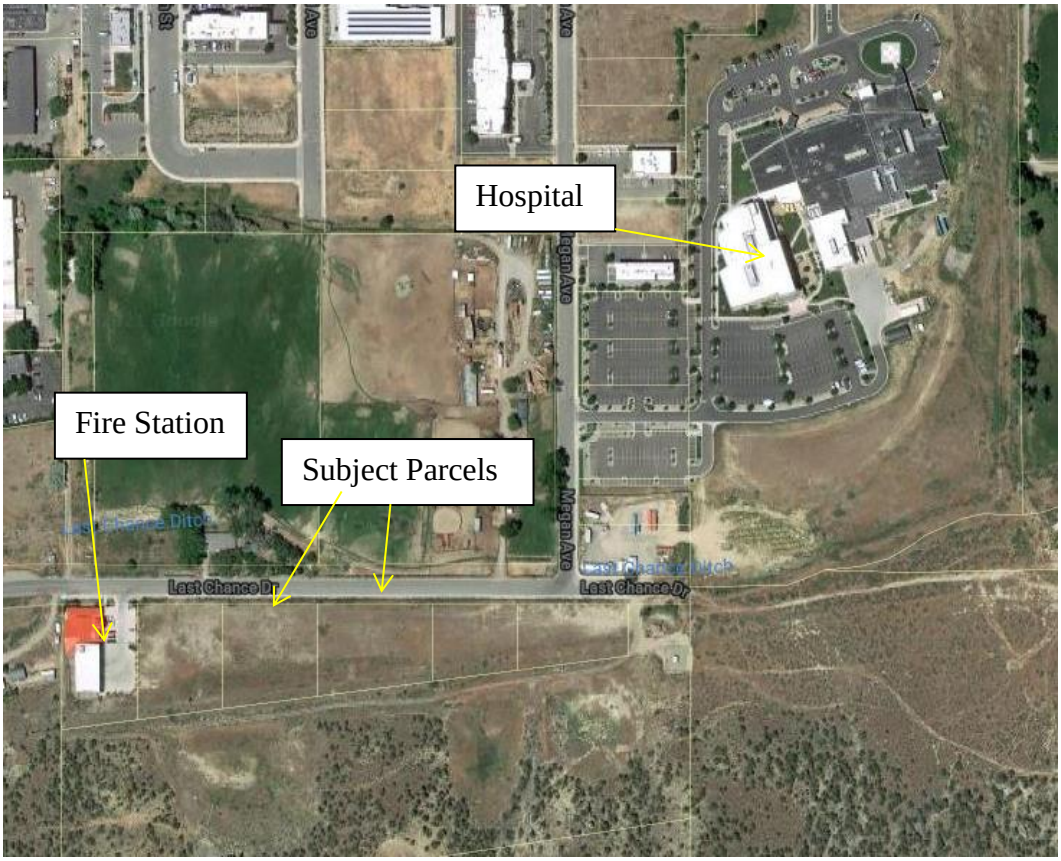
TO: City of Rifle City Council
FROM: Patrick Waller, Planning Director
DATE: May 18, 2022
SUBJECT: Last Chance Commons – Final Plan and PUD Request
ADDRESS: 493 and 525 Last Chance Drive
CASE #: Final Plan 2022-013
APPLICANT: BEA, Inc. - Property Owner – Brian Stowell, Rep

I. REQUEST AND SUMMMARY

The applicant requests approval of a Final Plan and PUD zoning for a development consisting of twelve units on 1.911-acres, currently zoned Community Service (CS).

II. PROJECT MAP

The property consists of Lots 15 and 16 of the Grand River Plaza Subdivision, located south of Airport Road, west of Grand River Hospital and east of Colorado River Fire Rescue Station #43 on the south side of Last Chance Drive.



III. ZONING, LAND USE, AND COMPREHENSIVE PLAN

The Final Plat for Grand River Plaza was recorded in November 2003. It consists of 18 lots ranging from ½ to 1 ½ acres. The majority of the lots along Megan Avenue are part of the Grand River Hospital campus. Along Last Chance Drive, the only developed lot is the fire station on the far west side of the subdivision. Staff has recently received a proposal to develop a warehouse building (which is a use by-right) on the lot between the fire station and the proposed Last Chance Commons development.

The current zoning on the property is Community Service (CS). The applicant is requesting approval of a PUD for relief from the following R.M.C. provisions:

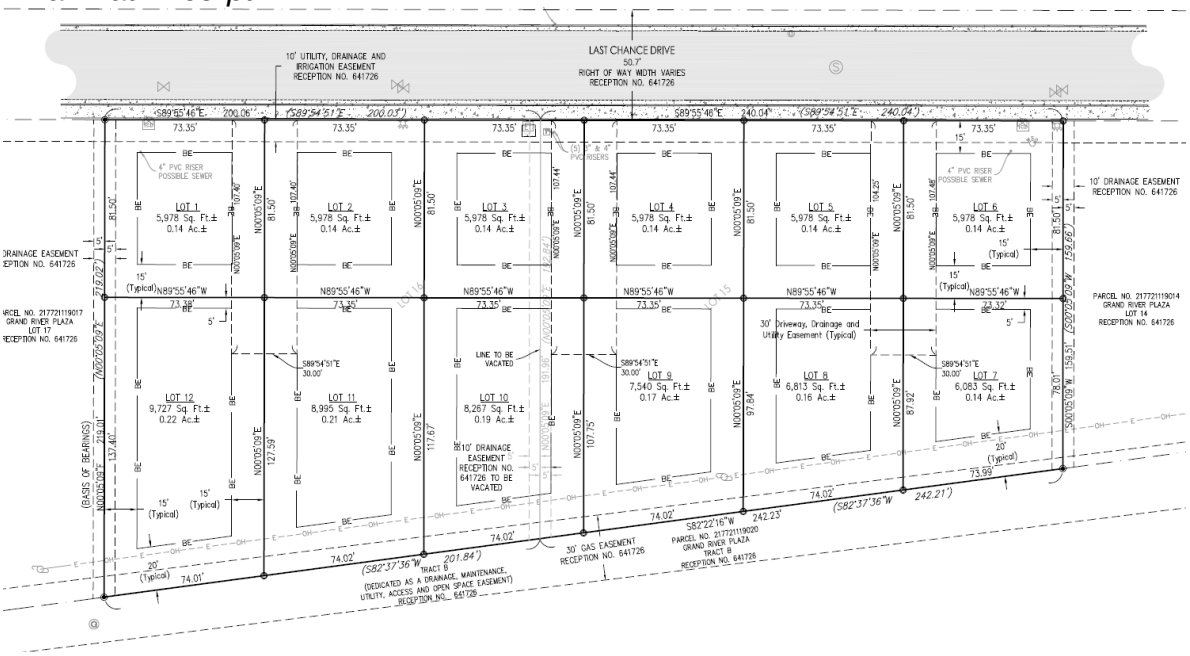
1. Minimum lot size for lots 1-6 is just under the 6,000 square foot residential lot requirement (5,978 square feet is proposed).
2. The applicant is requesting a 5' Front Yard Setback for the rear lots rather than the Code required 15'. This is required because of the steep topography on the rear lots.

The 2019 Comprehensive Plan update shows this property as suitable for high density residential, due to its location near Grand River Hospital and shopping areas along Airport Road, as well as easy transporation access to the rest of Rifle.

IV. PROJECT DESIGN

The proposal, consists of twelve units on 1.9 acres. The applicant is proposing to use three separate accesses from Last Chance Drive. The proposed lot sizes vary from 9,727 square feet to 5,798 square feet. The property has significant slopes at the rear setback that is triggering the PUD setback request.

Final Plat Excerpt



V. REFERRAL COMMENTS

The application was sent out for comments from other City Departments and the City of Rifle's consulting engineer. Comments were received as follows:

Mountain Cross Engineering

- Indicated all issues were addressed from Preliminary Plan review.

Colorado River Fire Rescue

- No comments were received on the application.

City of Rifle GIS

- Standard referral addressing as-built requirements.

Xcel Energy

- No issues were identified.

Planning Department

- Updates required to Final Plat

No other referral comments were received.

VI. STAFF COMMENTS FROM PRELIMINARY PLAN

Easements on Final Plat

The preliminary Final Plat provided by the applicant did not show access and utility easements. These need to be included in the Final Plat submittal.

These items were included on the updated plan set.

Debris Fan

The Final Plat for the Grand River Plaza identified a debris fan and rock fall area to the south of the property. When the property was originally developed, the City of Rifle required that the applicant install and maintain debris flow structures. This resulted in the creation of Tract B, which was dedicated to the HOA for maintenance. Public Works Staff completed a site visit to the debris flow areas and indicated that the drainage structures appear to be functioning and are in good condition. These areas will continue to be maintained by the HOA for the development.

PUD Criteria

The applicant is asking for PUD zoning to address the setback issues on the southern lots as well as a deviation from the minimum lot size. The City of Rifle Municipal Code requires that for a PUD to be approved it should provide benefits to the City. Generally,

the PUD section is written for major projects which will have a substantial impact on the City. Also the request for flexibility is generally more significant.

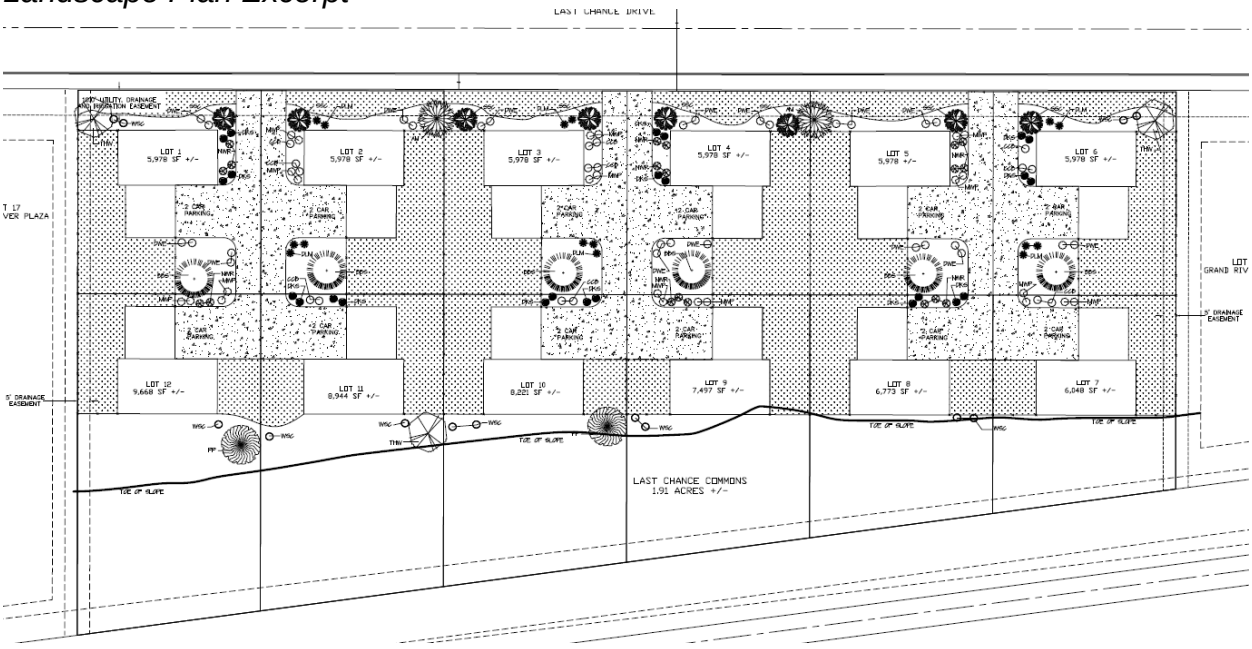
The Rifle Municipal Code requires that for approval of a PUD, the development can provide the following benefits: project design and land use, architecture and design, perimeter criteria, affordable housing, energy efficiency measures, and parks and open space.

There are pedestrian connections along the existing sidewalks that the applicant will maintain. The applicant is not asking for setback changes on the lots that border the City Right-of-Way and the pedestrian environment will be substantially improved by the development.

Staff has noted that the PUD section for architectural and design criteria requires that the same exterior building elevation shall not repeat itself for four consecutive lots. Staff has included this as a suggested condition of approval.

The project will provide needed single family residences and because of the smaller size of the units, the residences will be more affordable than larger homes. Additionally, the increased density and infill will benefit the City by providing more water and sewer users on existing infrastructure. Additionally, while the project is not large enough to dedicate an open space/parks parcel, the developer will be required to pay Parkland Dedication fees. Because the scale of this project is smaller, provides benefits to the City and the applicant is only asking for a small deviation from setbacks and minimum lot size, Staff is supportive of the PUD zoning request.

Landscape Plan Excerpt



Flexibility for Setbacks and Minimum Lot Sizes

The Rifle Municipal Code allows for setback and minimum lot size flexibility provided that the project addresses specific criteria, including sufficient parks and open space, greater diversity of housing types and mixed use, an attractive streetscape and pleasant pedestrian environment, and affordable housing.

Based on the smaller units that the applicant is proposing, the payment of parkland fees, the existing sidewalks for pedestrian connections and the provision of a needed housing type and project in the City, Staff is supportive of the modified setbacks and reduced minimum lot size.

Shared Driveways

The application shows a shared driveway for each of the four lot clusters. This is allowed per Rifle Municipal Code provided that it meets the standards in Section 16-4-140, including that the project shall not create any undue traffic, pedestrian, emergency access, or general access hazards. Referral agency review indicates that the application meets those criteria and Staff is supportive of the access plan. The applicant should supply a copy of the finalized covenants showing that the HOA shall maintain the accesses.

Planning Commission Last Chance Drive Parking

Planning Commission added an additional condition requiring that Public Works give input on impacts from truck routes and parking on Last Chance Drive as part of the Final Plat review. Public Works review indicated that based on the location of the driveways and the limited sight distance that would be created by on-street parking; no on-street parking would be allowed on Last Chance Drive at this time.

CITY COUNCIL REVIEW CRITERIA

Pursuant to Section 16-5-280, the City shall consider the following criteria before approving a project (***staff comments shown in bold italics***):

1. Conformance of the proposal with the City of Rifle Municipal Code;

   The applicant is following the process described in the R.M.C.

2. The compatibility of the proposal with the character of the surrounding area, including but not limited to the architectural character of the neighborhood, the average lot and building sizes in the neighborhood, and the relative value of the proposed structure to the value of other structures in the neighborhood;

   This stretch of Last Chance Drive continues outside city limits as County Road 332. A number of mobile homes are found further west on larger agricultural parcels. Existing residential development, concentrated west of Taugenbaugh

Boulevard, is high density townhouses and apartments. Although the proposed project would be the first new residential development on Last Chance Drive, it is compatible with the zoning (through a PUD approval), Comprehensive Plan and less dense than other nearby residential projects.

3. The desirability for the proposed use in the specific area of the City;

   See below under Comprehensive Plan.

4. The potential for adverse environmental effects that might result from the proposed use;

   No adverse environmental effects are anticipated.

5. Compatibility of the proposed use and the site (or subdivision) plan with the City of Rifle Comprehensive Plan;

   This portion of South Rifle has been identified as suitable for high density residential development, due to its location and quick access to the hospital and commercial outlets.

6. The potential impact of the proposed use upon the value of property and buildings within the surrounding area;

   Staff anticipates the development of a vacant area requiring ongoing maintenance with new homes would be an improvement on surrounding property values.

7. Conformance of the proposal with the approval requirements concerning water and sewer tap availability for high volume use requests pursuant to Section 13-4-120 of this Code, if applicable.

   Not applicable.

VII. PLANNING COMMISSION RECOMMENDATION

Planning Commission approved the Preliminary Plan for the project and recommended approval of the PUD application to City Council. The conditions of Preliminary Plan have been met. Staff has suggested the following conditions for Final Plan/PUD approval.

1) All representations made by the Applicant in the application and during public hearings shall be conditions of approval, unless specifically altered by City Council.

2) The applicant shall resolve any outstanding referral comments as part of the submittal of final construction plans to the satisfaction of the City of Rifle.

3) Building elevations shall vary for the lots fronting Last Chance Drive. The same building elevation shall not be repeated for four consecutive lots.

4) The applicant shall provide required GIS information before the Final Plat is recorded.

5) The applicant shall update the final plat as required by Planning Department and the Rifle Municipal Code, prior to the recording of the Final Plat.

6) The applicant shall provide a finalized set of Covenants for the property that demonstrates the homeowners association will maintain the access driveways, prior to recording the Final Plat.

DEPARTMENT OF PLANNING & DEVELOPMENT
202 Railroad Avenue, Rifle, CO 81650
Phone: 970-665-6491

May 11, 2022

Brian Stowell
90 Caballo Street
Carbondale, CO 81623

Re: Final Plat Review – Last Chance Commons

After reviewing the above referenced Final Plat, Rifle City Planning has the following comments:

1. The City Engineer Certificate shall be changed to the Public Works Director.

2. A Certificate shall be added for Planning Commission signature.

3. A Plat Note shall be added indicating that the Homeowners Association is responsible for the maintenance of the access drives.

4. The Plat shall include a certificate for Xcel Energy approval.

Sincerely,

Patrick Waller
Planning Director
pwaller@rifleco.org
970-665-6499

Patrick Waller

From: Erica Gentry
Sent: Monday, April 04, 2022 11:32 AM
To: Patrick Waller
Subject: RE: City of Rifle Referral Request - Last Chance Commons Final Plan / PUD

The usual for this please ☺ I'll start giving thought to addressing.
Thanks
E

From: Patrick Waller <pwaller@rifleco.org>
Sent: Friday, April 1, 2022 2:57 PM
To: Tommy Klein <tklein@rifleco.org>; Craig Spaulding <cspaulding@rifleco.org>; Erica Gentry <egentry@rifleco.org>; Brian Prunty <bprunty@rifleco.org>; 'Wakefield, Samantha L' <Samantha.l.wakefield@xcelenergy.com>; 'James S. Neu' <jsn@mountainlawfirm.com>; 'Joely R. Denkinger' <jrd@mountainlawfirm.com>; John Nihiser <JNihiser@rifleco.org>; Robert Burns <rburns@rifleco.org>; Casey Boren <cboren@rifleco.org>; 'Chris@mountaincross-eng.com' <Chris@mountaincross-eng.com>
Subject: City of Rifle Referral Request - Last Chance Commons Final Plan / PUD

Good Afternoon,

The City of Rifle is requesting referral comments for a Final Plan / PUD application for a 12 lot residential subdivision located at 493 and 525 Last Chance Drive. Please review the attached application and let me know if you have any comments by Monday, April 18.

Thanks for your review,

Patrick Waller
City of Rifle Planning Director
970-665-6499
pwaller@rifleco.org

Xcel has no objections, however the Developer needs to be aware that at the time of submitting an application with Xcel the following will be required and could happen:

1. Accurate BTU loads for the new homes will be required.
2. If determined by area engineer that reinforcement is needed to Xcel's gas main to support added loads from subdivision, said reinforcement will be at Developers expense.
3. Reinforcement costs are required to be paid prior to installation.
4. Tariff changes have taken effect as of 10/1/2019 affecting the cost of subdivision lots averaging less than 60'. They will have a standard cost per lot.

Completion of this City/County review approval process does not constitute an application with Xcel Energy for utility installation. Applicant will need to contact Xcel Energy's Builder's Call Line/Engineering Department to request a formal design for the project. **A full set of plans, contractor, and legal owner information is required prior to starting any part of the construction.** Failure to provide required information prior to construction start will result in delays providing utility services to your project. Acceptable meter and/or equipment locations will be determined by Xcel Energy as a part of the design process. Additional easements may be required depending on final utility design and layout. Engineering and Construction lead times will vary depending on workloads and material availability. Relocation and/or removal of existing facilities will be made at the applicant's expense and are also subject to lead times referred to above. All Current and future Xcel Energy facilities' must be granted easement.

MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design

April 11, 2022

Mr. Patrick Waller
City of Rifle – Department of Planning & Development
202 Railroad Avenue
Rifle, CO 81650

RE: Final Plan Review for Last Chance Commons: 2022-013

Dear Patrick:

This office has performed a review of the documents provided for the Final Plan of the Last Chance Commons application. The review generated no comments.

Feel free to call if you have any questions or comments.

Sincerely,
Mountain Cross Engineering, Inc.

Chris Hale, PE

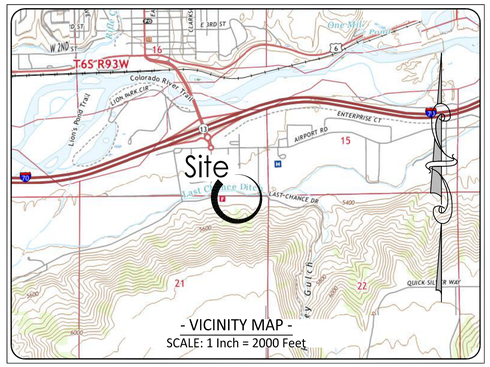
826 ½ Grand Avenue, Glenwood Springs, CO 81601
P: 970.945.5544 F: 970.945.5558 www.mountaincross-eng.com

Final Plat

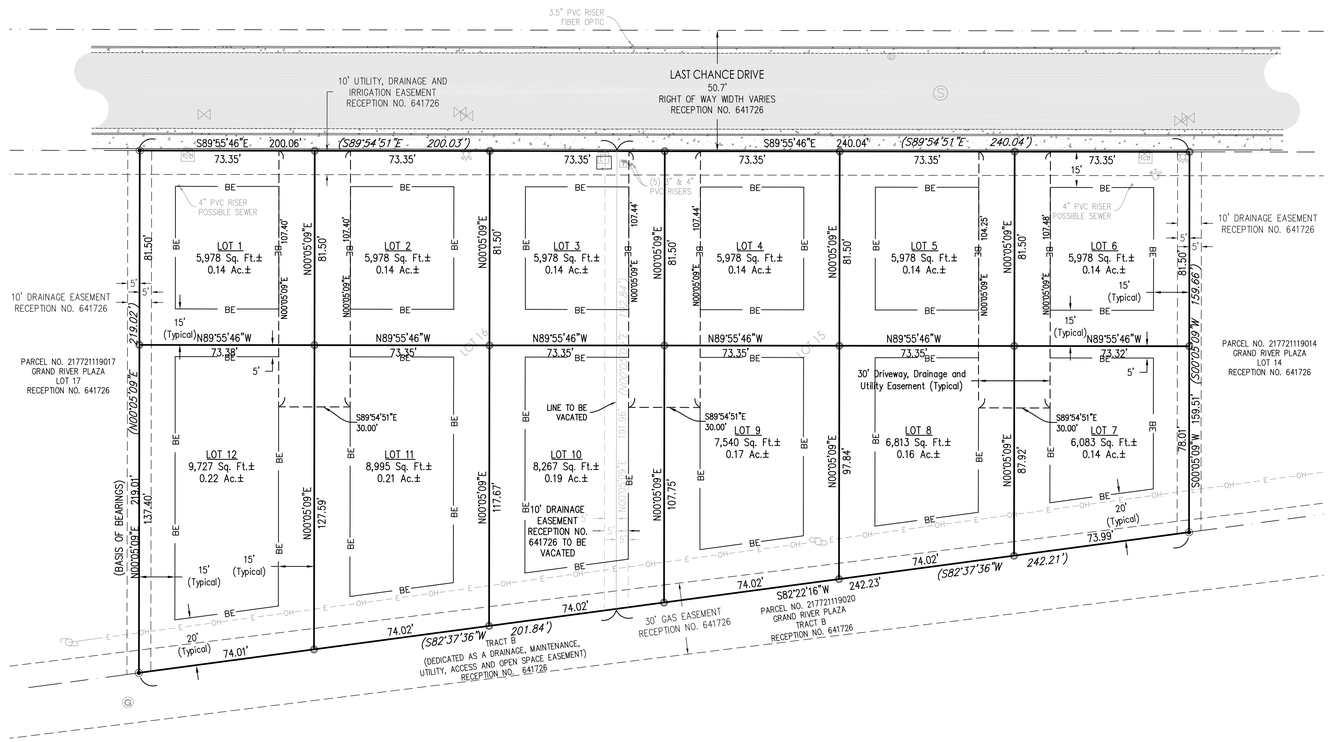
Last Chance Commons P.U.D.

Being a Replat of Lots 15 & 16, Grand River Plaza

Situated in the NE 1/4 of Section 21,
Township 6 South, Range 93 West of the 6th P.M.
City of Rifle, Garfield County, Colorado



- VICINITY MAP -
SCALE: 1 Inch = 2000 Feet



CERTIFICATE OF OWNERSHIP AND DEDICATION:

Know all by these presents that Last Chance Commons P.U.D. being sole owners, in fee simple of all that real property described as follows:

Lots 15 and 16, Grand River Plaza according to the plat thereof recorded November 26, 2003 under Reception No. 641726, County of Garfield, State of Colorado.

Have by these presents laid out, platted and subdivided the same into the lots shown hereon and designate the same as FINAL PLAT, LAST CHANCE COMMONS P.U.D. and do hereby dedicate those areas designated as Drainage Easements to the City of Rifle and do hereby dedicate those areas designated as Utility Easements to the Public Utilities and do hereby dedicate those areas designated as Driveway Easements to the respective Lot Owners noted hereon.

_____
By: Brian Stowell

STATE OF COLORADO)
)ss
COUNTY OF GARFIELD

The foregoing instrument was acknowledged before me this _____ day of_____, 2021 by Brian Stowell; _____ for Last Chance Commons P.U.D.

My commission expires on _____.

Witness my hand and official seal.

_____
Notary Public

TITLE INSURANCE COMPANY:

Land Title Guarantee Company does hereby certify that they have examined the title to all lands dedicated and shown upon this plat, and title to such lands is in the dedicator free and clear of any liens, taxes, and encumbrances except as follows:

_____

_____

_____

_____

BY: _____ Date: _____
Title Examiner

NOTES:

1. Basis of Bearings: Bearings shown hereon are based on a bearing of N0°05'09"E on the west line of said Lot 16, between a 1 1/4" orange plastic cap stamped 28643 on 5/8" rebar and a 1 1/4" orange plastic cap stamped 28643 on 5/8" rebar,, as shown hereon.
2. This map has been prepared pursuant to client request for an Final Plat.
3. Date of field survey: June 30, 2021
4. Units of linear measurements are displayed in US Survey Feet.
5. SGM is not responsible for any changes made to this document after it leaves our possession. Any copy, facsimile, etc., of this document must be compared to the original signed, sealed and dated document to insure the accuracy of the information shown on any such copy, and to insure that no such changes have been made.
6. Inconsistencies were observed on said Grand River Plaza plat which prevent the mathematical closure of said Lots 15 and 16. As a result, measured bearings and distances are shown hereon to reflect locations of apparent property corners found during the field survey.
7. The property shown hereon is subject to all easements, rights-of-way, building setbacks or other restrictions of record, as such items may affect this property. This survey does not represent a title search by this surveyor to determine ownership or to discover easements or other encumbrances of record. All information pertaining to ownership, easement and other encumbrances of record has been taken from the title insurance commitment issued by Land Title Guarantee Company, Commitment No. ABS63016462-2, having an effective date of June 15, 2021.

- LEGEND -

- Set 18" Long No. 5 Rebar & 1-1/4" Plastic Cap, LS # 38200
- Found Monument as Described
- Electric Transformer
- Utility Pole
- Telephone Ped
- Water valve
- Fire Hydrant
- Water Shut-off
- Irrigation Cont. Valve
- Irrigation Cont. Box
- Sanitary Sewer Manhole
- Gas Marker
- Storm Manhole
- Overhead Electric Line
- Concrete
- Asphalt paving
- (XX.XX) – Record Bearing
- XX.XX – Measured Bearing

Plat Note: All common area outside the Building Envelope to be dedicated as a Utility and Drainage Easement.

PLANNING DIRECTOR CERTIFICATE OF APPROVAL:

This Plat approved by Rifle Planning Director Pursuant to Rifle Municipal Code Section 16-5-140-(D) this _____ Day of _____, 2021

_____.

CITY ENGINEER CERTIFICATE OF APPROVAL:

This Plat approved by Rifle City Engineer this _____ Day of _____, 2021

_____.
Rifle City Engineer

CITY COUNCIL CERTIFICATE

This plat approved by city council of the City of Rifle, Garfield County, Colorado this _____ day of _____, A.D. 2021, for filing with the Clerk and Recorder of Garfield County and for conveyance to the City of Rifle of the public dedication shown heron; subject to the provisions that approval in no way obligates the City of Rifle for financing or construction of improvements on land, streets or easements dedicated to the public except as specifically agreed to by the city council.

_____

SURVEYOR'S CERTIFICATE:

I, Shawn Binion, being a Registered Professional Land Surveyor, licensed in the State of Colorado, do hereby certify that this plat is a true, correct and complete FINAL PLAT, LAST CHANCE COMMONS P.U.D. as laid out, platted, dedicated and shown hereon and that such plat was made from an accurate survey of said property by me and under my supervision and correctly shows the dimensions of the lots, easement and streets of said subdivision as the same are staked on the ground in compliance with state regulations governing the subdivision of land.

DRAFT COPY

Shawn Binion
Colorado PLS # 38200
For, and on behalf of SGM

CLERK AND RECORDERS CERTIFICATION:

This Plat filed for recording in the office of the Clerk and Recorder of Garfield County, Colorado, at _____ O'clock _____, this _____ Day of _____, 2021 and is duly recorded as Reception No. _____.

Attest: _____
Clerk and Recorder

BY: _____
Deputy

Graphic Scale
0 15 30 60
In U.S. Feet : 1" = 30'

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

Last Chance Commons P.U.D.
493 & 525 Last Chance Drive
Rifle, Colorado

#	Revision	Date	By:
1	–		
2	–		
3	–		
4	–		
5	–		
6	–		
7	–		
8	–		
9	–		

Notice: According to Colorado Law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any legal action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

Job No.	2021-333.001
Drawn by:	MEW
Date:	7/26/2021
Approved:	– PLS: SB
File:	LastChanceCommonsPlat011822JSS

Title: Final Plat

Sheet No. 1
Of: .

I:\2021\2021-333-Lastchancecommons\001\X-Dwgs\Civil\MiscDwgs\LastChanceCommonsPlat011822JSS.dwg Plotted: 1/18/2022 4:35 PM By: Jeff Simonson

Last Chance Commons

Rifle, CO

Vicinity Map

Scope of Work

Minor Subdivision Final Plat that vacates two existing parcels and re-subdivides the resulting parcel into twelve (12) single family lots with appurtenant subdivision improvements including water, sewer, storm drainage, access, dry utilities, curb, gutter and sidewalk.

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

Project Engineer

JEFF SIMONSON
COLORADO PE: 26152

RICK BARTH
COLORADO PE: 36749

MAX WEISS, EI

Owner/Applicant

BEA, Inc.
A Colorado Corporation
Brian Stowell, President

CITY OF RIFLE, COLORADO

Mayor	*Barbara Clifton*
Mayor Protem	*Theresa Hamilton*
Councilors	*Joe Carpenter*
	Brian Condie
	Ed Green
	Clint Hostettler
	Sean Strode

Preliminary Subdivision Plan
July 30, 2021

Sheet List Table

Sheet Number	Sheet Title
C1	Cover Sheet
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C9	Water Details
C10	Sewer Details
C11	Site Details
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Last Chance Commons
Rifle, CO

No.	Revision	Date	By
1	Project Milestone: Preliminary Not For Construction		

Job No. 2021-333
Drawn by: JMW
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Title: Cover Sheet

Dwg No. C1
Of: 13

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Legend

Linetypes

EXISTING	PROPOSED	DESCRIPTION
T OH	T OH	OVERHEAD TELEPHONE LINE
T T	T T	UNDERGROUND TELEPHONE LINE
G G	G G	LOW PRESSURE GAS LINE
G HP	G HP	HIGH PRESSURE GAS LINE
TV TV	TV TV	UNDERGROUND CABLE TELEVISION LINE
TV OH	TV OH	OVERHEAD CABLE TELEVISION LINE
E E	E E	UNDERGROUND ELECTRICAL LINE
E OH	E OH	OVERHEAD ELECTRICAL LINE
12"DR		STORM DRAIN LINE & SIZE
8"W	8"W	WATER LINE & SIZE
WS	WS	WATER SERVICE LINE
8"S	8"S	SANITARY SEWER LINE & SIZE
SS	SS	SANITARY SEWER SERVICE LINE
FO	F.O.	FIBER OPTIC LINE
IRR	IRR	IRRIGATION LINE
		DRAINAGE SWALE FLOWLINE
		BARBED-WIRE FENCE LINE
		COMBINATION FENCE
		CHAIN LINK FENCE
	PF	PLASTIC FENCE
	SF	SILT FENCE
18" CMP	24" CMP	CULVERT, SIZE & FES
		EDGE OF PAVEMENT
		EDGE OF WATER
		CENTERLINE
		GUARDRAIL
		ROCK WALL
		CONTOURS
		RIGHT-OF-WAY
		VEGETATION
LDA	LDA	LIMITS OF DISTURBED AREA
		RAILROAD TRACKS
		TOP OF CUT
		TOP OF FILL
		EASEMENT
		BUILDING ENVELOPE

Hatching

EXISTING	PROPOSED	DESCRIPTION
		ASPHALT MILLING
Asph.		ASPHALT
Conc.		CONCRETE SURFACING (PLAN VIEW)
Conc.		CONCRETE SURFACING (SECTION VIEW)
Grav.		GRAVEL SURFACING
		RIPRAP/RIVER ROCK
		RE-ESTABLISH NATIVE VEGETATION
		WOOD DECK
		FLAGSTONE
		UNDISTURBED SOIL
		RECOMPACTED SOIL

Symbols

EXISTING	PROPOSED	DESCRIPTION
		DECIDUOUS TREE
		CONIFEROUS TREE
		MONUMENT MARKER
		CONTROL POINT
T	T	TELEPHONE PEDESTAL
		CABLE PEDESTAL
		ELECTRIC TRANSFORMER
		ELECTRIC PEDESTAL
		ELECTRIC VAULT
		ELECTRIC SERVICE T-POST
		ELECTRIC METER
		HEATING/AIR CONDITIONING UNIT
		GAS MARKER
		GAS METER
		GAS VALVE
		GAS WELL
T D S W E		MANHOLES-TELE/DRAINAGE/SEWER/ WATER/ELEC PER PLAN REFERENCE
		CURB INLET
		STORM DRAIN INLET
		CLEAN-OUT
		WATER VALVE
		FIRE HYDRANT
		WATER SHUT-OFF VALVE
		WATER METER
		WATER SPIGOT
		WELL
		IRRIGATION VALVE
		IRRIGATION CONTROL VALVE
		IRRIGATION CONTROL BOX
		IRRIGATION HEADGATE
		IRRIGATION MANHOLE
		IRRIGATION SPRINKLER HEAD
		PVC PIPE
		UTILITY POLE
		GUY WIRE
		STREET LIGHT POLE
		FLOOD LIGHT
		SIGN
		MAILBOX
		BOLLARD
		FIBER OPTIC LINE MARKER
	42.77FL	FINISHED SPOT ELEV. W/ DESCRIPTION
		NEW FLARED END SECTION (HDPE)
		NEW FLARED END SECTION (CMP)
		SOIL BORING LOCATION
		TEST PIT LOCATION
		EROSION CONTROL LOG
		LARGE ROCK/BOULDER
		"T" POST
		SATELLITE DISH
		TRANSITION FROM SPILL TO CATCH GUTTER
		MINIMUM 4" TOP SOIL OR SPECIFIED ALTERNATIVE

Abbreviations

@	AT
°	DEGREE
ø	DIAMETER
#	NUMBER
ABC	AGGREGATE BASE COURSE
ADA	AMERICANS W/ DISABILITIES ACT
AP	ANGLE POINT
AS	ASPHALT
ASPH	ASPHALT
BM	BENCHMARK
BOW	BACK OF SIDEWALK
BP	BEGIN PROJECT, BEGINNING POINT
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
BW	BOTTOM OF WALL
C	CURB
CC	CURB CUT
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CF	CUBIC FEET
CG	CURB AND GUTTER
CIP	CAST IN PLACE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CONCRETE
CONC	CONCRETE
CONT	CONTINUOUS
COR	CORNER
CRB	CONCRETE REACTION BLOCK
CY	CUBIC YARD
D	DEEP
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRAIN
DW	DRIVEWAY
E	EASTING
EG	EXISTING GRADE
EL	ELEVATION
ELEV	ELEVATION
EOA	EDGE OF ASPHALT
EOD	EDGE OF DRIVEWAY
EOC	EDGE OF CONCRETE
EOG	EDGE OF GRAVEL
EOM	EDGE OF MILLINGS
EOP	EDGE OF PAVEMENT
EP	END PROJECT, END POINT
ES	ELECTRIC SERVICE
ESMT	EASEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX	EXISTING
EXIST	EXISTING
FES	FLARED END SECTION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FT	FEET
G	GAS
GAL	GALLONS
GALV	GALVANIZED
GB	GRADE BREAK
GR	GRAVEL
GRAV	GRAVEL
GS	GAS SERVICE
GV	GATE VALVE
HC	HANDICAP RAMP
HCL	HORIZONTAL CONTROL LINE
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HOV	HIGH OCCUPANCY VEHICLE
HP	HIGH POINT
HPG	HIGH PRESSURE GAS
HWL	HIGH WATER LINE
HWY	HIGHWAY
HYD	HYDRANT
ID	INSIDE DIAMETER
INTX	INTERSECTION
INV	INVERT
JB	JUNCTION BOX
L	LEFT
LBS	POUNDS
LF	LINEAR FOOT
LPFM	LOW PRESSURE FORCE MAIN
LP	LOW POINT
LS	LUMP SUM
LSA	LANDSCAPED AREA
LT	LIGHT POLE
MAT'L	MATERIAL
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MEGALUG
MP	MILE POST
MPH	MILES PER HOUR
MSE	MECHANICALLY STABILIZE EARTH
N	NORTHING
N/A	NOT APPLICABLE
NAT	NATIVE GRASS AREA
NE	NORTHEAST
NO	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
O/S	OFFSET
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PED	PEDESTRIAN
PERM	PERMANENT
PG	PAGE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PNT	POINT
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PRV	PRESSURE REDUCING VALVE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
Q	PEAK DISCHARGE
R	RIGHT
R&R	REMOVE AND REPLACE
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
REQ	REQUIRED
REVEG	REVEGETATE
ROW	RIGHT OF WAY
RP	RADIUS POINT
RW	RETAINING WALL
SAN	SANITARY
SD	STORM DRAIN
SE	SOUTHEAST
SF	SQUARE FEET
SHLDR	SHOULDER
SL	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
SOD	SOD GRASSED AREA
SS	SANITARY SEWER SERVICE
SSD	STOPPING SIGHT DISTANCE
STA	STATION
STBK	SETBACK
SW	SIDEWALK OR SOUTHWEST
SY	SQUARE YARDS
TAN	TANGENT
TBC	TOP BACK OF CURB
TB	THRUST BLOCK
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TELE	TELEPHONE
TEMP	TEMPORARY
TP	TOP OF PIPE
TRANS	TRANSITION
TRFLG	TRAFFIC FLANGE OF FIRE HYDRANT
TW	TOP OF WALL
TYP	TYPICAL
VC	VERTICAL CURVE
VP	VALLEY PAN
W	WIDE
W/	WITH
WL	WATER LINE
WS	WATER SERVICE
WWM	WELDED WIRE MESH
X-S	CROSS SLOPE

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Last Chance Commons
Rifle, CO

No.	Revision	Date	By
1			

Project Milestone: Preliminary Not For Construction

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Drawn by:	JMW
Date:	July 30, 2021
QC:	JS PE RLB
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Title: Legend & Abbreviations

Dwg No. C2

Of: 13

GENERAL ROAD NOTES:

1. LIMITS OF CONSTRUCTION SHALL BE 5' BEYOND GRADING LIMITS, BASE OF FILL SLOPES OR TOP OF CUT SLOPES, AND 20' EITHER SIDE OF THE CENTERLINE OF UTILITY INSTALLATIONS, BUT NOT BEYOND FENCE LINE OR RIGHT-OF-WAY LINES. PROJECT LIMITS SHALL ADDITIONALLY INCLUDE ANY DESIGNATED BORROW AREAS, EXCAVATION DISPOSAL AREAS OR MATERIAL OR TOPSOIL STOCKPILE AREAS. RESPECT ALL TREE/VEGETATION PRESERVATION ZONES (PER SPECS).

2. TRAFFIC CONTROL REQUIREMENTS:
   2.1. MAINTAIN ACCESS TO OTHER STRUCTURES AT ALL TIMES. TEMPORARY CLOSURE ALLOWED FOR UTILITY WORK -- PROVIDE FOR EMERGENCY ACCESS CONTINUOUSLY.
   2.2. PROVIDE SAFETY CONES, FLAG PERSONS, VERTICAL PANELS WITH BEACONS, SIGNAGE AND BARRICADES AS NECESSARY TO PROTECT PUBLIC AND WORK SITE.
   2.3. PROVIDE SIGNAGE AS REQUIRED BY OWNER AND LOCAL GOVERNMENT WITH JURISDICTION OVER ADJACENT ROADS.
   2.4. COORDINATE ALL TRAFFIC CONTROL AND WORK WITH THE CITY OF RIFLE PUBLIC WORKS DEPARTMENT. SUBMIT MUTCD TO PUBLIC WORKS PRIOR TO CONSTRUCTION.

3. THE CONTRACTOR SHALL CERTIFY THAT ALL AGGREGATES USED ON THIS PROJECT ARE FREE FROM HAZARDOUS COMPONENTS IN EXCESS OF THE THRESHOLD CONCENTRATIONS ESTABLISHED BY THE E.P.A.

4. PRIME COAT NOT REQUIRED UNLESS INDICATED ON DRAWINGS. PREPARED BASE COURSES SHALL BE PRIMED AT CONTRACTOR'S EXPENSE IF THE SURFACE HAS DETERIORATED DUE TO TRAFFIC, WEATHER OR TIME LAPSE BETWEEN SURFACE PREPARATION AND PLACEMENT OF BITUMINOUS MATERIALS, SUCH THAT, IN THE OPINION OF THE ENGINEER, USE OF PRIME COAT IS REQUIRED. APPLICATION RATE SHALL BE 0.3 GALS/SQ.YD.

5. IF TACK COATS ARE REQUIRED, DILUTED EMULSIFIED ASPHALT OR TACK COAT SHALL CONSIST OF 1 PART EMULSIFIED AND 1 PART WATER. RATES OF APPLICATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION. APPROXIMATE RATE SHALL BE 0.1 GALS/SQ.YD.

6. THE FOLLOWING SHALL BE USED WITH EACH BITUMINOUS PAVER:
   6.1. A SKI-TYPE DEVICE AT LEAST 30 FEET IN LENGTH.
   6.2. SHORT SKI OR SHOE.

7. PAVEMENT MARKING TO INCLUDE THE FOLLOWING:
   7.1. NO NEW MARKINGS

8. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE SECTIONS OF THE SITE SUBSOIL STUDY. CONTRACTOR TO NOTE REQUIREMENTS FOR EXCAVATION, BACKFILL AND SUPPORT MATERIALS. REFERENCED GEOTECHNICAL INVESTIGATION PERFORMED BY YEH AND ASSOCIATES. PROJECT NUMBER 27-0666. DATED 03/28/07 FOR JDC. LLC.

9. SLOPE ASPHALT/CONCRETE AND SOILS AWAY FROM BUILDING AS SHOWN ON PLANS AND FOLLOWING GEOTECHNICAL RECOMMENDATIONS. BUILDINGS / FOOTPRINTS SHOWN ARE PRELIMINARY FOR THE PURPOSES OF SUBDIVISION PLANNING..

10. SOURCE OF MAPPING: EXISTING FIELD CONDITIONS WERE GENERATED BY A SURVEY PERFORMED BY SGM IN JUNE 2021 SEE EXISTING CONDITIONS MAP.

11. THROUGHOUT ALL PHASES OF CONSTRUCTION, UNTIL THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THE CONTRACTOR SHALL ALSO ABATE DUST NUISANCE AS NECESSARY BY CLEANING, SWEEPING AND SPRINKLING WITH WATER OR OTHER MEANS AS NECESSARY. THE CONTRACTOR SHALL HAVE TWENTY-FOUR (24) HOURS AFTER THE DEPOSIT OF ANY EARTH, GRAVEL OR OTHER EXCAVATED MATERIAL TO REMOVE SUCH DEPOSIT. IN THE EVENT THAT THE EARTH, GRAVEL OR OTHER EXCAVATED MATERIAL IS NOT REMOVED, THE ENGINEER SHALL CAUSE SUCH REMOVAL AND THE COST INCURRED SHALL BE DEDUCTED FROM THE BOND. DUST CONTROL WILL ONLY BE REQUIRED IF ADJACENT PROPERTY OWNERS ARE ADVERSELY AFFECTED OR IF DUST ADVERSELY AFFECTS MAINTENANCE OF TRAFFIC DURING THE PROJECT SUCH THAT, IN THE OPINION OF ENGINEER, A WATERING PROGRAM IS APPROPRIATE. IT IS ANTICIPATED DUST CONTROL WILL BE REQUIRED ON THIS PROJECT.

12. CONTRACTOR SHALL OBTAIN FROM THE CIVIL ENGINEER A PLAN SET MARKED "FOR CONSTRUCTION" PRIOR TO COMMENCING ANY WORK.

SHALLOW UTILITY NOTES:

1. EXISTING UTILITY LOCATIONS ARE A COMBINATION OF SURVEYED FIELD LOCATIONS, OBSERVATIONS, AND EXISTING MAPPING. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION.

2. ALL WORK TO BE DONE IN STRICT COMPLIANCE WITH RESPECTIVE UTILITY COMPANY REQUIREMENTS.

3. SHALLOW UTILITIES SHOWN ON THE PLANS ARE SHOWN AS DESIGN LOCATIONS. FIELD CONDITIONS MAY REQUIRE MINOR UTILITY ADJUSTMENTS.

4. PROVIDE CONDUIT SIZE AND TYPE PER LOCAL UTILITY PROVIDER.

5. PROVIDE CONDUIT STUB A MINIMUM OF 6" ABOVE FINAL GRADE AT LOCATIONS DESIGNATED FOR PEDESTAL INSTALLATION AND CAP.

6. DUCT TAPE EACH UTILITY CONDUIT GROUPING (I.E. TELEPHONE, CABLE, ELEC.) TOGETHER ABOVE GRADE AND LABEL.

7. PROVIDE PULL STRING IN EACH CONDUIT.

8. TRANSITION CONDUIT FROM TYPICAL UTILITY TRENCH SPACING TO PROVIDE SEPARATION FROM VERTICAL APPURTENANCES OF DEEPER UTILITIES.

9. GAS UTILITY WILL INSTALL GAS PIPING.

10. GAS- OWNER PROVIDED TRENCH REQUIREMENTS AND FINAL METER LOCATIONS - XCEL ENERGY. GAS LINE TRENCH SHALL BE EXCLUSIVE TO XCEL, AND SHALL BE LOCATED SO THAT GAS MAIN AND SERVICES ARE A MINIMUM OF 5 FEET FROM ALL ELECTRICAL LINES.

11. GAS MAIN SHALL HAVE A MINIMUM OF 36" OF APPROVED BACK-FILL OR COVER.

12. GAS- WIDTH OF TRENCH SHALL NOT BE LESS THAN (10") FOR 2" MAIN OR ANY SERVICE INSTALLATION AND (14") FOR 4" MAIN INSTALLATION. WHERE TIE-INS OR CROSSINGS ARE LOCATED BELL-HOLES SHALL BE PROVIDED, SIZE OF WHICH SHALL ALLOW ADEQUATE WORKING SPACE FOR MEN AND EQUIPMENT.

13. GAS- BEDDING MATERIAL SHALL BE ROCK FREE. BEDDING MATERIAL SHALL NOT CONSIST OF ANY FRACTURED ROCK TYPE MATERIAL. ALL BEDDING MATERIAL TO BE PRE-APPROVED BY XCEL REPRESENTATIVE.

14. GAS- WHEN ROCKY CONDITIONS ARE ENCOUNTERED THE TRENCH BOTTOM SHALL BE CLEAN AND THE GAS MAIN BEDDED A MINIMUM OF 6" BELOW AND 12" ABOVE WITH PRE-APPROVED BEDDING MATERIAL.

15. GAS- PIPELINE TO BE BEDDED AND BACK-FILLED THE SAME DAY AS INSTALLED.

16. GAS- CONTRACTOR/DEVELOPER RESPONSIBLE FOR COMPACTION REQUIREMENTS PER SPECIFICATIONS.

17. GAS- PRIOR TO TRENCHING, A PRE-CONSTRUCTION MEETING WILL BE HELD WITH XCEL REPRESENTATIVE AND EXCAVATION SUPERVISOR AND/OR SUB-CONTRACTOR SUPERVISOR.

18. ALL SITE CLEANUP AND LANDSCAPING TO BE COMPLETE BY CONTRACTOR/DEVELOPER.

19. IT IS THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO DISPOSE OF EXCESS MATERIALS OR SPOILS.

20. ELEC- CONTRACTOR TO INSTALL (1) CONDUIT FURNISHED BY XCEL ENERGY; BED CONDUIT WITH 3/4" MINUS MATERIAL, 4" BELOW TO 4" ABOVE CONDUIT. PULL CORD TO BE FURNISHED AND INSTALLED BY CONTRACTOR.

21. CABLE- COMCAST CABLE WILL PROVIDE ANY REQUIRED VAULTS AND PEDESTALS AND FINAL PLACEMENT.

22. CABLE- COMCAST REQUESTS CONTRACTOR TO FURNISH, SCHEDULE 40 PVC CONDUIT.

23. CABLE- CONTRACTOR TO INSTALL CONDUIT; BED CONDUIT WITH 3/4" MINUS MATERIAL, 4" BELOW TO 4" ABOVE CONDUIT; STUB CONDUIT ABOVE GROUND AT PEDESTAL LOCATIONS; PULL CORD TO BE FURNISHED AND INSTALLED BY CONTRACTOR.

24. TELE- CENTURYLINK REQUESTS CONTRACTOR TO SUPPLY SCHEDULE 40 PVC CONDUIT.

25. TELE- CENTURYLINK REQUESTS INSTALLATION OF SWEEPS TO HAVE A MINIMUM 9 FOOT RADIUS.

26. TELE- CENTURYLINK REQUESTS SWEEPS TO BE GLUED IN PLACE, EXTEND AT LEAST 12" ABOVE GROUND, AND TO BE PLACED CLOSELY TOGETHER TO FIT INSIDE A SINGLE PEDESTAL.

GENERAL UTILITY NOTES:

1. THE APPROXIMATE LOCATION OF ALL KNOWN UTILITIES (WATER, SEWER, GAS, PHONE, ELECTRIC, CABLE, ETC.) ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS TO VERIFY BOTH LOCATION AND DEPTH OF UTILITIES BEFORE ANY WORK BEGINS. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR THE PROTECTION OF UTILITIES DURING CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR UTILITIES LOCATED BUT NOT SHOWN IN DRAWINGS.

2. THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING ANY DISTURBED AREAS IN ACCORDANCE WITH SPECIFICATIONS.

3. FOLLOW ALL CDPHE (COLORADO DEPARTMENT OF HEALTH & ENVIRONMENT) REGULATIONS FOR WATER AND SEWER LINE CROSSINGS.

4. REPLACE ALL DISTURBED ASPHALT WITH 3" PG 58-22 ASPHALT ON 8" OF CLASS 6 AGGREGATE BASE COURSE COMPACTED TO 95% STANDARD DENSITY OVER PREPARED SUBGRADE (12"). PROVIDE T-PATCH AT ALL JOINTS WITH ASPHALT IF THE EXISTING ASPHALT IS GREATER THAN 4" THICK. USING MILLING MACHINE TO ESTABLISH UPPER (WEARING COURSE) LIFT.

GENERAL WATER NOTES:

1. ALL WATER MAINS SHALL BE INSTALLED WITH A 4-1/2 FOOT MINIMUM DEPTH OF COVER. IF GRADE CONFLICTS OCCUR WITH EXISTING UTILITIES OR OTHER OBSTRUCTIONS, COORDINATE WITH ENGINEER AND CITY OF RIFLE PUBLIC WORKS DEPARTMENT THE NECESSARY RELOCATION OF WATER LINE.

2. ALL FITTINGS (BENDS, CROSSES, PLUGS, VALVES AND TEES) TO HAVE A CONCRETE THRUST BLOCK INSTALLED IN ACCORDANCE WITH THE THRUST BLOCK TABLE SHOWN ON FIRM DETAIL WITH A STATIC PRESSURE OF 150 PSI. MEGALUGS ARE REQ'D IN ADDITION TO THE CONC. THRUST BLOCK. ALL CONCRETE THRUST BLOCK SHALL BE FORMED AND POURED IN PLACE AGAINST NATIVE SOIL OR SOIL WITH PROPER COMPACTION ON ALL FITTINGS INCLUDING TAPS 4" OR LARGER TO RESIST HYDRAULIC THRUST.

3. PROVIDE C900, CLASS 200 PVC FOR MAIN LINE AND PURE CORE SERVICES INSTALLED PER REQUIREMENTS OF THE CITY OR RIFLE PUBLIC WORKS MANUAL.

4. ALL FITTINGS SHALL BE CLASS 150 DUCTILE IRON PIPE, FULL EPOXY COATED AND OF MECHANICAL JOINT OR PRE-APPROVED FLANGED FITTING AS DICTATED BY THE APPURTENANCES TO BE INSTALLED. POLYWRAP ALL DUCTILE IRON PIPE FITTINGS AND HYDRANT APPURTENANCES BELOW GRADE.

5. THE CONTRACTOR SHALL ENSURE PIPES ARE FREE OF GRAVEL AND DEBRIS PRIOR TO BEING INSTALLED IN THE TRENCH. IF THE PIPE IS DIRTY, HAS GRAVEL OR DEBRIS INSIDE, OR HAS SAT UNUSED FOR A LONG PERIOD OF TIME, THE PIPE WILL REQUIRE CLEANING PRIOR TO INSTALLATION.

6. THE PIPE SHALL BE BEDDED FOR THE FULL LENGTH OF THE PIPELINE. THE BEDDING MATERIAL SHALL BE EITHER CLASS 6 ABC OR ¾" CHIP. THE BEDDING SHALL EXTEND FROM 6 INCHES BELOW THE PIPE AND BELLS TO 12 INCHES OVER THE TOP OF THE PIPE AND BELLS. BEDDING WILL EXTEND THE FULL WIDTH OF THE EXCAVATION. CONTRACTOR SHALL PROVIDE SPECIFICATION OF GRAVEL PRIOR TO INSTALLATION.

7. BACKFILL MATERIAL FROM 12 INCHES ABOVE THE TOP OF THE PIPE TO THE TOP OF THE TRENCH SHALL BE CLASS 6 BASE COURSE MATERIAL IN ALL STREET RIGHT-OF-WAYS WITH 95% COMPACTION MPD. PROVIDE GEOTECHNICAL TEST RESULTS FOR TRENCH WORK.

8. CONCRETE THRUST BLOCKS SHALL BE FORMED AND POURED IN-PLACE AGAINST NATIVE SOIL OR SOIL WITH PROPER COMPACTION ON ALL FITTINGS AS DEFINED BY PROJECT ENGINEER, INCLUDING TAPS 4" OR LARGER. POLY WRAP BOND BREAKER SHALL BE INSTALLED BETWEEN CONCRETE AND ALL PIPES AND ASSOCIATED APPURTENANCES.

9. ALL FITTINGS SHALL HAVE MEGA-LUG RETAINER GLANDS IN ADDITION TO CONCRETE THRUST BLOCKS, OR COR-TEN TIE RODS.

10. THE CONTRACTOR SHALL NOTIFY THE CITY OF RIFLE WATER DEPARTMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND ANY NON-EMERGENCY REQUESTS FOR TESTING, WORKING VALVES OR SYSTEM VERIFICATIONS.

11. A CHLORINATION/BACTERIOLOGICAL, FLUSHING, HYDROSTATIC/LEAKAGE AND CONDUCTIVITY TEST WILL BE REQUIRED ON ALL NEW LINES AND SYSTEMS BEFORE ACCEPTANCE BY THE WATER DEPARTMENT. THESE TESTS SHALL BE PERFORMED AS PER APPLICABLE ANSI/AWWA STANDARD C651. AND SHALL BE CONDUCTED AND COORDINATED WITH THE CITY OF RIFLES UTILITIES DEPARTMENT.

12. VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES SHALL BE 24" INCHES, WATER ABOVE SEWER. IF THIS CANNOT BE ACCOMPLISHED, COORDINATE WITH CITY AND ENGINEER FOR ALTERNATIVES.

13. WATER LINES TO HAVE 10-GA SOLID TRACER WIRE FOR ALL LENGTHS AND SIZES, PUBLIC OR SERVICES. ADDITIONAL TRACER WIRE BOXES MAY BE REQUIRED FOR APPROPRIATE TIE IN LOCATIONS.

GENERAL SEWER NOTES:

1. ALL SANITARY SEWER UTILITY WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CITY OF RIFLE STANDARDS AND SPECIFICATIONS.

2. SANITARY SEWER PIPE SHALL BE PVC SDR 35 PIPE.

3. CONTRACTOR SHALL INSTALL, OPERATE, AND MAINTAIN A SEWAGE BYPASS SYSTEM AS NEEDED FOR ANY TIE INS OR INTERRUPTIONS FOR THE DURATION OF THE PROJECT.

4. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER MAINS AND SERVICES (MEASURED OUTSIDE OF PIPE TO OUTSIDE OF PIPE). MAINTAIN A MINIMUM OF 2 FEET VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATER/STORM SEWER CROSSINGS (MEASURED OUTSIDE OF PIPE TO OUTSIDE OF PIPE) OR OTHERWISE PROVIDE ENCASEMENT PER CDPHE.

5. INSULATION (4" THICK) TO BE INSTALLED WHEREVER SEPARATION DISTANCE BETWEEN STORM SEWER AND SANITARY SEWER IS LESS THAN 2 FEET.

6. ALL EXISTING SANITARY SEWER MAIN SHALL BE REMOVED FROM THE GROUND UNLESS SHOWN AS BEING ABANDONED. CONFIRM WITH PLANS AND CITY WHAT, IF ANY SEWER SHALL BE ABANDONED.

7. SANITARY SEWER SERVICES SHALL BE INSTALLED AT A MINIMUM SLOPE OF 2%.

8. ALL SERVICES SHALL BE CAPPED DURING SANITARY SEWER MAIN TESTING.

9. MARK ENDS OF ALL SEWER SERVICE LINES WITH FENCE POST, 3-WAY SWING TIES AND DEPTH TO SERVICE.

10. CONTRACTOR TO VERIFY THE GRADE OF ALL EXISTING SEWER LINES BEFORE INSTALLING ANY PIPE TO VERIFY INVERT ELEVATIONS. CONTACT ENGINEER WITH ANY DIFFERENCES IN ELEVATIONS SO THAT GRADES CAN BE ADJUSTED.

11. CONTRACTOR SHALL POTHOLE ALL MISCELLANEOUS UTILITIES THAT WILL CROSS OR PARALLEL THE LINE PRIOR TO INSTALLING NEW LINE. IF GRADE CONFLICTS OCCUR, CONTACT ENGINEER SO THAT GRADES CAN BE ADJUSTED.

12. ALL KNOWN SERVICES WHICH TIE INTO THE EXISTING MAIN ARE SHOWN. ANY SERVICE WHICH IS NOT SHOWN BUT TIES INTO MAIN SHALL BE REPLACED AND TIED INTO NEW MAIN.

13. SEWER SERVICE TO HAVE 4" MINIMUM OF CLASS 6 ABC OR ¾" CHIP AS BEDDING MATERIAL. THE SAME MATERIAL SHOULD BE BROUGHT UP TO 6" ABOVE THE TOP OF THE PIPE.

STORM SEWER NOTES:

1. FOLLOW CDPHE AND NOTES ON THIS SHEET FOR ALL STORMWATER/POTABLE WATER CROSSINGS.

2. ALL SIDEWALK TRENCH CASTINGS SHALL BE NEENAH R-4990 -AX, TYPE D (SOLID).

LANDSCAPE NOTES:

1. ALL AREAS DISTURBED BY ROAD OR UTILITY CONSTRUCTION OR OVER-LOT GRADING SHALL BE REVEGETATED WITH DRYLAND SEED MIXTURE. PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSIS OF NORTH AMERICA. PROVIDE SEED OF GRASS SPECIES, PROPORTIONS AND MINIMUM PERCENTAGES OF PURITY, GERMINATION, AND MAXIMUM PERCENTAGE OF WEED SEED, AS SPECIFIED.

2. FOR DRYLAND SEEDED AREAS, PROVIDE FERTILIZER WITH COMMERCIAL TYPE MIXTURE OF 16-16-8 OR SIMILAR RATION, NOT LESS THAN 15 LBS PER ACRE FOR NITROGEN RATE.

3. MULCH ALL SEEDED AREAS WITH CONWEB LONG FIBER MULCH, HAY OR STRAW. MATERIAL FOR STRAW MULCHING SHALL CONSIST OF STRAW OR OATS, BARLEY, WHEAT OR RYE AND SHALL NOT CONTAIN SEED OF NOXIOUS WEEDS. CLEAN FIELD HAY MAY BE SUBSTITUTED FOR STRAW WHEN APPROVED BY THE ENGINEER. STRAW OR HAY IN SUCH AN ADVANCED STAGE OR DECOMPOSITION AS TO SMOTHER OR RETARD THE NORMAL GROWTH OF GRASS WILL NOT BE ACCEPTED. CONWEB FIBER MULCH, PREVIOUSLY SPECIFIED, SHALL BE APPLIED AT A RATE OF 1500 LBS./ACRE. HAY OR STRAW SHALL BE APPLIED IN A UNIFORM MANNER AT A RATE OF 1.5 TONS/ACRE.

4. PROVIDE EROSION CONTROL BLANKET ON ALL SLOPES OF 2:1 OR STEEPER.

5. PRIOR TO REVEGETATION, PLANTING OR TOPSOIL PLACEMENT, ALL CUT OR FILL SLOPES WILL BE CONTOURED TO BLEND WITH ADJACENT TERRAIN. VARIOUS SLOPE MOLDING TECHNIQUES WILL BE USED TO ENHANCE THE AESTHETIC QUALITY OF THE SLOPE, WHILE MAXIMIZING THE REVEGETATION POTENTIAL. ALL CUT AND FILL SLOPES ALSO BEING ROUNDED AT THE TOE TO BLEND WITH THE EXISTING TERRAIN. ADDITIONALLY, WHERE SOILS AND STEEPNESS OF SLOPES PERMIT, TERRACES WILL BE CONSTRUCTED TO AID THE REVEGETATION PROCESS.

6. SEEDING SHALL BE DONE BY HYDROSEEDING, DRILLING, OR HAND BROADCASTING. HYDROSEED SHALL BE APPLIED IN A WATER AND LIGHT MULCH SLURRY AFTER WHICH MULCH WILL BE APPLIED TO COVER THE SEED. ANY AREAS THAT CANNOT BE REACHED BY HYDROSEEDING OR DRILL SEEDING SHALL BE HAND BROADCAST. AREAS SEEDED BY HAND BROADCASTING SHALL BE LIGHTLY RAKED.

7. DRYLAND SEEDING SHALL BE PERFORMED AS SOON AS PRACTICAL AFTER COMPLETING OF CONSTRUCTION, WITHIN THE APPROPRIATE SEASON. SEEDING SHALL BE PERFORMED AFTER SPRING THAW UNTIL JUNE 30TH, OR AFTER SEPTEMBER 1 UNTIL CONSISTENT GROUND FREEZE.

8. CONTRACTOR / APPLICANT MAY NEED TO PROVIDE WATERING FOR ANY REVEGETATION FOR UP TO 1-YEAR OR SUBSTANTIAL VEGETATIVE COVER IS ACHIEVED.

9. IF AREAS THAT ARE HYDROSEEDED DO NOT SHOW SUFFICIENT GROWTH, A MORE INTENSIVE PROCEDURE SUCH AS DRIL SEEDING OR OTHER METHOD WILL BE REQUIRED WITH ADDITIONAL WARRANTY TIME FOR AREAS IMPACTING OR WITHIN THE CITY ROW.

REVEGETATION:

1. HYDROSEEDING WILL OCCUR WHERE THERE ARE HAZARDOUS DISTURBED SLOPES AND AREAS OF DISTURBANCE WITH 15% SLOPES OR GREATER (GARFIELD COUNTY RECLAMATION GUIDELINES).

2. SEEDING MATERIAL TO BE USED FOR RECLAMATION:

   TOTAL SEEDING RATE: 24 LBS PER ACRE (DRILL SEEDING) ALL OTHER METHODS WILL NEED TO DOUBLE THIS SEEDING APPLICATION RATE.

	COMMON NAME	APPLICATION RATE (DRILL SEEDING) LBS/ACRE
1	AMERICAN SLOUGHGRASS	3 (IN WET AREAS, OMIT IF NOT NEEDED)
2	INDIAN RICEGRASS	2.5
3	BLUEBUNCH WHEATGRASS	4
4	WESTERN WHEATGRASS	7
5	GALLETA GRASS	5
6	ALKALI SACATON	2
7	WINTERFAT	0.5

UTILITY CONTACT INFORMATION:

ELECTRICAL & GAS UTILITY CONTACT: XCEL ENERGY (970) 625-6000

CABLE TV UTILITY CONTACT: COMCAST CABLE (970) 925-4311.

PHONE UTILITY CONTACT: CENTURYLINK (970) 328-8209.

WATER & SEWER UTILITY CONTACT: CITY OF RIFLE (970) 665-6590

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Last Chance Commons
Rifle, CO

No.	Revision	Date	By
1			

Project Milestone: Preliminary Not For Construction

Job No.	2021-133
Drawn by:	JMW
Date:	July 30, 2021
QC:	JS / PE: RLB
File:	LCC-Admin

Title: General Notes

Dwg No. C3

Of: 13

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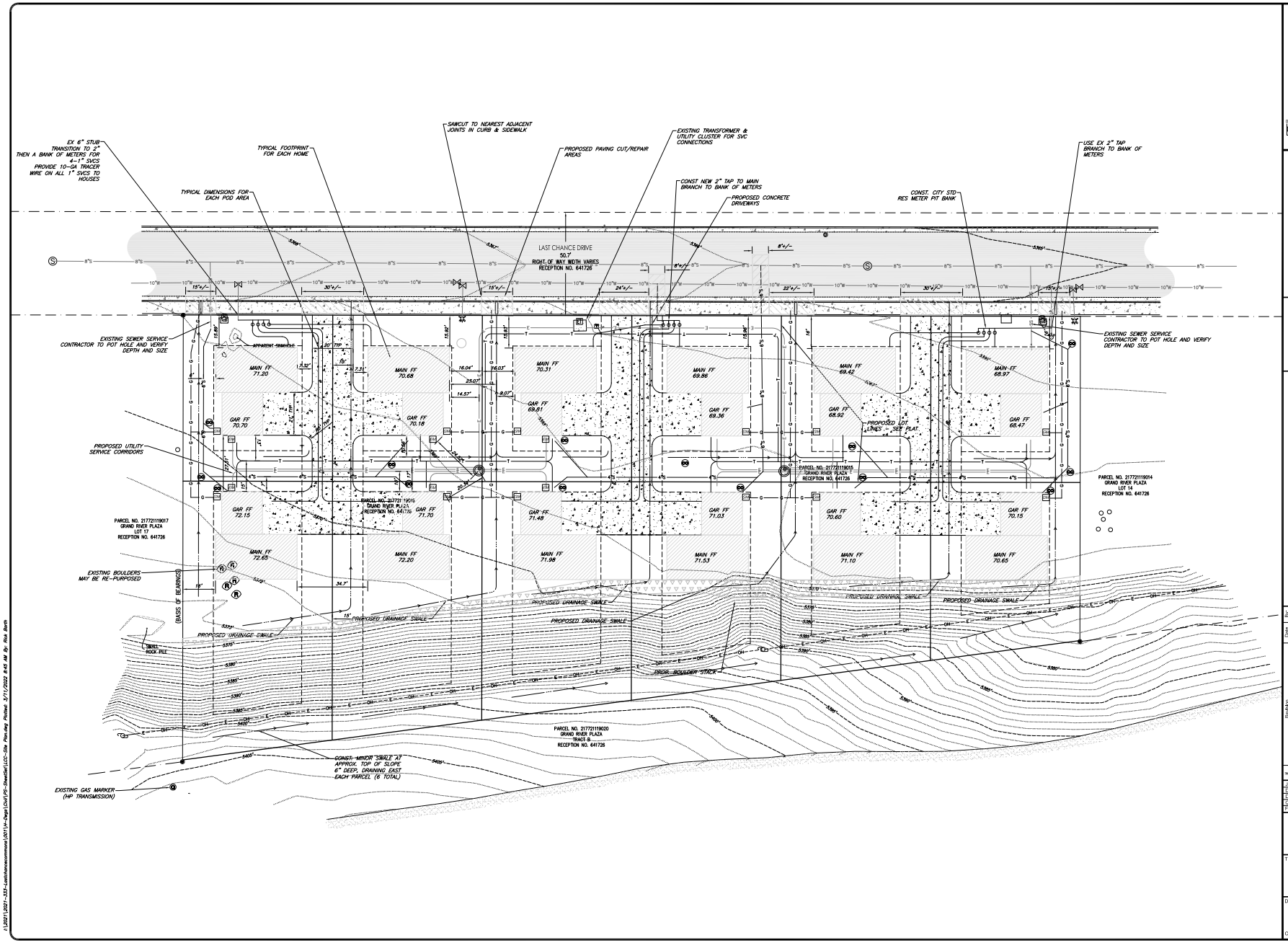

Graphic Scale

0 10 20 40

In Feet: 1" = 20'

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No.	Revision	Date	By
1			

Project Milestone: Preliminary Not For Construction

Job No.	2021-333
Drawn by:	JMW
Date:	February 21, 2022
QC:	JS PE: RLB
File:	LCC-Site Plan

Title:

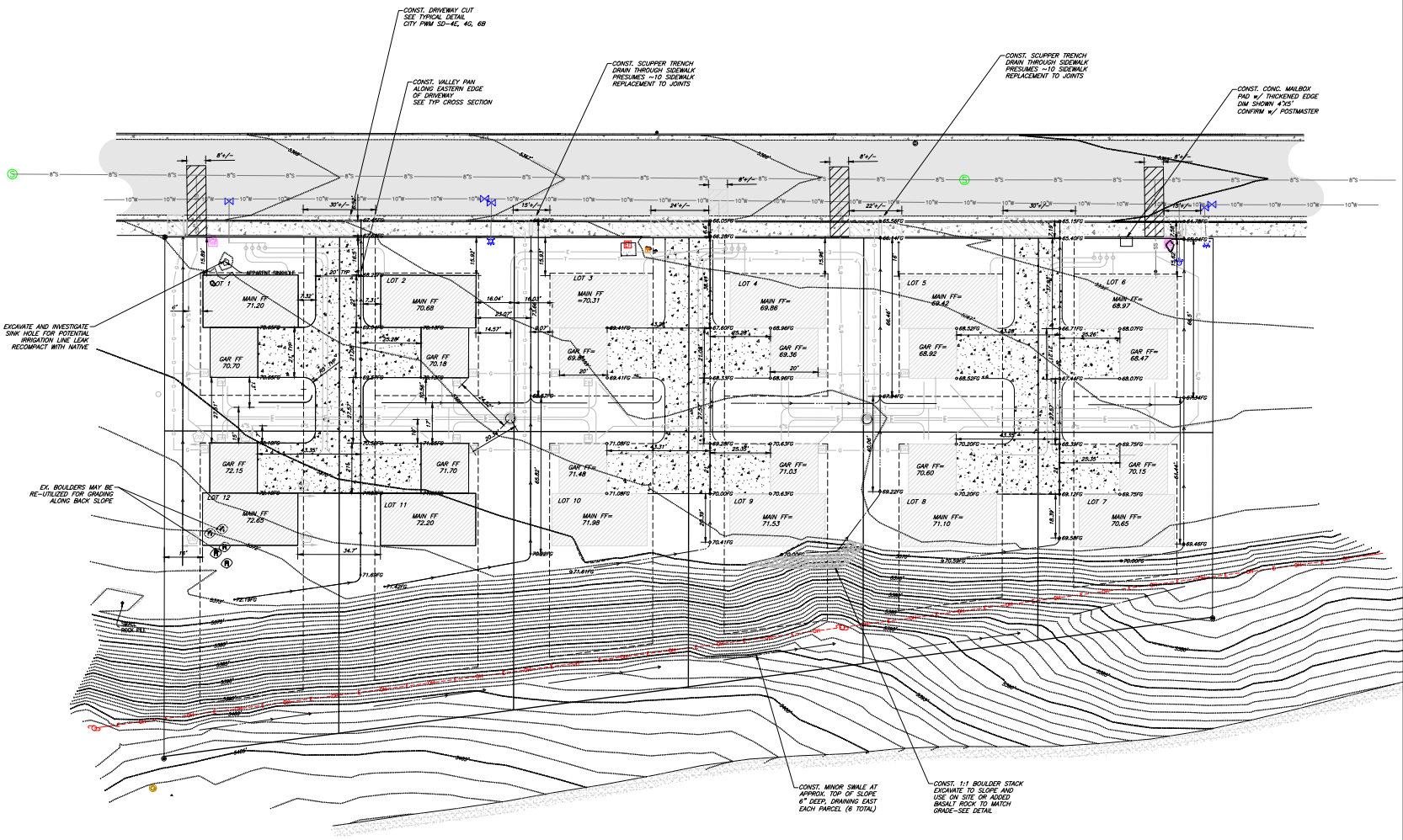
Site Plan

Dwg No.

C5

Of: 13

J:\2021\2021-333-Lastchancecommons\001\H-Dwgs\Civil\PS-Sheets\LCC-Site Plan.dwg Plotted: 3/11/2022 8:43 AM By: Rick Barth



Graphic Scale

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Revision	Date	By

Project Milestone: Preliminary Not For Construction

Job No.	2021-333
Drawn by:	JMW
Date:	March 8, 2022
QC:	JS | PE RLB
File:	LCC-Grading Plan

Title: Grading Plan

Dwg No. C6

Of: 13

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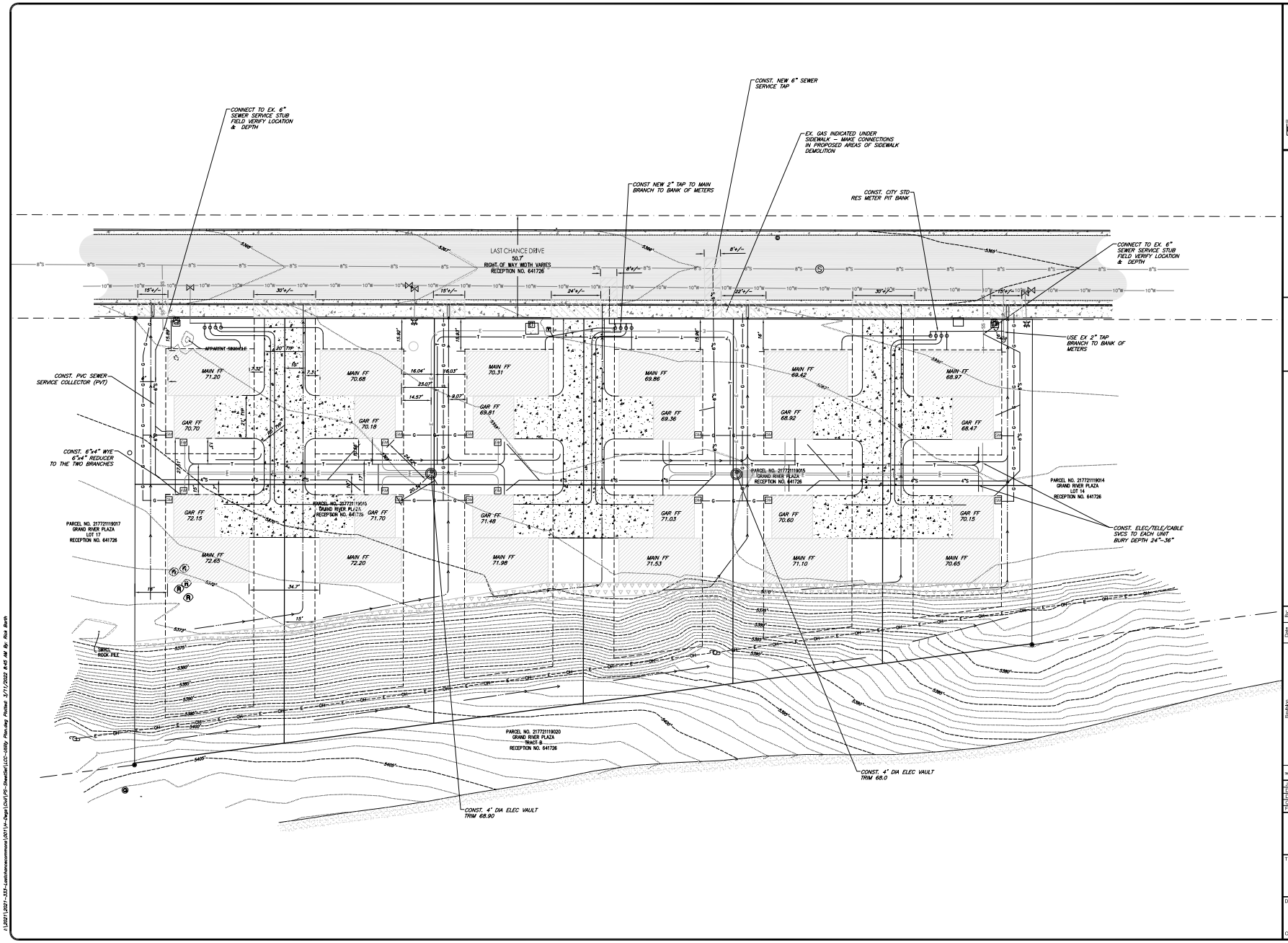

Graphic Scale

0 10 20 40

In Feet: 1" = 20'

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No.	Revision	Date	By
1	Project Milestone: Preliminary Not For Construction		

Job No.	2021-333
Drawn by:	JMW
Date:	February 21, 2022
QC:	JS PE: RLB
File:	LCC-Utility Plan

Title:

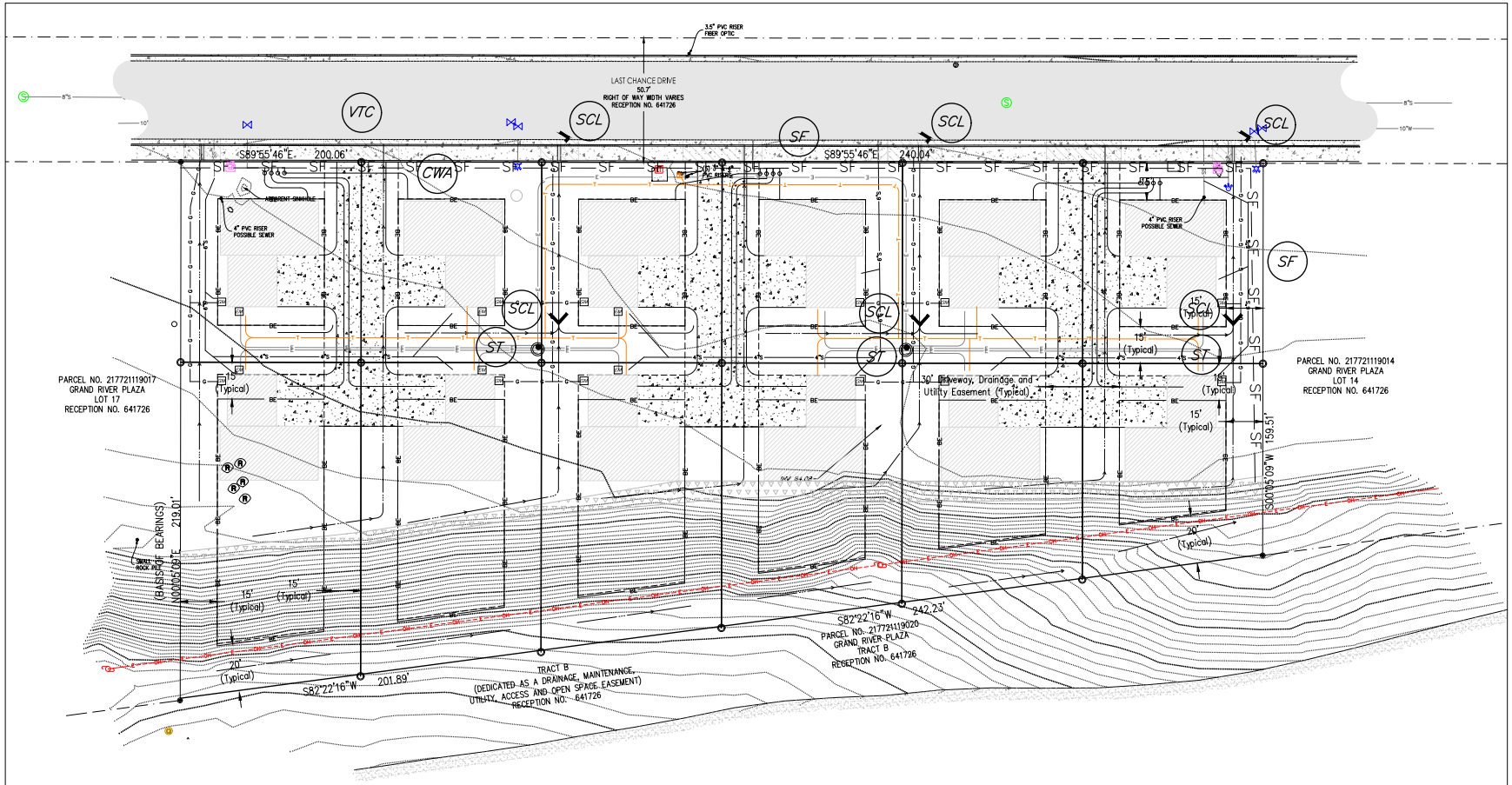
Utility Plan

Dwg No.

C7

Of: 13

J:\2021\2021-333-Lastchancecommons\001\Hydrogy\Civil\PD-Sheets\LCC-Utility Plan.dwg Plotted: 3/11/2022 8:45 AM By: Rob Barth



WATER QUALITY, SEDIMENT–EROSION CONTROL TOOLBOX

VTC	VEHICLE TRACKING PAD	A GRAVEL PAD, LOCATED AT THE POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE, TO REDUCE THE MUD TRANSPORTED ONTO ROADS AND PAVED AREAS.
CWA	CONCRETE WASH–OUT AREA	IMPERVIOUS, PREFABRICATED, HAULAWAY CONCRETE WASHOUT CONTAINER REQUIRED. NO DISCHARGE TO GROUND SURFACE PERMITTED. REMOVE CONCRETE WASTE IN THE WASHOUT AREA, AS NEEDED TO MAINTAIN BMP FUNCTION (TYPICALLY WHEN FILLED TO ABOUT TWO–THIRDS OF ITS CAPACITY). COLLECT CONCRETE WASTE AND DELIVER OFFSITE TO A DESIGNATED DISPOSAL LOCATION.
SCL	SEDIMENT CONTROL LOG	A TEMPORARY SEDIMENT BARRIER COMPOSED OF ANCHORED STRAW WATTLES PLACED ACROSS OR AT THE TOE OF A SLOPE TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM SMALL DRAINAGE AREAS; APPLICABLE WHERE SHEET AND RILL EROSION POTENTIAL IS LOW.
SBB	SANDBAG BARRIER	TEMPORARY STABILIZATION OF DITCHES BY PLACEMENT OF SANDBAGS PERPENDICULAR TO FLOW, ACCOMPANIED BY A DEPRESSION UPSTREAM FOR SEDIMENT RETENTION. GOOD FOR USE WHERE SOILS ARE DIFFICULT TO EXCAVATE, IN AREAS OF SHALLOW BEDROCK, AND IN STEEP DRAINAGES.
SF	SILT FENCE	A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FILTER FABRIC AND, IN SOME CASES, A WIRE SUPPORT FENCE, PLACED ACROSS OR NEAR THE TOE OF A SLOPE OR IN A MINOR DRAINAGEWAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE; APPLICABLE WHERE SHEET AND RILL OR SMALL CONCENTRATED FLOWS MAY BE A PROBLEM.
ST	SEDIMENT TRAP	A SMALL PONDING AREA, FORMED BY CONSTRUCTING AN EARTHEN EMBANKMENT WITH A GRAVEL OUTLET ACROSS A DRAINAGE SWALE, TO DETAIN SEDIMENT–LADEN RUNOFF FROM SMALL DISTURBED AREAS FOR ENOUGH TIME TO ALLOW MOST OF THE SEDIMENT TO SETTLE OUT.

Graphic Scale
0 10 20 40
In Feet: 1" = 20'

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No.	Revision	Date	By

Project Milestone: Preliminary Not For Construction

Job No.	2021-333
Drawn by:	XX
Date:	11.15.17
QC:	XX | PE: XX
File:	LCC-Erosion Control Plan

Title: Erosion Control Plan

Dwg No. C8

Of: 13

J:\2021\2021-333-Lastchancecommons\001\Hydrogy\Civil\PD-Sheets\LCC-Erosion Control Plan.dwg Plotted: 3/11/2022 2:14 AM By: Rick Barth

NOTES:

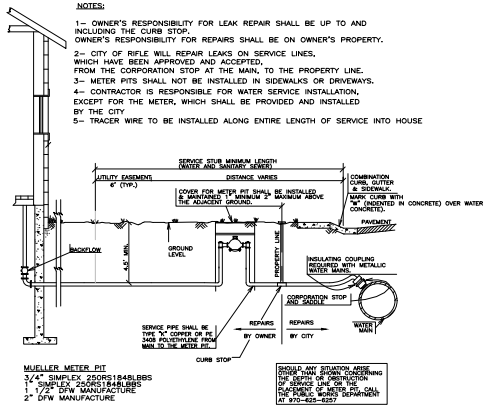
1– OWNER'S RESPONSIBILITY FOR LEAK REPAIR SHALL BE UP TO AND INCLUDING THE CURB STOP. OWNER'S RESPONSIBILITY FOR REPAIRS SHALL BE ON OWNER'S PROPERTY.

2– CITY OF RIFLE WILL REPAIR LEAKS ON SERVICE LINES, WHICH HAVE BEEN APPROVED AND ACCEPTED, FROM THE CORPORATION STOP AT THE MAIN, TO THE PROPERTY LINE.

3– METER PITS SHALL NOT BE INSTALLED IN SIDEWALKS OR DRIVEWAYS.

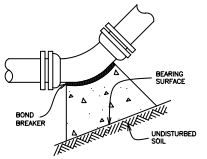
4– CONTRACTOR IS RESPONSIBLE FOR WATER SERVICE INSTALLATION, EXCEPT FOR THE METER, WHICH SHALL BE PROVIDED AND INSTALLED BY THE CITY

5– TRACER WIRE TO BE INSTALLED ALONG ENTIRE LENGTH OF SERVICE INTO HOUSE

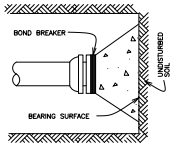


W–30 WATER SERVICE & PROFILE
5/8"– 3/4", 3/4"– 1"

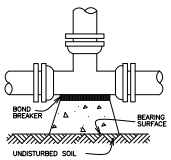
NOT TO SCALE



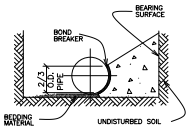
$11\frac{1}{4}°$, $22\frac{1}{2}°$, 45° AND 90° BENDS



DEAD END



TEE



TYPICAL CROSS SECTION

NOTES:

1.) BEARING SURFACES SHOWN IN CHART ARE MINIMUM.

2.) BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER. 4",6",8" AND 12" WATER HAMMER = 110 P.S.I. 16",20"AND 24" WATER HAMMER = 70 P.S.I.

3.) BASED ON 3,000 psf SOIL BEARING CAPACITY.

4.) ALL BENDS, TEE BRANCHES AND DEAD ENDS SHALL BE RESTRAINED AND KICK BLOCKED.

MINIMUM BEARING SURFACE AREA
(IN SQUARE FEET)

SIZE OF PIPE	BENDS				TEE OR DEAD END
	$11\frac{1}{4}°$	$22\frac{1}{2}°$	45°	90°	
4"	1.00	1.00	1.00	1.50	1.50
6"	1.00	1.25	2.25	3.00	3.00
8"	1.00	2.00	4.00	5.25	5.25
12"	2.25	4.50	8.75	11.25	11.25
16"	3.75	7.50	14.50	27.00	19.00
20"	5.00	10.00	19.50	35.50	25.00
24"	7.00	14.00	27.75	51.00	36.00

W–16 CONC. KICKBLOCKS BEARING SURFACES & INSTALLATION

NOT TO SCALE

Graphic Scale
0 10 20 40
In Feet: 1" = 20'

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No.	Date	Revision

Project Milestone: Preliminary Not For Construction

Job No. 2021-333
Drawn by: XX
Date: 11.15.17
QC: XX | PE: XX
File: LCC-Details

Title: Water Details

Dwg No. C9
Of: 13

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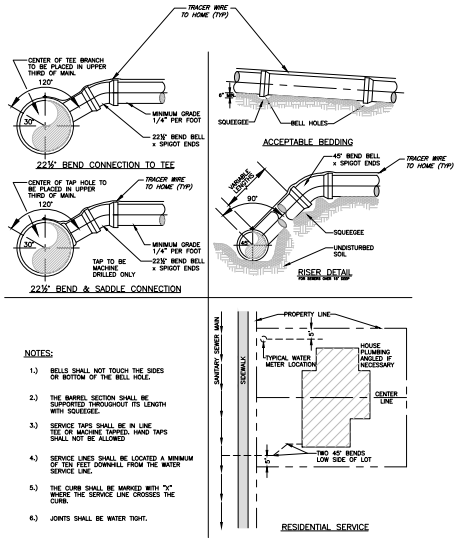


NOTES:

1.) BELLS SHALL NOT TOUCH THE SIDES OR BOTTOM OF THE BELL HOLE.

2.) THE BARREL SECTION SHALL BE SUPPORTED THROUGHOUT ITS LENGTH WITH SQUEEGEE.

3.) SERVICE TAPS SHALL BE IN LINE TEE OR MACHINE TAPPED. HAND TAPS SHALL NOT BE ALLOWED

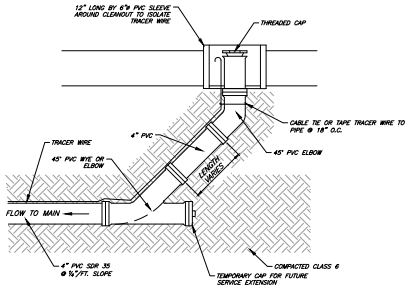
4.) SERVICE LINES SHALL BE LOCATED A MINIMUM OF TEN FEET DOWNHILL FROM THE WATER SERVICE LINE.

5.) THE CURB SHALL BE MARKED WITH "X" WHERE THE SERVICE LINE CROSSES THE CURB.

6.) JOINTS SHALL BE WATER TIGHT.

SS-6 SANITARY SEWER SERVICE DETAIL

NOT TO SCALE



SEWER CLEAN-OUT DETAIL

NOT TO SCALE

Graphic Scale

0 10 20 40

In Feet: 1" = 20'

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Project Milestone: Preliminary Not For Construction

Job No. 2021-333
Drawn by: XX
Date: 11.15.17
QC: XX | PE: XX
File: LCC-Details

Title: Sewer Details

Dwg No. C10

Of: 13

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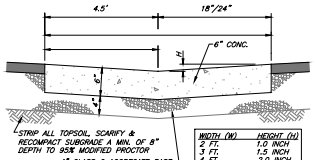
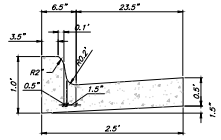
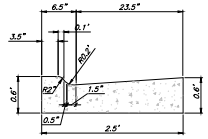


WIDTH (W)	HEIGHT (H)
2 FT.	1.0 INCH
3 FT.	1.5 INCH
4 FT.	2.0 INCH
6 FT.	2.5 INCH
8 FT.	3.0 INCH

VALLEY PAN DETAIL
SCALE: 1"= 1'-0"

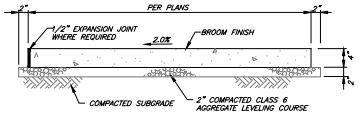


VERTICAL FACE CURB & GUTTER



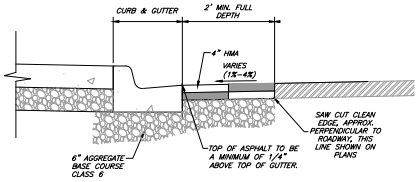
STANDARD DRIVEWAY GUTTER PLAN

SD-6B CURB & GUTTER SECTIONS
N.T.S.

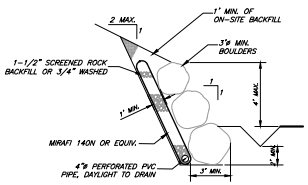


NOTES:
1) EXPANSION JOINTS: 100' ON CENTER AND AT DRIVEWAYS.
2) DUMMY JOINTS: 1" DEEP BY 1/8" – 1/4" WIDTH AT INTERVALS EQUAL TO SIDEWALK WIDTH.
3) USE 1/4" RADIUS ON ALL EDGES.
4) USE 6" DEPTH OF CONCRETE ON ALL DRIVEWAYS.
5) CURE FOR 72 HOURS USING CURING COMPOUND, PLASTIC COVERING OR MOISTURE.
6) USE 3750 PSI CONCRETE WITH FIBERMESH ADDITIVE AT 1-1/2 LBS./C.Y. MAXIMUM SLUMP 4".

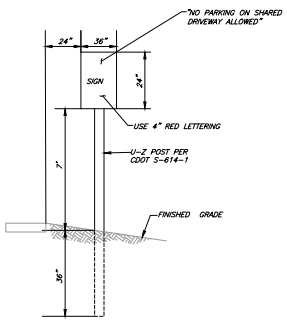
CONCRETE SIDEWALK
N.T.S.



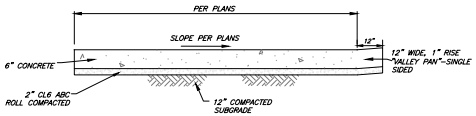
TYPICAL PATCH PAVEMENT JOINT
TO BE USED TO TRANSITION TO EX. PAVEMENT SURFACES
N.T.S.



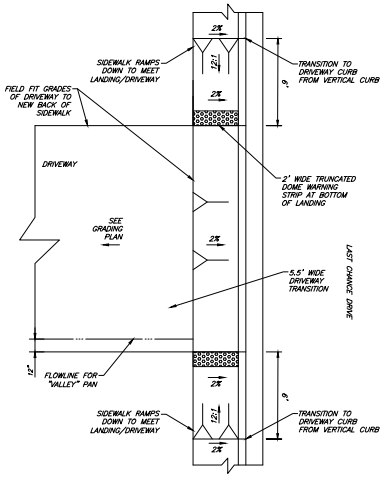
4' MAX. BOULDER RETAINING WALL
N.T.S.



NO PARKING SIGN DETAIL
NOT TO SCALE



DRIVEWAY SECTION
NOT TO SCALE



DRIVEWAY DETAIL
NOT TO SCALE

Graphic Scale
0 3 6 12
In Feet: 1" = 6'

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No.	Date	Revision
1		

Project Milestone: Preliminary Not For Construction

Job No.	2021-333
Drawn by:	JMW
Date:	July 29, 2021
QC:	JS PE RLB
File:	LCC-Details

Title: Site Details

Dwg No. C11
Of: 13

J:\2021\2021-333-Lastchancecommons\001\H-Dwgs\Civil\PS-Sheets\LCC-Details.dwg Plotted: 3/11/2022 8:14 AM By: Rob Barth

Agenda Item #5.c.i.

Agenda Item Name:
Consider Request for Community Service PUD Zoning for the Last Chance Commons Subdivision - Ordinance No. 9, Series of 2022 - 2nd Reading

Presenter:
Patrick Waller, Planning Director

Item Description:
The applicant requests approval of a Final Plan and PUD application to subdivide two parcels into 12 single-family residential lots. The proposal includes a request for a PUD that allows smaller setbacks for certain lots and a decrease in the minimum lot size.

This item is for the PUD request.

Recommended Action:
Staff recommends that Council approve Ordinance No. 9, Series of 2022, on second reading as presented.

Fiscal Impact:
Minimal

Operational Impact:
Minimal additional utility maintenance will be required by the City. The applicant will be responsible for maintenance of the driveway accesses.

Prior Board Motions:
None

Background Information:
The applicant requests approval of a Final Plan and PUD Zoning for a development consisting of twelve units on 1.9-acres, currently zoned Community Service (CS).

Executive Summary:
The proposal consists of twelve units on 1.9 acres. The applicant is proposing to use three separate accesses from Last Chance Drive. The proposed lot sizes vary from 9,727 square feet to 5,798 square feet. The PUD requests smaller minimum lot sizes (the zone district requires 6,000 square feet) and decreased Front Yard setbacks on lots 7-12 (the applicant is requesting 5 feet instead of 15 feet).

Notification Requirements:

The applicant was required to mail, publish, and post the property for the PUD request as required by the Rifle Municipal Code.

Prepared By:
Misty Williams, City Clerk

Attachments:
1. Ordinance No. 9-Last Chance Commons Rezoning

CITY OF RIFLE, COLORADO
ORDINANCE NO. 9
SERIES OF 2022

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO, REZONING LOTS 15 AND 16, GRAND RIVER PLAZA, FROM COMMUNITY SERVICE BUSINESS DISTRICT (CS) ZONE DISTRICT TO COMMUNITY SERVICE BUSINESS DISTRICT PLANNED UNIT DEVELOPMENT (CS-PUD).

WHEREAS, Brian's Epic Adventures, Inc. applied to rezone Lots 15 and 16, Grand River Plaza, in the City of Rifle, Colorado as shown on the plat thereof recorded with the Garfield County Clerk and Recorder as Reception No. 641726 (the "Property") from Community Service Business (CS) Zone District to Community Service Business District Planned Unit Development (CS -PUD); and

WHEREAS, on February 22, 2022, the City of Rifle Planning and Zoning Commission considered the rezoning application for the Property and, based upon changed circumstances and neighboring zoning, recommended that the Property be rezoned Community Service Business District Planned Unit Development (CS -PUD); and

WHEREAS, the City Council reviewed the rezoning application at its May 18 and June 1, 2022 meetings and agreed with the Planning and Zoning Commission's findings; and

WHEREAS, the City of Rifle Planning and Zoning Commission and the Rifle City Council have held duly noticed public hearings as required by the Rifle Municipal Code ("RMC") and now wish to rezone the Property to Community Service Business District Planned Unit Development (CS -PUD).

NOW, THEREFORE, THE COUNCIL OF THE CITY OF RIFLE, COLORADO, ORDAINS THAT:

Section 1. The aforementioned recitals are hereby fully incorporated herein.

Section 2. The Property is hereby zoned Community Service Business District Planned Unit Development (CS -PUD).

Section 3. Within thirty (30) days after the effective date of this Ordinance, the City Clerk shall incorporate the terms of this Ordinance into the Geographical Information System described in RMC §16-3-20 and shall cause a printed copy of the amendment to the City Zone District Map to be made, which shall be dated and signed by the Mayor and attested to by the City Clerk and which shall bear the seal of the City. The amended Map shall include the number of this Ordinance. The signed original printed copy of the Zoning Map shall be filed with the City Clerk. The Clerk shall also record a certified copy of this Ordinance with the Garfield County Clerk and Recorder. The City staff is further directed to comply with all provisions of the Rifle Land Use Regulations, RMC §16-1-10, *et seq*., to implement the provisions of this Ordinance.

INTRODUCED on May 18, 2022, read by title, passed on first reading, and ordered published as required by the Charter.

INTRODUCED a second time at a regular meeting of the Council of the City of Rifle, Colorado, held on June 1, 2022, passed without amendment, approved, and ordered published in full as required by the Charter.

DATED this _____ day of _____, 2022.

CITY OF RIFLE, COLORADO

By _____
Mayor

ATTEST:

_____
City Clerk

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #5.c.ii.

Agenda Item Name:
Consider Request for Final Plan Approval for Last Chance Commons - Ordinance No. 10, Series of 2022 - 2nd Reading and Subdivision Improvements Agreement

Presenter:
Patrick Waller, Planning Director

Item Description:
The applicant requests approval of a Final Plan and PUD application to subdivide two parcels into 12 single-family residential lots. The proposal includes a request for a PUD that allows smaller setbacks for certain lots and a decrease in the minimum lot size.

Recommended Action:
Staff recommends that Council approve Ordinance No. 10, Series of 2022, on second reading as presented and the Subdivision Improvements Agreement

Fiscal Impact:
Minimal

Operational Impact:
Minimal additional utility maintenance will be required by the City. The applicant will be responsible for the maintenance of the driveway accesses.

Prior Board Motions:
None

Background Information:
The applicant requests approval of a Final Plan and PUD Zoning for a development consisting of twelve units on 1.9-acres, currently zoned Community Service (CS).

Executive Summary:
The proposal consists of twelve units on 1.9 acres. The applicant is proposing to use three separate accesses from Last Chance Drive. The proposed lot sizes vary from 9,727 square feet to 5,798 square feet. The PUD requests smaller minimum lot sizes (the zone district requires 6,000 square feet) and decreased Front Yard setbacks on lots 7-12 (the applicant is requesting 5 feet instead of 15 feet).

Notification Requirements:
The applicant was required to mail, publish, and post the property for the PUD request as required by the Rifle Municipal Code.

Prepared By:
Misty Williams, City Clerk

Attachments:
1. Ordinance No. 10-Last Chance Commons Subdivision
2. SIA-Last Chance Commons

CITY OF RIFLE, COLORADO
ORDINANCE NO. 10
SERIES OF 2022

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO, APPROVING A FINAL SUBDIVISION PLAN AND FINAL SUBDIVISION PLAT FOR LAST CHANCE COMMONS

WHEREAS, there was filed with the Rifle Planning Department an application for combined Sketch/Preliminary Plan approval for subdivision of property owned by Brian's Epic Adventures, Inc. (hereinafter "Developer"), which property is knowns as Last Chance Commons and legally described as:

LOTS 15 AND 16,
GRAND RIVER PLAZA,
ACCORDING TO THE PLAT THEREOF,
RECORDED NOVEMBER 26, 2003 UNDER RECEPTION NO. 641726,
COUNTY OF GARFIELD, STATE OF COLORADO.
hereinafter the "Property"); and

WHEREAS, on February 22, 2022, after a duly-noticed public hearing, the City of Rifle Planning Commission approved a combined Sketch/Preliminary Plan for the Property; and

WHEREAS, on May 18, 2022 and June 1, 2022, the Rifle City Council reviewed the Final Subdivision Plan and the Final Subdivision Plat application for the Property and found these documents to be consistent with the approved Sketch/Preliminary Plan, and that all conditions of Sketch/Preliminary Plan approval have been met; and

WHEREAS, the City Council desires to approve the Final Subdivision Plan and Final Subdivision Plat for the Property, subject to all terms and conditions set forth in the Site-Specific Development Plan and Subdivision Improvements Agreement for the Property ("SIA") which SIA is available for inspection at the City Clerk's Office during business hours.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF RIFLE, COLORADO, ORDAINS THAT:

1. The City Council incorporates the foregoing recitals as findings by the City Council.

2. That certain Final Subdivision Plan and Final Subdivision Plat for Last Chance Commons, proposing development of 12 single family homes, is hereby approved subject to the conditions contained in the Rifle Planning Department staff report provided to the City Council and the SIA.

3. The Mayor of the City is hereby authorized to indicate the City Council's approval of the Final Subdivision Plan and Final Subdivision Plat and SIA for the Property by signing the

Final Plat and SIA. A true and correct copy of the Final Plat and SIA for the Property shall be deposited with the City Clerk and shall be available for public inspection at the Clerk's office after being fully executed by the parties.

4. Developer shall comply with all of Developer's representations made in any applications and in statements during the Public Hearings before the Planning Commission and City Council which shall be conditions of approval with which the Developer shall comply. The Developer shall also comply in full with the Rifle Municipal Code and the Public Works Manual requirements.

5. The City Clerk is hereby directed to file one (1) copy of the Final Plat and the original of this Ordinance in the Office of the City Clerk.

6. The City Clerk is hereby further directed to record this Ordinance, the Final Plat, the SIA and any other associated documents in the Office of the Clerk and Recorder of Garfield County, and to file one (1) certified copy of the Final Plat and this Ordinance with the Garfield County Assessor.

7. The City Council's approval of this Final Subdivision Plan and the Final Subdivision Plat for Phase 1 of the Property creates a vested property right pursuant to the Rifle Municipal Code and Article 68 of Title 24, C.R.S., as amended, for a period of three (3) years from the effective date of this Ordinance. As a condition of the granting of such vested right, the Developer shall, at its expense, publish the vested rights notice required by C.R.S. §24-68-103(c) and the Rifle Municipal Code §16-11-10, *et. seq.*, and Developer shall comply with all other procedural requirements set forth therein.

INTRODUCED on May18, 2022, read by title, passed on first reading, and ordered published as required by the Charter.

INTRODUCED a second time at a regular meeting of the Council of the City of Rifle, Colorado, held on June 1, 2022, passed without amendment, approved, and ordered published in full as required by the Charter.

Dated this _____ of _____, 2022.

CITY OF RIFLE, COLORADO

BY: _____
Mayor

ATTEST:

_____
City Clerk

SITE SPECIFIC DEVELOPMENT PLAN AND
SUBDIVISION IMPROVEMENTS AGREEMENT

LAST CHANCE COMMONS

THIS AGREEMENT made this _____ day of _____, 2022, by and between the CITY OF RIFLE, COLORADO, a home-rule municipality (hereinafter "City") and BRIAN'S EPIC ADVENTURES, INC. (hereinafter "Developer");

W I T N E S S E T H:

WHEREAS, Developer is the owner of certain real property located in the City of Rifle, Colorado, which property is to be known as Last Chance Commons and is further described as:

LOTS 15 AND 16,
GRAND RIVER PLAZA,
ACCORDING TO THE PLAT THEREOF,
RECORDED NOVEMBER 26, 2003 UNDER RECEPTION NO. 641726,
COUNTY OF GARFIELD, STATE OF COLORADO.
hereinafter the "Property"); and

WHEREAS, on May 18, 2022 and June 1, 2022, the City Council of the City of Rifle, after holding all necessary public hearings, approved by appropriate ordinance a Final Plat and Final Subdivision Plan for Last Chance Commons, which Ordinance No. 10, Series of 2022, which is recorded as Reception No. _____ in the Office of the Garfield County Clerk and Recorder; and

WHEREAS, the approvals cited above are contingent upon the express condition that all obligations and duties created by this Agreement are faithfully performed by the Developer.

NOW, THEREFORE, for and in consideration of the mutual promises and covenants contained herein, the parties hereto agree as follows:

1. Recitals. The foregoing recitals are incorporated herein as material representations and acknowledgments of the parties.

2. Purposes. The purpose of this Agreement is to set forth the terms and conditions to be met by the Developer; to set forth the fees to be paid by the Developer upon subdivision of the Property, and to constitute the Subdivision Improvement Agreement provided for in Sections 16-4-170, 16-5-440(d) and 16-6-180(c)(2) of the Rifle Municipal Code. All terms and conditions contained herein are in addition to all requirements of the Rifle Municipal Code, the City of Rifle Land Use Regulations (Title 16 of the Rifle Municipal Code), and state and federal statutes, and are not intended to supersede any requirements contained therein, except where specifically provided in this Agreement.

3. Reserved.

4. Fees. The following fees shall be paid to the City by the Developer:

A. Reimbursement of Costs. The Developer hereby agrees to pay the City the actual costs to the City for engineering, surveying, and legal services rendered in connection with the review of the subdivision of the Property. In addition, the Developer shall reimburse the City for the cost of making corrections or additions to the master copy of the official City map, for the fee for recording the Final Plat and accompanying documents with the County Clerk and Recorder of Garfield County. Developer shall also pay any fee required pursuant to the Rifle Municipal Code. Interest shall be imposed at rate of 1.5% per month on all balances not paid within thirty (30) days of the date of the statement. In addition to any and all remedies available to the City and in the event the City is forced to pursue collection of any amounts due and unpaid under this provision or under this Agreement, the City shall be entitled to collect attorney's fees and costs incurred in said collection efforts in addition to the amount due and unpaid.

B. Water and Sewer Taps. Developer, its successors and assigns, shall comply in full with Title 13 of the Rifle Municipal Code regarding tap fees for water and sewer service.

C. Water Rights Dedication. Developer shall pay the cash in lieu of the water rights dedication fees as required under RMC Section 13-6-10, *et. seq.* for the Property. For this purpose, prior to the recording of the Final Plat, Developer shall pay the fee then in effect at the rate of one (1) EQR for each lot created by the Plat for which potable water service is to be provided by the City. If there are additional EQRs associated with development of any of the lots, payment shall be due at the time of building permit for such units which raise the total EQRs above the above-referenced calculations. The water rights dedication fee per EQR to be paid will be the fee then in effect by an ordinance of general applicability. Further, the Developer agrees to be bound by any ordinance or resolution of general applicability that modifies these fees.

D. Parkland Dedication Fees. The City and Developer agree that the Property is subject to the City parkland dedication requirements set forth in Rifle Municipal Code §§16-1-90 and 16-4-110. Developer shall pay parkland dedication fees then in effect for each unit at the time of building permit application.

E. Offsite Street Impact Fees. The City and Developer agree that the Property is subject to offsite street impact fees as set forth in the RMC Section 16-1-100.

5. Specific Conditions. Developer agrees to perform the following conditions:

A. Representations. All representations of the Developer made in its application and in statements during the public hearings before the Planning Commission and City Council shall be considered conditions of approval with which the Developer shall comply.

B. Noxious Weed Control/Maintenance. Developer agrees and acknowledges that it shall, pending and during development of the Property, control the growth of noxious weeds on all parcels within the Property as required by the Rifle Municipal Code, and maintain the Property.

C. Privately Maintained Roads Open to the Public. The parties agree and acknowledge that the roads accessing and within the Property shall be open to the public with no gated access, but owned, maintained, repaired and replaced by the homeowners association created for the Property and the City has no obligations for the roads.

6. Pre-Construction Meeting. Developer shall hold a pre-construction meeting between the City Engineer and Public Works Director and the Developer, its engineer and contractor for the purpose of discussing all construction issues that will be required for this project.

7. Public Improvements. All water lines, water facilities, sewer lines, sewer facilities, hydrants, landscaping, water or sewer distribution facilities, drainage structures, gas lines, electrical facilities, cable T.V., telephone lines, utility systems, streets (public and/or private), lighting, landscaping and signage required by this Agreement or shown on the final subdivision plat (the "public improvements") shall be installed and completed at the expense of the Developer.

A. General Responsibility. All public improvements required by this Agreement and shown on the Final Subdivision Plat submittal, and the estimated costs thereof, are identified on Exhibit A attached hereto. The public improvements shall be constructed in conformance with the plans and specifications submitted by the Developer as part of the Final Plat application and approved by the City Public Works Director or his/her designee, including all supplemental plans and specifications submitted, which plans and specifications are on file at City Hall, the City of Rifle Public Works Manual then in effect, and the utility plan (hereinafter collectively referred to as "Plans and Specifications").

8. Construction Observation and Inspection.

A. Construction Inspection by Developer. Developer shall be responsible for ensuring that its certified professional engineer provides construction inspection services as necessary to allow Developer's engineer to provide a stamped certification, when improvements are submitted to the City for acceptance, that

the Public Improvements have been constructed in accordance with the Plans and Specifications approved by the City.

B. Construction Observation by the City. The City shall have the right to make engineering observations at reasonable intervals and at the Developer's expense during construction of the public improvements. Observation, acquiescence in or approval by any engineering inspector of the construction of any physical facilities, at any particular time, shall not constitute City approval of any phase of construction of the public improvements. City approvals shall be made only after completion of construction and in the manner hereinafter set forth. To assist the City in monitoring the installation of the public improvements, a supervisor employed by the Developer's general contractor shall inspect the public improvements on at least a weekly basis, and shall provide the City Public Works Director or his/her designee with supervisor's field and inspection notes relating to the installation of the public improvements which have been reviewed and stamped by a professional engineer. The supervisor shall regularly apprise the City Public Works Director or his/her designee of the status of the work on the public improvements. Further, the Developer at its own expense shall have an approved geotechnical engineer monitor the methods of construction and backfill, to ensure such work is being completed in conformance with the approved plans and specifications, and accepted standards for such work. The geotechnical engineer shall conduct inspections and testing as directed by the City Public Works Director or his/her designee. The City agrees to respond to requests for interim inspections in a timely manner and to respond not later than ten (10) business days after a request for a final inspection. Nothing in this paragraph shall be construed to constitute an acceptance by the City of the Public Improvements, which approval and acceptance shall only occur pursuant to the specific provisions below.

9. Acceptance; Conveyance. Within thirty (30) days of the Acceptance Date, the Developer shall execute a quit-claim deed to the City conveying any interests it has in the public improvements. The Developer shall also execute a bill of sale conveying the public improvements to the City, free and clear of all liens and encumbrances. All public improvements conveyed to the City shall be warranted for a period of twelve (12) months from the Acceptance Date, as provided below.

10. Warranty. Developer shall warrant any and all public improvements and facilities which are conveyed to the City pursuant to this Agreement (i.e. water and sewer facilities and lines, public roads and facilities located on or under public lands and easements) for a period of 12 months from the Acceptance Date. Specifically, but not by way of limitation, Developer shall warrant that:

A. The title conveyed shall be good and its transfer rightful;

B. Any and all facilities conveyed shall be free from any security interest or other lien or encumbrance; and

C. Any and all facilities so conveyed shall be free of any defects in materials or workmanship for a period of one (1) year, as stated above.

11. Performance Guarantee. The total amount of required security for the Public Improvements for the Property are specified on Exhibit A.

A. In order to secure the construction and installation of the Public Improvements above described for which Developer is responsible, Developer shall furnish the City with a certificate or other evidence in good and sufficient form approved by the City Attorney of an irrevocable letter of credit issued or confirmed by a commercial banking institution authorized to do business and with offices located within the State of Colorado to secure the performance and completion of the Public Improvements required by this Agreement in an amount equal to the estimated costs of said facilities as set forth on Exhibit A. The City shall have the right to review and approve all terms and conditions of the letter of credit prior to recording of the Final Plat; or, in the alternative, delay recording the Final Plat until all Public Improvements are constructed and, if applicable, accepted by the City pursuant to this Agreement.

The original letter of credit shall be delivered to the City prior to the recordation of the Final Plat. This Letter of Credit shall comply in all respects with the Uniform Customs and Practice for Documentary Credits, 1993 Revision, issued by the International Chamber of Commerce, Paris, to the extent it does not conflict with Article 5 of the Colorado Uniform Commercial Code.

B. In the event the Public Improvements are not constructed or completed within 12 months of the date of this Agreement, the letter of credit shall provide that the funds necessary to complete the Public Improvements shall be put directly into an escrow account under the control of the City Manager and shall be used to complete the Public Improvements called for herein.

C. Within ten (10) days of timely completion of the Public Improvements, and performance of the conditions and requirements of this Agreement secured by the performance guarantee, and upon the approval of the City Manager, the performance guarantee shall be released to Developer. If the improvements are not completed within the required time, the performance guarantee may be called by the City and the monies may be used to complete the improvements; provided, however, that if such guarantee is not sufficient to pay the actual costs, the Developer shall be responsible for the balance.

D. The required security for the Public Improvements is the amount mutually agreed upon by the Developer and the City Engineer as set forth above. The parties agree that this amount does not necessarily reflect the City Engineer's estimate of what the actual cost to the City would be if the City were required to fund construction of all of the Public Improvements. In the event the costs of the Public Improvements exceed the amount set forth above, Developer shall be solely responsible for the actual cost. The purpose of Exhibit A is solely to determine the amount of security and shall be revised as necessary to reflect the actual costs, and the performance guarantee required by this SIA shall be adjusted accordingly. No representations are made as to the accuracy of these estimates, and the Developer agrees to pay the actual costs of all such Public Improvements.

E. The parties expressly agree that the Developer's preparation and submission to the City of "as-built drawings" and a summary of actual construction costs for the Public Improvements to be dedicated to the City--and approval by the City of the as-built drawings and summary--are essential requirements of this Agreement. In the event the Developer fails to provide the as-built drawings and summary to the City thirty (30) days prior to the expiration of the performance guarantee or any extension thereof, such failure shall constitute a breach of this Agreement with regard to the completion of the Public Improvements, damages for which are impossible to ascertain, entitling the City to call upon the performance guarantee in an amount equal to ten (10%) percent of the total amount set forth on Exhibit A, which amount the City may retain as liquidated damages due to Developer's breach. No releases to the letter of credit shall be granted by the City until such as-built drawings are provided and the secured improvements are accepted by the City pursuant to the provisions of this Agreement.

12. Title Policy. Prior to the recordation of the Final Plat for the Property, the Developer shall provide the City a commitment for a title insurance policy, indicating that the Property is free and clear of all encumbrances whatsoever which would impair the use of the Property as proposed by the Final Subdivision Plat. Further, said title commitment, and/or an additional title commitment, shall show that all other property to be dedicated to the City is free and clear of all encumbrances which would make said dedications unacceptable as the City in its sole discretion determines. At the time of recording the Final Plat, the title insurance policy(s) shall be provided to the City, and the premium(s) for the title insurance shall be paid by the Developer. In the event the title commitment(s) reflect encumbrances which would impair the use of the Property as proposed or which would make the public dedications unacceptable, the City shall notify the Developer, who shall cure or otherwise remove or subordinate said encumbrances to the satisfaction of the City prior to the recordation of the Final Plat.

13. Vested Rights. Pursuant to Section 16-11-10, *et. seq.*, of the Rifle Municipal Code, the City and the Developer agree that the City Council's final subdivision plat approval of

Pioneer Mesa Subdivision constitutes the approval of a "Site Specific Development Plan", and no further hearings are required. Pursuant to the approval by the City Council of the Final Plat for the Property, the City will have granted vested property rights for the Property for a period of three (3) years from the effective date of the City ordinance approving this Agreement and the Final Plat upon the condition that the Developer comply with all of the terms and conditions of this Agreement, the Final Plat for the Property, and the development submittal. Such rights shall also be subject to the provisions of Rifle Municipal Code Section 16-11-10, *et. seq*. The Developer shall at its expense publish the vested rights notice required by C.R.S. §24-68-103(1) and Rifle Municipal Code Section 16-11-50.

14. Owners Association; Covenants. The Property shall be subject to an owners association created by the Developer under the laws of the State of Colorado at the time of Final Subdivision Plat recording that sets forth the ownership and maintenance obligations of the private road accessing the Property and all other common elements on the Property.

15. Conditions of Building Permit / Certificate of Occupancy. In addition to all requirements of the Rifle Municipal Code and any requirements imposed by operation of state, federal, or local law, no building permits shall be issued for the Property until:

A. This SIA has been recorded in the Office of the Garfield County Clerk and Recorder, and a recorded copy is on file in the Office of the City Clerk.

B. The Final Plat has been recorded in the Office of the Garfield County Clerk and Recorder, and a recorded copy is on file in the Office of the City Clerk.

C. All public improvements have been accepted, or a performance guarantee to secure all public improvements has been provided in accordance with this SIA.

16. Voluntary Action of Developer. Notwithstanding any provision of the Rifle Municipal Code, the Developer agrees that all terms and conditions of this Agreement, including specifically the payment of fees, the dedication of land, and the completion of off-site infrastructure improvements, are agreed to and constitute the voluntary actions of the Developer.

17. Breach by Developer; City's Remedies. In the event of any default or breach by the Developer of any term, condition, covenant or obligation under this Agreement, the City Council shall be notified immediately. The City may take such action as it deems necessary to protect the public health, safety, and welfare; to protect lot buyers and builders, and to protect the citizens of the City from hardship. The City's remedies include:

A. The refusal to issue to the Developer any building permit or certificate of occupancy; provided, however, that this remedy shall not be available to the City until after the affidavit described below has been recorded;

B The recording with the Garfield County Clerk and Recorder of an affidavit, approved in writing by the City Attorney and signed by the City Manager or his designee, stating that the terms and conditions of this Agreement have been breached by the Developer. At the next regularly scheduled City Council meeting, the City Council shall either approve the filing of said affidavit or direct the City Manager to file an affidavit stating that the default has been cured. Upon the recording of such an affidavit, no further lots or parcels may be sold within the Property until the default has been cured. An affidavit signed by the City Manager or his designee and approved by the City Council stating that the default has been cured shall remove this restriction;

C. A demand that the security given for the completion of the public improvements be paid or honored;

D. The refusal to consider further development plans within the Property; and/or

E. Any other remedy available at law.

Unless necessary to protect the immediate health, safety, and welfare of the City or City residents, the City shall provide the Developer ten (10) days' written notice of its intent to take any action under this paragraph during which ten-day period the Developer may cure the breach described in said notice and prevent further action by the City. Furthermore, unless an affidavit as described in 17(B), above, has been recorded with the Garfield County Clerk and Recorder, any person dealing with the Developer shall be entitled to assume that no default by the Developer has occurred hereunder unless a notice of default has been served upon Developer as described above, in which event Developer shall be expressly responsible for informing any such third party of the claimed default by the City.

18. Assignment. This Agreement may not be assigned by the Developer without the prior written consent of the City, which consent shall not be unreasonably withheld. In the event Developer desires to assign its rights and obligations herein, it shall so notify the City in writing together with the proposed assignee's written agreement to be bound by the terms and conditions contained herein.

19. Indemnification. Developer agrees to indemnify and hold the City harmless from any and all claims or losses of any nature whatsoever incurred by the City resulting from the subdivision of the Property. This indemnification shall include actual attorneys' fees incurred in the event that any party brings an action against the City for any of the approvals described herein. The parties hereto intend not to duplicate any legal services or other costs associated with the defense of any claims against either party described in this section. Therefore, the parties hereto agree to cooperate in full to prevent duplicative expenses incurred as a result of the indemnification herein described.

20. Waiver of Defects. In executing this Agreement, Developer waives all objections it may have concerning defects, if any, in the formalities whereby it is executed, or concerning the power of the City to impose conditions on Developer as set forth herein, and concerning the procedure, substance, and form of the ordinances or resolutions adopting this Agreement.

21. Final Agreement. This Agreement supersedes and controls all prior written and oral agreements and representations of the parties and is the total integrated agreement between the parties.

22. Modifications. This Agreement shall not be amended, except by subsequent written agreement of the parties.

23. Release of Liability. It is expressly understood that the City cannot be legally bound by the representations of any of its officers or agents or their designees except in accordance with the City of Rifle Code and Ordinances and the laws of the State of Colorado, and that Developer, when dealing with the City, acts at its own risk as to any representation or undertaking by the City officers or agents or their designees which is subsequently held unlawful by a court of law.

24. Captions. The captions in this Agreement are inserted only for the purpose of convenient reference and in no way define, limit, or prescribe the scope or intent of this Agreement or any part thereof.

25. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, successors, and assigns.

26. Invalid Provision. If any provisions of this Agreement shall be determined to be void by any court of competent jurisdiction, then such determination shall not affect any other provision hereof, all of which other provisions shall remain in full force and effect. It is the intention of the parties hereto that, if any provision of this Agreement is capable of two constructions, one of which would render the provision void, and the other of which would render the provision valid, then the provision shall have the meaning which renders it valid.

27. Governing Law. The laws of the State of Colorado shall govern the validity, performance, and enforcement of this Agreement. Should either party institute legal suit or action for enforcement of any obligation contained herein, it is agreed that the venue of such suit or action shall be in Garfield County, Colorado.

28. Attorneys' Fees; Survival. Should this Agreement become the subject of litigation, the substantially prevailing party shall be entitled to, and the failing party shall pay, all reasonable attorneys' fees, expenses, and court costs. All rights concerning remedies and/or attorneys shall survive any termination of this Agreement.

29. Authority. Each person signing this Agreement represents and warrants that he is fully authorized to enter into and execute this Agreement, and to bind the party it represents to the terms and conditions hereof.

30. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which, when taken together, shall be deemed one and the same instrument.

31. Notice. All notices required under this Agreement shall be in writing and shall be hand-delivered or sent by registered or certified mail, return receipt requested, postage prepaid, to the addresses of the parties herein set forth. All notices so given shall be considered effective seventy-two (72) hours after deposit in the United States mail with the proper address as set forth below. Either party by notice so given may change the address to which future notices shall be sent.

Notice to City:	City of Rifle P. O. Box 1908 Rifle, CO 81650
With copy to:	Karp Neu Hanlon, P.C. P. O. Drawer 2030 Glenwood Springs, CO 81602
Notice to Developer:	BEA, Inc. 441 Boundary Lane Carbondale, CO 81623

33. Gender. Whenever the context shall require, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

WHEREFORE, the parties hereto have executed duplicate originals of this Agreement on the day and year first written above.

CITY OF RIFLE, COLORADO

By: _____
Mayor

ATTEST:

_____
Clerk

BRIAN'S EPIC ADVENTURES, INC.:

By: _____
Brian Stowell, President

STATE OF COLORADO)
) ss.
COUNTY OF)

Acknowledged, subscribed, and sworn to before me this ____ day of _____, 2022, by Brian Stowell as President of Brian's Epic Adventures, Inc.

WITNESS my hand and official seal.

My Commission expires: _____.

_____
Notary Public

EXHIBIT A

Cost Estimates

LAST CHANCE COMMONS-PHASE 1 (INFRASTRUCTURE) DEVELOPMENT HARD COSTS	
Mobilization	$8,000
Survey	$7,000
Geotechnical	$6,500
Erosion Control	$6,650
Rough Grading/Overlot	$5,500
Concrete Demo	$3,000
6" Sewer Main	$48,450
4" Sewer Services	$39,000
Water Main/Services	$66,000
Curb & Gutter Prep	$2,600
Sidewalk Prep	$6,000
Shared Driveway Prep	$28,000
Curb & Gutter	$6,000
4" Sidewalk	$8,000
6" Sidewalk	$7,200
Electrical Trenching	$10,000
Electrical Conduit	$35,000
Gas Trenching	$5,000
Shared Driveway Paving	$46,000
Sanitary	$275
Waste	$1,200
	$345,375
Contingency (8%)	$27,630
	$373,005

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #5.d.

Agenda Item Name:
Consider Amending Section 10-3-50 of the City of Rifle Municipal Code Setting Forth the Definition of the Municipal Offense of Harassment - Ordinance No. 11, Series of 2022 - 2nd Reading

Presenter:
Kathy Pototsky, Court Clerk / PIO

Item Description:
This amendment is to clarify language in the harassment code as well as update the term "telephone" to "phone" to assure that our definitions are keeping up with technological developments.

Recommended Action:
Move to approve Ordinance No. 11, Series of 2022, amending section 10-3-50 of the City of Rifle Municipal Code setting forth the definition of the municipal offense of harassment on second reading as presented and order it to be published as required by Charter.

Fiscal Impact:
none

Operational Impact:
none

Prior Board Motions:
none

Background Information:
Last month, in People v. Moreno, the Colorado Supreme Court struck down a section of the state harassment statute (C.R.S 18-9-111) as unconstitutionally vague. The wording in the Rifle Municipal Code's Harassment ordinance (10-3-50) is substantially similar. In an effort to preempt any issues, we are recommending clarifying our wording as well as updating other sections of the same ordinance by changing "telephone" to "phone".

Executive Summary:
n/a

Notification Requirements:
none

Prepared By:
Misty Williams, City Clerk

Attachments:

1. Ordinance No. 11-Harassment Text Amendment

CITY OF RIFLE, COLORADO
ORDINANCE NO. 11
SERIES OF 2022

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO AMENDING SECTION 10-3-50 OF THE CITY OF RIFLE MUNICIPAL CODE SETTING FORTH THE DEFINITION OF THE MUNICIPAL OFFENSE OF HARASSMENT

WHEREAS, the City of Rifle ("Rifle" or the "City") is a home-rule municipality organized pursuant to Article XX of the Colorado Constitution and with the authority of the Rifle Home Rule Charter; and

WHEREAS, Section 10-3-50 of the City of Rifle Municipal Code (the "Code") defines the municipal offense of harassment; and

WHEREAS, the Colorado Supreme Court recently interpreted the definition of harassment in Section 18-9-111, C.R.S., and concluded that certain language was unconstitutionally overbroad; and

WHEREAS, the City Council finds and determines that amending the language in Section 10-3-50 of the Code as described herein in light of the Court's interpretation of the state statute is in the best interest of the public health, safety and welfare of the citizens of Rifle.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF RIFLE, COLORADO, ORDAINS THAT:

1. The foregoing recitals are incorporated by reference as findings and determinations of the City Council.

2. Section 10-3-50 of the Code is hereby amended as follows (deletions shown in ~~strikethrough~~, additions shown in double underline):

Sec. 10-3-50. - Harassment.

(a) A person commits harassment if, with intent to harass, annoy or alarm another person, he or she:

(1) Strikes, shoves, kicks or otherwise touches a person or subjects him or her to physical contact;

(2) In a public place directs obscene language or makes an obscene gesture to or at another person, which is a Class B municipal offense;

(3) Follows a person in or about a public place, which is a Class B municipal offense;

(4) Directly or indirectly ~~I~~nitiates communication with a person, anonymously or otherwise by ~~tele~~phone, phone network, data network, text message, instant message, computer, computer network or computer system, or other interactive electronic medium in a manner intended to ~~harass~~ cause a reasonable person serious emotional distress or threaten~~s~~ bodily injury or property damage, or makes any comment, request, suggestion or proposal by ~~tele~~phone, phone network, data network, text message, instant message, computer, computer network or computer system, or other interactive electronic medium which is obscene, which is a Class B municipal offense;

(5) Makes a ~~tele~~phone call or causes a ~~tele~~phone to ring repeatedly, whether or not a conversation ensues, with no purpose of legitimate conversation, which is a Class B municipal offense;

(6) Makes repeated communications at inconvenient hours that invade the privacy of another and interfere in the use and enjoyment of another's home or private residence or other private property, which is a Class B municipal offense; or

(7) Repeatedly insults, taunts, challenges or makes communications in offensively coarse language to another in a manner likely to provoke a violent or disorderly response, which is a Class B municipal offense.

(b) Any act prohibited by Paragraph (a)(4) above may be deemed to have occurred or to have been committed at the place at which the ~~tele~~phone call, electronic mail or other electronic communication was either made or received.

(c) As used in this Section, unless the context otherwise requires, obscene means a patently offensive description of ultimate sexual acts or solicitation to commit ultimate sexual acts, whether or not said ultimate sexual acts are normal or perverted, actual or simulated, including masturbation, cunnilingus, fellatio, anilingus or excretory functions.

INTRODUCED on May 18, 2022 read by title, passed on first reading, and ordered published as required by the Charter.

INTRODUCED a second time at a regular meeting of the Council of the City of Rifle, Colorado held on June 1, 2022, passed without amendment, approved, and ordered published in full as required by the Charter.

DATED this _____ day of _____, 2022.

CITY OF RIFLE, COLORADO

By _____
Mayor

ATTEST:

_____
City Clerk

Agenda Item #5.e.

Agenda Item Name:
Designating Persons Authorized to Sign Checks - Resolution No. 6, Series of 2022

Presenter:
Misty Williams, City Clerk

Item Description:
Designating Persons Authorized to Sign Checks - Resolution No. 6, Series of 2022

Recommended Action:
Approve Resolution No. 6, Series of 2022

Fiscal Impact:
None

Operational Impact:
None

Prior Board Motions:
None

Background Information:
Resolution No. 6, Series of 2022 designates four individuals authorized to sign City checks. These individuals are determined by the office or position they hold in the City.

Executive Summary:
Resolution No. 6, Series of 2022 designates four individuals authorized to sign City checks. These individuals are determined by the office or position they hold in the City.

Notification Requirements:
N/A

Prepared By:
Misty Williams, City Clerk

Attachments:
1. Resolution No. 6-Series of 2022-Banking Signors

CITY OF RIFLE, COLORADO
RESOLUTION NO. 6
SERIES OF 2022

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RIFLE, DESIGNATING PERSONS AUTHORIZED TO SIGN CITY CHECKS

WHEREAS, the City of Rifle has traditionally required three signatures on City checks; and

WHEREAS, the City Council desires to designate those individuals authorized to sign City checks.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Rifle that the following four persons, by reasons of their office, are the only authorized signatories on all City checks and any prior authorizations are hereby revoked:

Ed Green _____
Mayor

Thomas Klein _____
City Manager

Misty Williams _____
City Clerk

Scott Rust _____
Finance Director

THIS RESOLUTION was read, passed, and adopted by the Rifle City Council at the Regular City Council Meeting held this 1st day of June, 2022.

CITY OF RIFLE, COLORADO

By _____
Mayor

ATTEST:

_____
City Clerk

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #7.a.

Agenda Item Name:
Consider Awarding Contract to Frontier Paving, Inc. for the Construction Services on the 2022 Street and Asphalt Improvements

Presenter:
Craig Spaulding, Civil Engineer

Item Description:
The 2022 Asphalt and Street Improvements Include the following

Airport Road: is a mill and overlay from the West Entrance of Enterprise Court to approximately 61' West of Baron Lane. There is also a waterline crossing that will be replaced with approximately 100' of 12" C900. The roadway will be milled 2" and overlayed with one 3" mat. The drive lanes will receive a Tencate MVP 500 or equivalent prior to the overlay installed per the manufacturer's recommendation. Two driveways will require full-depth asphalt. Removal and base prep at these locations will be performed by the City of Rifle. All other driveways will receive a two-foot-wide mill and a sliver fill apron. Striping will be water-based. All striping layouts shall match existing and will be the responsibility of the contractor. Traffic control will be the responsibility of the contractor. Airport Road is to remain open during construction. Business access shall remain with the only exception being when the asphalt is placed. At this time, it is understood that access will be blocked until the mat is sufficiently cool to drive on.

Enterprise Court: The project will also pave 175 of Enterprise Court where removal and excavation is performed by the City of Rifle. The asphalt is 6" thick and shall be placed in 3 lifts.

Railroad Avenue: The Railroad Avenue bridge asphalt will be milled and cleaned to an acceptable surface based on the waterproofing membrane's manufacturer recommendation. The approaches will be removed at full depth, approximately 10' to the north and 25' to the south of the bridge joint. This will be replaced with a 6" mat placed in three lifts. The bridge overlay will be 2" and striping will be done by others. A method statement for milling, cleaning, waterproofing, and paving shall be submitted within 2 weeks of the NTP for review by the COR and a structural engineer to verify loads being applied to the bridge during construction activities. This submittal should include model numbers for the equipment used. W 7th Street: The project will also pave 237 lf of W 7th St between Mesa and Moki Ave where removal and excavation are performed by the City of Rifle. The asphalt is 4" thick and will be placed in 2 lifts.

Cemetery: The trails at the Cemetery will be removed, scarified, moisture conditioned, compacted, and put back with a 5" asphalt mat placed in two lifts. The trails are 9' wide with a 6"-1' shoulder on both sides. The shoulder shall be moisture conditioned and compacted Class 6. Trails shall be removed and repaved in a sequence that allows access to the portions of the cemetery that are not under construction.
Through a competitive bid process, Frontier Paving was the only bid received. The bid is under the engineer's estimate and within budget.

Recommended Action:
Move to approve the contract for construction services in the amount of $1,477,868.42 for the 2022 Asphalt and Street Improvements to Frontier Paving, Inc.

Fiscal Impact:
N/A

Operational Impact:
N/A

Prior Board Motions:
N/A

Background Information:
N/A

Executive Summary:
N/A

Notification Requirements:
N/A

Prepared By:
Craig Spaulding, Civil Engineer

Attachments:
1. APO 2022 Bid Analysis
2. 2022 Asphalt and Steet Improvements Project Manual
3. APO 2022_location map
4. PURCHASE REQUEST-2022 APO_FPI 5-26-22

Schedule A-Airport Road					Frontier Paving		Eng. Est			
Item		Description	Unit	Est. Quantity	Unit Cost	Scheduled Value	Unit Cost	Scheduled Value	Bid Est %	Over/(Under)
A1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 23,500.00	$ 23,500.00	$ 22,000.00	$ 22,000.00	107%	$ 1,500.00
A2	Traffic Control	Includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1	$ 23,500.00	$ 23,500.00	$ 25,000.00	$ 25,000.00	94%	$ (1,500.00)
A3	Mill Asphalt	Milling to remove 2" of Asphalt per Sq. Yard	SY	21584	$ 2.00	$ 43,168.00	$ 3.50	$ 75,544.00	57%	$ (32,376.00)
A4	Mill Asphalt	Milling to remove 1" of Asphalt per Sq. Yard	SY	285.3333333	$ 15.00	$ 4,280.00	$ 4.50	$ 1,284.00	333%	$ 2,996.00
A5	3" Hot Mix Asphalt	(1) 3" lift,Compacted, tack & prime coats, Complete, per Sq. Yard	SY	21584	$ 22.50	$ 485,640.00	$ 33.00	$ 712,272.00	68%	$ (226,632.00)
A6	4" HMA at Driveways	(2) 2" lift,Compacted, Complete, per Sq. Yard	SY	285.3333333	$ 46.50	$ 13,268.00	$ 37.00	$ 10,557.33	126%	$ 2,710.67
A7	2" Thick transition apron at driveway	(2) 2" lift,Compacted, Complete, per Sq. Yard	SY	285.3333333	$ 22.50	$ 6,420.00	$ 38.00	$ 10,842.67	59%	$ (4,422.67)
A8	Paving Mat	furnished and intalled per manufacturer's reccomendations, per SY	SY	14554	$ 6.00	$ 87,324.00	$ 4.50	$ 65,493.00	133%	$ 21,831.00
A9	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	120	$ 124.00	$ 14,880.00	$ 29.00	$ 3,480.00	428%	$ 11,400.00
A10	4" Solid White Striping	furnish and install, includes all survey or layout. Per Linear Foot	LF	11908	$ 0.35	$ 4,167.80	$ 1.23	$ 14,646.84	28%	$ (10,479.04)
A11	4" Solid Yellow Striping	furnish and install, includes all survey or layout. Per Linear Foot	LF	11908	$ 0.35	$ 4,167.80	$ 0.38	$ 4,525.04	92%	$ (357.24)
A12	4" Yellow, 6' Stripe with 11' Skip Striping	furnish and install, includes all survey or layout. Per Linear Foot	LF	11908	$ 0.20	$ 2,381.60	$ 0.38	$ 4,525.04	53%	$ (2,143.44)
A13	12" C900	furnished and intalled per manufacturer's reccomendations, includes excavation and bedding per lf	LF	100	$ 255.00	$ 25,500.00	$ 172.80	$ 17,280.00	148%	$ 8,220.00
A14	Backfill in Roadway and below driveways	Class 6 to bottom of asphalt elevation moisture condidtioned and compacted in 6"-8" lifts	CY	36	$ 125.00	$ 4,500.00	$ 80.00	$ 2,880.00	156%	$ 1,620.00
A15	Backfill in swale	Native Soil with no rocks larger than 6" moisture conditioned and backfilled in max 12" lifts	lf	40	$ 74.00	$ 2,960.00	$ 29.00	$ 1,160.00	255%	$ 1,800.00
A16	12" Gate Valve	furnished and intalled per manufacturer's reccomendations	Ea	1	$ 6,300.00	$ 6,300.00	$ 5,027.04	$ 5,027.04	125%	$ 1,272.96
A17	12" 45deg Elbow	furnished and intalled per manufacturer's reccomendations	Ea	2	$ 2,200.00	$ 4,400.00	$ 3,715.20	$ 7,430.40	59%	$ (3,030.40)
A18	12" Solid Sleeve	furnished and intalled per manufacturer's reccomendations	Ea	3	$ 1,450.00	$ 4,350.00	$ 1,440.00	$ 4,320.00	101%	$ 30.00
A19	Waterline Testing	furnished and intalled per manufacturer's reccomendations	Ea	1	$ 2,750.00	$ 2,750.00	$ 1,500.00	$ 1,500.00	183%	$ 1,250.00
A20	12" Tee	furnished and intalled per manufacturer's reccomendations	Ea	1	$ 3,800.00	$ 3,800.00	$ 3,823.20	$ 3,823.20	99%	$ (23.20)
A21	12" Cap	furnished and intalled per manufacturer's reccomendations	Ea	1	$ 950.00	$ 950.00	$ 396.00	$ 396.00	240%	$ 554.00
A22	Hydrant Assm	Includes hydrant, lead, valve and pup (furnish and install everything from existing tee to hydrant)	Ea	1	$ 13,500.00	$ 13,500.00	$ 12,240.00	$ 12,240.00	110%	$ 1,260.00
A23	CRB	Poured in place per contract documents	Ea	4	$ 500.00	$ 2,000.00	$ 1,872.00	$ 7,488.00	27%	$ (5,488.00)
A25	MCR	Minor Contract Revisions	DOL	100000	$ 1.00	$ 100,000.00	$ 1.00	100000	100%	$ -
		Schedule B-Enterprise Court								
B1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 1,000.00	$ 1,000.00	$ 2,500.00	$ 2,500.00	40%	$ (1,500.00)
B2	Traffic Control	includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1	$ 400.00	$ 400.00	$ 1,500.00	$ 1,500.00	27%	$ (1,100.00)
B3	6" Hot Mix Asphalt	(2) 3" lift,Compacted, tack & prime coats, Complete, per Sq. Yard	ton	160	$ 150.00	$ 24,000.00	$ 130.00	$ 20,800.00	115%	$ 3,200.00
B4	MCR	Minor Contract Revisions	DOL	5000	$ 1.00	$ 5,000.00	$ 1.00	$ 5,000.00	100%	$ -
										$ -
		Schedule C-West 7th Street								
C1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 1,000.00	$ 1,000.00	$ 5,000.00	$ 5,000.00	20%	$ (4,000.00)
C2	Traffic Control	Includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1	$ 650.00	$ 650.00	$ 2,000.00	$ 2,000.00	33%	$ (1,350.00)

C3	4" Hot Mix Asphalt	(2) 2" lift,Compacted, Complete, per Sq. Yard	ton	183.57	$ 150.00	$ 27,535.50	$ 130.00	$ 23,864.10	115%	$ 3,671.40
C4	MCR	Minor Contract Revisions	DOL	5000	$ 1.00	$ 5,000.00	$ 1.00	$ 5,000.00	100%	$ -
		Schedule D-Railroad Avenue Bridge								
D1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 2,800.00	$ 2,800.00	$ 15,000.00	$ 15,000.00	19%	$ (12,200.00)
D2	Traffic Control	Includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1	$ 8,500.00	$ 8,500.00	$ 11,500.00	$ 11,500.00	74%	$ (3,000.00)
D3	Removal of Asphalt	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	CY	30	$ 225.00	$ 6,750.00	$ 40.00	$ 1,200.00	563%	$ 5,550.00
D4	Mill Asphalt	Milling to remove 2" of Asphalt per Sq. Yard	SY	888	$ 8.80	$ 7,814.40	$ 3.50	$ 3,108.00	251%	$ 4,706.40
D5	Waterproofing Membrane	furnished and intalled per manufacturer's reccomendations	SY	888	$ 220.00	$ 195,360.00	$ 37.50	$ 33,300.00	587%	$ 162,060.00
D6	2" Overlay	(1) 2" lift,Compacted, tack & prime coats, Complete, per Sq. Yard	ton	97	$ 190.00	$ 18,430.00	$ 130.00	$ 12,610.00	146%	$ 5,820.00
D7	6" HMA	(3) 2" lift,Compacted, Complete, per Sq. Yard	ton	60	$ 265.00	$ 15,900.00	$ 130.00	$ 7,800.00	204%	$ 8,100.00
D8	MCR	Minor Contract Revisions	DOL	20000	$ 1.00	$ 20,000.00	$ 1.00	$ 20,000.00	100%	$ -
		Schedule E-Cemmetary Asphalt Trails: A1, S1, B1, R1, R2, D1								
E1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 1,200.00	$ 1,200.00	$ 5,000.00	$ 5,000.00	24%	$ (3,800.00)
E2	Asphalt Removal	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	SY	1462.06	$ 4.60	$ 6,725.48	$ 4.50	$ 6,579.27	102%	$ 146.21
E3	Scarify and Grade	scarification, moisture condition, compaction; per Lump SY	SY	1462.06	$ 2.00	$ 2,924.12	$ 15.00	$ 21,930.90	13%	$ (19,006.78)
E4	5" HMA	(2) 3"/2" lifts respectively,Compacted, Complete, per Sq. Yard	ton	397.4975625	$ 145.00	$ 57,637.15	$ 130.00	$ 51,674.68	112%	$ 5,962.46
E5	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	12	$ 300.00	$ 3,600.00	$ 29.00	$ 348.00	1034%	$ 3,252.00
E6	MCR	Minor Contract Revisions	DOL	15000	$ 1.00	$ 15,000.00	$ 1.00	$ 15,000.00	100%	$ -
		Schedule F-Cemmetary Asphalt Trails: T1,B3,B2,S2,S3,D2								
E1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 1,200.00	$ 1,200.00	$ 5,000.00	$ 5,000.00	24%	$ (3,800.00)
E2	Asphalt Removal	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	SY	1077.84	$ 4.60	$ 4,958.06	$ 4.50	$ 4,850.28	102%	$ 107.78
E3	Scarify and Grade	scarification, moisture condition, compaction; per Lump SY	SY	1077.84	$ 2.00	$ 2,155.68	$ 15.00	$ 16,167.60	13%	$ (14,011.92)
E4	5" HMA	(2) 3"/2" lifts respectively,Compacted, Complete, per Sq. Yard	ton	293.03775	$ 145.00	$ 42,490.47	$ 130.00	$ 38,094.91	112%	$ 4,395.57
E5	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	12	$ 300.00	$ 3,600.00	$ 29.00	$ 348.00	1034%	$ 3,252.00
E5	MCR	Minor Contract Revisions	DOL	15000	$ 1.00	$ 15,000.00	1	$ 15,000.00	100%	$ -
		Schedule G-Cemmetary Asphalt Trails: E1, W Loop, C1, C2, C3, C4, Q1								
E1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1	$ 1,200.00	$ 1,200.00	$ 5,000.00	$ 5,000.00	24%	$ (3,800.00)
E2	Asphalt Removal	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	SY	1675.95	$ 4.60	$ 7,709.37	$ 4.50	$ 7,541.78	102%	$ 167.59
E3	Scarify and Grade	scarification, moisture condition, compaction; per Lump SY	SY	1675.95	$ 2.00	$ 3,351.90	$ 15.00	$ 25,139.25	13%	$ (21,787.35)
E4	5" HMA	(2) 3"/2" lifts respectively,Compacted, Complete, per Sq. Yard	ton	455.6489063	$ 145.00	$ 66,069.09	$ 130.00	$ 59,234.36	112%	$ 6,834.73
E5	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	14	$ 300.00	$ 4,200.00	$ 29.00	$ 406.00	1034%	$ 3,794.00
E5	MCR	Minor Contract Revisions	DOL	15000	$ 1.00	$ 15,000.00	1	$ 15,000.00	100%	$ -
					Total	**$ 1,477,868.42**		**$ 1,576,211.68**	**94%**	**$ (98,343.26)**

2022 Steet and Asphalt Improvements

PROJECT MANUAL

CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, COLORADO 81650

2022

Pre-Bid Meeting: May 6, 2022
Bid Due Date: May 20, 2022
Award Date: June 1, 2022
Construction Start Date: July 11, 2022
Construction Completion Date: September 30, 2022

Project Directory

Project Engineer
Craig Spaulding
202 Railroad Ave
Rifle, CO 81650
970-665-6556
cspaulding@rifleco.org

Public Works Director
Brian Prunty
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Construction Inspector
Jeff Shanks
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jshanks@rifleco.org

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ADVERTISEMENT FOR BIDS

Sealed BIDS for the construction of the **2022 Steet and Asphalt Improvements** will be received at the **Council Chambers, Rifle City Hall, 202 Railroad Avenue, Rifle, CO.** until 2:00pm, on May 20, 2022, at which time they will be publicly opened and read aloud.

Airport Road: is a mill and overlay of from the West Entrance of Enterprise Court to approximately 61' West of Baron Lane. There is also a waterline crossing that will be replaced with approximately 100' of 12" C900. The roadway will be milled 2" and overlayed with one 3" mat. The drive lanes will received a Tencate MVP 500 or equivalent prior to the overlay installed per the manufacturer's recommendation. Two driveways will require full depth asphalt. Removal and base prep at these locations will be performed by the City of Rifle. All other driveways will receive a two foot wide mill and sliver fill apron. Striping will be water based. All striping layout shall match existing and will be the responsibility of the contractor. Traffic control will be the responsibility of the contractor. Airport road is to remain open during construction. Business access shall remain with the only exception being when asphalt is placed. At this time it is understood that access will be blocked until the mat is sufficiently cool to drive on.

Enterprise Court: The project will also pave 175 lf of Enterprise Court where removal and excavation is performed by the City of Rifle. The asphalt is 6" thick and shall be placed in 3 lifts

Railroad Avenue: The Railroad Avenue bridge asphalt will be milled and cleaned to an acceptable surface based on the waterproofing membrane's manufacturer recommendation. The approaches will be removed full depth approximately 10' to the north and 25' to the south of the bridge joint. This will be replaced with a 6" mat placed in three lifts. The bridge overlay will be 2" and striping will be by others. A method statement for milling, cleaning, waterproofing, and paving shall be submitted within 2 weeks of the NTP for review of the COR and a structural engineer to verify loads being applied to the bridge during construction activities. This submittal should include model numbers for the equipment used.

W 7th Street: The project will also pave 237 lf of W 7th St between Mesa and Moki Ave where removal and excavation is performed by the City of Rifle. The asphalt is 4" thick and shall be placed in 2 lifts

Cemetery: The trails at the Cemetery will be removed, scarified, moisture conditioned, compacted, and put back with a 5" asphalt mat placed in two lifts. The trails are 9' wide with a 6"-1' shoulder on both sides. The shoulder shall be moisture conditioned and compacted Class 6. Trails shall be removed and repaved in a sequence that allows access to the portions of the cemetery that are not under construction.

A Bid Bond in the amount of 5% of bid price is required, and a Performance and a Payment Bond, each in the amount of 100% of bid, will be required. Bid Award will be the June 1, 2022 Council Meeting. Time of Commencement of the Work is anticipated to be no later than July 11, 2022, with completion by September 30, 2022.

A PREFERENCE FOR LOCAL CONTRACTORS WILL BE APPLIED BY THE OWNER WHEN SELECTING A CONTRACTOR.

A Pre-Bid will be held at 10:00 am at Rifle City Council on May 6, 2022.

Digital copies of the Contract Documents may be downloaded from the City website at http://www.rifleco.org/216/Projects-Out-To-Bid **for free. Contact Craig Spaulding,** cspaulding@rifleco.org**, 970-665-6556 for questions or issues with downloading the documentation.**

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Instructions to Bidders

1.0 Defined Terms

Terms used in these Instructions to Bidders, which are defined in the General Conditions of the City of Rifle Public Works Manual, have the meaning assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a Bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement for Bids, Instructions to Bidders, the Bid Form, and the Contract Documents (including all Addenda issued prior to receipt of Bids).

2.0 Copies of Bidding Documents

2.1 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. The City of Rifle Public Works Manual, Part I-General Conditions, Part II-Construction Materials and Methods and Part III Minimum Design Standards shall be followed unless otherwise specified herein. In case of conflict, follow the Supplementary General Conditions section 25, Precedence of Contract Documents. Copies of the Public Works Manual are available on Rifle's web site www.rifleco.org.

2.2 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the work and do not confer a license or grant for any other use.

3.0 Qualifications of Bidders

The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and to demonstrate qualifications to perform the Work. Each Bidder must be prepared to submit within five days of Owner's request written evidence of the types set forth in the Supplementary Conditions, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

4.0 Examination of Contract Documents and Site

4.1 It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider federal, state and local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

4.2 Information and data reflected in the Contract documents with respect to Underground Facilities at or contiguous to the site are based upon information and data furnished to Owner and Engineer by owners of such underground facilities or other, and Owner does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.3 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and

data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work and which Bidder deems necessary to determine its Bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.4 On request, in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill and patch all holes, clean up, and restore the site to its former condition upon completion of such exploration.

4.5 The lands upon which the work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by Contractor in performing the work, are identified in the Contract Documents. All additional lands, and access thereto, required for temporary construction facilities or storage of materials and equipment, are to be provided by Contractor.

4.6 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of performance and furnishing of the work.

5.0 Interpretations and Addenda

5.1 All questions about the meaning or intent of the Contract Documents are to be directed to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five (5) days prior to the date of opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

6.0 Conditions of Work

Each Bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor or danger to the public.

7.0 Substitute or “Or-Equal” Items

The Contract, if awarded, will be on the basis of materials and equipment described in the drawings or specified in the specifications, without consideration of possible substitute or “or-equal” items. Whenever it is indicated in the drawings or specified in the Specifications that substitute or “or-equal” items of materials or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the effective date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in the General Conditions and may be supplemented by the Supplementary Conditions.

8.0 Subcontracts

The Bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the Owner. The bidder shall submit, with their bid, a completed list of subcontractors they propose to use on this contract.

9.0 Bid Form

9.1 The Bid Form is included with the Bidding Documents; additional copies may be obtained from City Hall of Rifle, 202 Railroad Avenue, Rifle, Colorado.

9.2 All blanks on the Bid Form must be completed in ink, by typewriter, or electronically and printed. NOTE: The spreadsheet is offered for your convenience only. The contractor is responsible for use and confirmation of any formulae or calculations therein. The submittal may be on the pdf. All tracking of project progress will be through that spreadsheet.

9.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign), and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

9.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

9.5 All names must be typed or printed below the signature.

9.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

9.7 The address, email, and telephone number for communications regarding the Bid must be shown.

10.0 Submission of Bids

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of the Bidder and accompanied by the required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation “BID ENCLOSED” on the face of it. Any submission received after the advertised Bid Opening shall be returned unopened to the sender.

11.0 Modification and Withdrawal of Bids

11.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

11.2 If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and Engineer and promptly thereafter demonstrates to the reasonable satisfaction of Owner and Engineer that there was a material and substantial mistake in the presentation of its Bid, that Bidder may withdraw its Bid.

12.0 Bids to Remain Subject to Acceptance

All Bids will remain subject to acceptance for sixty (60) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid prior to that date.

13.0 Award of Contract

13.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities, and to negotiate Contract terms with the Successful Bidder, and the right to disregard all nonconforming, non-responsible, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the bid is not responsible, or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner.

13.2 In evaluation of Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

13.3 Owner may consider the qualifications and experience of subcontractors, suppliers and other persons and organizations proposed for those portions of the work as to which the identity or subcontractors, suppliers, and other persons and organizations may be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the work when such data is required to be submitted prior to the Notice of Award.

13.4 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed subcontractors, suppliers and other persons and organizations to perform and furnish the work in accordance with the Contract Documents to Owner’s satisfaction within the prescribed time.

13.5 If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project.

13.6 Section 2.26 of the General Conditions of the City of Rifle’s Public Works Manual and section 16.00 of the Supplementary Conditions set forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

13.7 If the Contract is to be awarded, Owner will give the successful Bidder a Notice of Award within sixty (60) days after the date of the Bid opening.

14.0 Laws and Regulations

The Bidders’ attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

15.0 Complete Prices

All lump sum, alternate, and unit prices must include all required General Conditions line items necessary to complete the work, including, but not limited to the following (as required): all permits, insurance, and taxes (except as specified in Article 3.0 of the Supplementary General Conditions); supervision; layout

and survey as needed; protection of all surrounding materials; lifting/hoisting; equipment and personnel; off-site management and administrative assistance; trash disposal to a separate dumpster; miscellaneous equipment; mobilization; as-built drawings; fuel, watchmen, flagmen, and site security; scheduling; small tools; drawings and printing expenses and mailing costs.

15.1 On bid items to be paid as lump sum that may extend beyond a single pay estimate, a schedule of values shall be submitted to OWNER a minimum of 10 days prior to commencement of work. Adequate detail shall be given to allow a value to be placed on work completed during any given pay estimate.

16.0 Permits and Fees

Bids shall include all sales tax (except as specified in Article 3.0 of the Supplementary General Conditions) and all other applicable taxes and fees related directly to the construction of this project. Fees for permits and inspections directly related to this construction will be paid by the BIDDER; however, no tap fees or access charges for this or subsequent work will be the responsibility of the BIDDER. City has Tax Exemption, a copy of which will be provided to the Contractor. Contractor and all subcontractors shall hold a current license to perform work in Rifle, Garfield County, and the State of Colorado.

17.0 Authorities

Technical Specifications included herein supplement the Standard Specifications and take precedence. Work shall be completed as per these specifications and accepted by the Owner or proper agencies having jurisdiction before final payment is requested of the Owner.

18.0 Subsurface Investigations

Geotechnical reports, if available, are included in the appendix of the Project Manual. Contractor use of such reports shall be in accordance with section 18.00 “Soils Investigation”, of the Supplemental General Conditions.

19.0 Completion of Work

Work shall be completed as per the City of Rifle Public Works Manual (and as modified by these specifications) and accepted by the Owner or proper agencies having jurisdiction before final payment is requested of the Owner.

**Contractor shall provide a daily estimate of progress to the Public Works Director or City representative to verify quantities and that we shall stay within the contracted price. <u>The City shall not pay for work above the contract price.</u>

20.0. Bid Bond

Bid security shall be made payable to the Owner in the amount of 5% of the bidder’s maximum bid price in the form of a certified check or a bid bond, using the form herein, issued by a surety meeting the requirements of the Supplementary General Conditions. The bid security of the successful bidder will be retained until such bidder has executed the agreement and furnished the required contract security whereupon it will be returned; if the successful bidder fails to execute and deliver the agreement and furnish the required contract security within ten (10) days of the Notice of Award, the Owner may annul Notice of award and the bid security of that bidder will be forfeited. Owner will return bid bonds or checks of unsuccessful bidder within or by 60 days after the bid submittal date.

21.0 Payment Bond

Payment Bond form is found in Agreement Documents section of this package.

22.0 Performance Bond

Performance Bond form is found in Agreement Documents section of this package.

23.0 Work by Illegal Aliens Prohibited

Work By Illegal Aliens Prohibited. Pursuant to Section 8-17.50191, C.R.S., *et. Seq*.,

Contractor warrants, represents, acknowledges, and agrees that:

1. Contractor does not knowingly employ or contract with an illegal alien.

2. Contractor shall not knowingly employ or contract with an illegal alien to perform works or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

3. Contractor has participated in or attempted to participate in the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, administered by the Department of Homeland Security (hereinafter, "Basic Pilot Program") in order to verify that Contractor does not employ illegal aliens. If Contractor is not accepted into the Basic Pilot Program prior to entering into this Agreement, Contractor shall forthwith apply to participate in the Basic Pilot Program and shall submit to the City written verification of such application within five (5) days of the date of this Agreement. Contractor shall continue to apply to participate in the Basic Pilot Program and shall verify such application to the City in writing, every three (3) months until Contractor is accepted or this Agreement is completed, whichever occurs first. This Paragraph 3 shall be null and void if the Basic Pilot Program is discontinued.

4. Contractor shall not use the Basic Pilot Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

5. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
(a) notify the subcontractor and the City within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
(b) terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

6. Contractor shall comply with any reasonable request be the Colorado Department of Labor and Employment ("Department") made in the course of an investigation that the Department is undertaking pursuant to the authority established in subsection 8-17.5-102(5), C.R.S.

7. Contractor violates this Addendum; the City may terminate this Agreement for breach of contract. If this Agreement is so terminated, Contractor shall be liable for actual and consequential damages to the City arising out of said violation.

24.0 Local Contractor Preference

Primary and secondary preference will be given to contractors when determining the lowest responsible bidder for work on this project. Local contractors, who have a principal place of business, are 1) for primary preference, within the City of Rifle or within 3 miles of the City Limits and 2) for secondary preference, outside of the three mile limit but within Garfield County.

For projects of $5,000 or more in value, to determine the lowest bidder, an amount equal to the percentage shown below will be deducted from the total price proposed for the work. The contract, however, will be awarded for the total bid price proposed.

Contract Amount	***Primary Preference City of Rifle Goods/Vendors***	***Secondary Preference Garfield County Goods/Vendors***
Less than $1,000	10% discount	5% discount
$1,001 to $5,000	8% discount	4% discount
$5,001 to $25,000	6% discount	3% discount
$25,001 to $100,000	5% discount	2.5% discount
$100,000 to $200,000	4% discount	2% discount
$200,001 to $500,000	3% discount	1.5% discount
$500,000 or greater	2% discount	1% discount

25.0 Scopes of Bids

4.7 **General Scope of Project**:

Airport Road: is a mill and overlay of from the West Entrance of Enterprise Court to approximately 61' West of Baron Lane. There is also a waterline crossing that will be replaced with approximately 100' of 12" C900. The roadway will be milled 2" and overlayed with one 3" mat. The drive lanes will receive a Tencate MVP 500 or equivalent prior to the overlay installed per the manufacturer's recommendation. Two driveways will require full depth asphalt. Removal and base prep at these locations will be performed by the City of Rifle. All other driveways will receive a two-foot-wide mill and sliver fill apron. Striping will be water based. All striping layouts shall match existing and will be the responsibility of the contractor. Traffic control will be the responsibility of the contractor. Airport road is to remain open during construction. Business access shall remain with the only exception being when asphalt is placed. At this time, it is understood that access will be blocked until the mat is sufficiently cool to drive on.

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Cemetery: The trails at the Cemetery will be removed, scarified, moisture conditioned, compacted, and put back with a 5" asphalt mat placed in two lifts. The trails are 9' wide with a 6"-1' shoulder on both sides. The shoulder shall be moisture conditioned and compacted Class 6. Trails shall be removed and repaved in a sequence that allows access to the portions of the cemetery that are not under construction.

END OF INSTRUCTIONS TO BIDDERS

Required Bid Documents

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of the Bidder and accompanied by the required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. Any submission received after the advertised Bid Opening shall be returned unopened to the sender. Required Bid Documents are in the Bid Submittal Checklist Below

_____ **Bid Form**

_____ **List of Materials Suppliers/ Subcontractors**

_____ **Contractor's License**

_____ **Bid Schedule**

_____ **Bid Bond**

CITY OF RIFLE

BID FORM

FOR CONSTRUCTION OF:

2022 Steet and Asphalt Improvements

DATE: _____

OWNER: City of Rifle
202 Railroad Avenue
Rifle CO 81650
Attn: Craig Spaulding

BIDDER: Name of Bidder_____

Address of Bidder _____

_____

_____

Phone Number _____

Email Address _____

Contact Name _____

THE UNDERSIGNED BIDDER, having familiarized himself with the Work required by the Contract Documents, the site and conditions where the Work is to be performed, local labor conditions, and all laws, regulations, and other factors affecting performance of the Work, and having satisfied himself of the expense and difficulties attending performance of the Work,

HEREBY PROPOSES and agrees, if this Bid is accepted, to enter into Agreement with the Owner to perform all work, including the assumption of all obligations, duties, and responsibilities necessary to the successful completion of the contract and the furnishing of all materials and equipment required to be incorporated in and form a permanent part of the Work; tools, equipment, supplies, transportation, facilities, labor, superintendence, and services required to perform the Work; and bonds, insurance, submittals; and all fees as indicated or specified in the Contract Documents to be performed or furnished by BIDDER for the amount identified and detailed in the BID SCHEDULE and further totaled below ("Bid Proposal Amount"):

_____Dollars($_____)
(written) (numeric)

CITY OF RIFLE
BID FORM page2

DOCUMENTS AND ADDENDA:
The BIDDER submits that he has carefully examined the site of the proposed work and the existing conditions, as well as the drawings and specifications. Also, he has thoroughly reviewed the proposal form, Instructions to Bidders, General Conditions, Supplementary Conditions, General Requirements, and the Specifications and Drawings, and acknowledges that the following addenda covering revisions to the drawings and/or specifications, and the cost, if any, of such revisions has been included in the Total Bid Price.

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

CHANGES TO THE WORK:
BIDDER agrees to perform all the WORK for the Total Base Bid price identified in the "Bid Proposal Amount." If circumstances arise during construction of this project which dictate a change in quantity, then the pricing for that particular portion of the job will be adjusted up or down with the BIDDER'S Schedule of Values (as included in the Contract Documents) to the revised quantity required by the construction circumstances of these plans. Final payment will be based upon count or measurement of items in place upon completion of the project at the units of measure and unit prices, with the exception of lump sum items.

For changes not covered by a contract unit price, BIDDER proposes that all such changes ordered to the work which increases the Scope of Work shall be priced in advance of the work and such unit prices will be approved by the Owner prior to commencement of work.

PERFORMANCE AND LABOR & MATERIAL PAYMENT BONDS:
By signing and submitting this Bid Proposal, the BIDDER certifies that upon demand, Performance and Labor & Material Payment Bonds can be furnished in amounts sufficient to cover the total proposed cost of work.

TIME OF COMMENCEMENT, COMPLETION, AND DAMAGES:
The BIDDER agrees that, if awarded the Contract, the Work will be substantially complete, ready for occupancy by Owner, according to the schedule submitted by BIDDER of within the indicated construction durations specified within the Contract Documents except for delays caused by Acts of God, neglect of the Owner or the

Representative of the Owner or other causes beyond the BIDDER'S control, and allows for no time due to labor disputes or strikes. Weather (unless severe) is not considered as an excuse for delay of the work.

Time is expressly declared to be of the essence in completion of the Work covered by the Contract Documents. Where additional time is allowed under the Agreement for the Completion of the work, the new time limits shall be of the essence of the Agreement.

GENERAL AGREEMENTS:
The BIDDER agrees to the following:

The BIDDER has had an opportunity to examine the Site of the work and has examined the Contract Documents therefore.

The BIDDER has carefully prepared the bid proposal upon the basis thereof and has carefully examined and checked the Bid Proposal and the materials, equipment and labor required thereunder, the cost thereof, and figures therefore, and hereby states that the amount or amounts set forth in the Bid Proposal is, or are, correct and that no mistake or error has occurred in the Bid Proposal or in the BIDDER's computations upon which the Bid Proposal is based and the BIDDER agrees that no claim for reformation, modification, rescission or correction of the Bid Proposal will be made after the scheduled closing time for the receipt of Bid Proposals.

The BIDDER understands that the Owner reserves the right to reject any or all Bids for any or no reason and to waive any informality in the bidding.

The BIDDER understands that this Bid shall not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

The BIDDER understands that unless a bid item is included on the "Bid Schedule", no separate payment shall be made for items required to complete the work in accordance with the contract. If included on the bid schedule, then work under the item will be paid at the unit or units given and shall include all necessary work complete and in place.

In preparing the Bid Proposal, the BIDDER has verified and is reasonably assured of the availability of all labor, materials, and products in this document.

The BIDDER has carefully reviewed the Bid Documents in their entirety and has agreed to meet these requirements.

CITY OF RIFLE
BID FORM page 4

DOCUMENT EXECUTION:

DATED This _____ day of _____, 2022

_____

(Name of Firm)

_____

(Street Address)

_____

(City, State, Zip)

_____

(Signature)

_____

(Printed Signature)

_____

(Title)

Please check as appropriate:

_____ An individual

_____ A Partnership Between:

_____ A Corporation organized under the laws of the State of _____

END OF BID FORM

LIST OF MATERIALS SUPPLIERS / SUBCONTRACTORS

Provide the name of the materials supplier or subcontractor included in your base bid price. Any changes in the providers listed below can be made only with the approval of the Owner. Any amount of work greater than 10% of the amount bid shall be considered as a subcontractor/Materials Supplier.

Name of Subcontractor /Materials Supplier	Work Item Performed or Provided	% of Value

CITY OF RIFLE

Bid Schedule

Schedule A-Airport Road						
Item		Description	Unit	Est. Quantity	Unit Cost	Scheduled Value
A1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		
A2	Traffic Control	Includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1		
A3	Mill Asphalt	Milling to remove 2" of Asphalt per Sq. Yard	SY	21584		
A4	Mill Asphalt	Milling to remove 1" of Asphalt per Sq. Yard	SY	285.3333333		
A5	3" Hot Mix Asphalt	(1) 3” lift, Compacted, tack & prime coats, Complete, per Sq. Yard	SY	21584		
A6	4" HMA at Driveways	(2) 2” lift, Compacted, Complete, per Sq. Yard	SY	285.3333333		
A7	2" Thick transition apron at driveway	(2) 2” lift, Compacted, Complete, per Sq. Yard	SY	285.3333333		
A8	Paving Mat	furnished and installed per manufacturer's recommendations, per SY	SY	14554		
A9	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	120		

A10	4" Solid White Striping	furnish and install, includes all survey or layout. Per Linear Foot	LF	11908		
A11	4" Solid Yellow Striping	furnish and install, includes all survey or layout. Per Linear Foot	LF	11908		
A12	4" Yellow, 6' Stripe with 11' Skip Striping	furnish and install, includes all survey or layout. Per Linear Foot	LF	11908		
A13	12" C900	furnished and installed per manufacturer's recommendations , includes excavation and bedding per lf	LF	100		
A14	Backfill in Roadway and below driveways	Class 6 to bottom of asphalt elevation moisture conditioned and compacted in 6"-8" lifts	CY	36		
A15	Backfill in swale	Native Soil with no rocks larger than 6" moisture conditioned and backfilled in max 12" lifts	lf	40		
A16	12" Gate Valve	furnished and installed per manufacturer's recommendations	Ea	1		
A17	12" 45deg Elbow	furnished and installed per manufacturer's recommendations	Ea	2		
A18	12" Solid Sleeve	furnished and installed per manufacturer's recommendations	Ea	3		
A19	Waterline Testing	furnished and installed per manufacturer's recommendations	Ea	1		

A20	12" Tee	furnished and installed per manufacturer's recommendations	Ea	1		
A21	12" Cap	furnished and installed per manufacturer's recommendations	Ea	1		
A22	Hydrant Assm	Includes hydrant, lead, valve and pup (furnish and install everything from existing tee to hydrant)	Ea	1		
A23	CRB	Poured in place per contract documents	Ea	4		
A24	MCR	Minor Contract Revisions	DOL	10000	$ 1.00	$ 100,000.00

Schedule B-Enterprise Court						
B1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		$ -
B2	Traffic Control	includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1		$
B3	6" Hot Mix Asphalt	(2) 3” lift, Compacted, tack & prime coats, Complete, per Sq. Yard	ton	160		$ -
B4	MCR	Minor Contract Revisions	DOL	5000		$ -

Schedule C-West 7th Street						
C1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		$ -
C2	Traffic Control	Includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1		$ -
C3	4" Hot Mix Asphalt	(2) 2” lift, Compacted, Complete, per Sq. Yard	ton	183.57		$ -
C4	MCR	Minor Contract Revisions	DOL	1	$ 5,000.00	$ 5,000.00

Schedule D-Railroad Avenue Bridge						
D1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		$ -
D2	Traffic Control	Includes development of MHT; placement and maintenance of traffic control devices; per Lump Sum	LS	1		$ -
D3	Removal of Asphalt	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	CY	30		$ -
D4	Mill Asphalt	Milling to remove 2" of Asphalt per Sq. Yard	SY	888		$ -
D5	Waterproofing Membrane	furnished and installed per manufacturer's recommendations	SY	888		$ -
D6	2" Overlay	(1) 2” lift, Compacted, tack & prime coats, Complete, per Sq. Yard	ton	97		$ -

D7	6" HMA	(3) 2” lift, Compacted, Complete, per Sq. Yard	ton	60		$ -
D8	MCR	Minor Contract Revisions	DOL	1	$ 40,000.00	$ 40,000.00

Schedule E-Cemmetary Asphalt Trails: A1, S1, B1, R1, R2, D1						
E1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		$ -
E2	Asphalt Removal	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	SY	1462.06		$ -
E3	Scarify and Grade	scarification, moisture condition, compaction; per Lump SY	SY	1462.06		$ -
E4	5" HMA	(2) 3”/2" lifts respectively, Compacted, Complete, per Sq. Yard	ton	397.4975625		$ -
E5	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	12		$ -
E6	MCR	Minor Contract Revisions	DOL	1	$ 20,000.00	$ 20,000.00

Schedule F-Cemmetary Asphalt Trails: T1,B3,B2,S2,S3,D2						
E1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		$ -
E2	Asphalt Removal	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	SY	1077.84		$ -
E3	Scarify and Grade	scarification, moisture condition, compaction; per Lump SY	SY	1077.84		$ -
E4	5" HMA	(2) 3”/2" lifts respectively, Compacted, Complete, per Sq. Yard	ton	293.03775		$ -
E5	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	12		$ -
E5	MCR	Minor Contract Revisions	DOL	1	$ 15,000.00	$ 15,000.00

Schedule G-Cemmetary Asphalt Trails: E1, W Loop, C1, C2, C3, C4, Q1						
E1	Mobilization	Includes erosion control per CDOT M Stds/Rifle Public Works Manual & de-mobilization; per Lump Sum	LS	1		$ -
E2	Asphalt Removal	Removal/disposal of asphalt, and road base includes all cutting. includes all adjoining material such as Crack fill, chip seal, etc.; per Sq. Yard	SY	1675.95		$ -
E3	Scarify and Grade	scarification, moisture condition, compaction; per Lump SY	SY	1675.95		$ -
E4	5" HMA	(2) 3”/2" lifts respectively, Compacted, Complete, per Sq. Yard	ton	455.6489063		$ -
E5	Class 6 Shoulder	placed, moisture conditioned, compacted, and cleaned off new asphalt	CY	14		$ -
E5	MCR	Minor Contract Revisions	DOL	1	$ 15,000.00	$ 15,000.00

TOTAL BID PRICE _____

Total Bid Price in Words _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,_____
_____

_____
_____

as Principal, and_____
_____

held and firmly bound unto_____
_____

in the penal sum of_____
_____

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this_____ day of _____, 2022. The condition of the above obligation is such that whereas the Principal has submitted to the **CITY OF RIFLE, COLORADO**, a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the 2022 Steet and Asphalt Improvements

NOW, THEREFORE,

[a] If said Bid shall be rejected, or

[b] If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____**(L.S.)**
Principal

_____
Surety

By:_____

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as Amended) and be authorized to transact business in the state where the project is located.

CONTRACTOR'S LICENSING STATEMENT FORM

The undersigned is licensed in accordance with the laws of Colorado providing for the registration of Contractors: License Number_____; Class_____.

Name of Contractor's Firm_____

Business Address and Telephone Number_____

_____

Name of Individual Owner (print)_____

Signature of Owner_____

OR

Signature, Title, and Address of members signing on behalf of the partnership:

Name_____Title_____

Address_____

Name_____Title_____

Address_____

Name_____Title_____

Address_____

OR

Corporation organized under the laws of the State of _____

_____

Signature of President of Corporation

_____

Signature of Secretary of Corporation

(Place Seal Here)

AGREEMENT

THIS AGREEMENT, made this _____ day of_____ , 2022, by and between, **CITY OF RIFLE** hereinafter called "OWNER", and ___,_____ doing business as a Corporation, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of
   2022 Steet and Asphalt Improvements
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other service necessary for the construction and completion of the WORK described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within **14** calendar days after the date of the NOTICE TO PROCEED and will complete the same by **as indicated in the contract documents**, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The Contractor agrees to perform all of the Work described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of ($_____) dollars or as shown in the BID SCHEDULE.
5. The term "CONTRACT DOCUMENTS" means and includes the following:

A.	ADVERTISEMENT FOR BID
B.	INSTRUCTIONS TO BIDDERS
C.	BID
D.	BID BOND
E.	AGREEMENT
F.	GENERAL CONDITIONS (CITY OF RIFLE PUBLIC WORKS MANUAL)
G.	SUPPLEMENTARY GENERAL CONDITIONS
H.	PAYMENT BOND
I.	PERFORMANCE BOND
J.	NOTICE OF AWARD
K.	NOTICE TO PROCEED
L.	List of Drawing Sheets
Cover	Cover
01	Airport Road to STA 4+98
02	Airport Road to STA 10+26
03	Airport Road to STA 15+54
04	Airport Road to STA 20+82
05	Airport Road to STA 26+10
06	Airport Road to STA 31+38
07	Airport Road to STA 36+66
08	Airport Road to STA 41+94
09	Airport Road to STA 47+22
10	Airport Road to STA 52+17.9
11	Cemetery Asphalt
12	RR Ave Bridge Overlay
13	W 7th St
14	Enterprise Ct Repairs
W1	Airport Road Waterline
D1	Waterline Details
D2	Road Sections
D3	Standard Details

M. TYPICAL SPECIFICATIONS noted in the City Public Works Manual and CDOT Specifications.

N. Technical Specifications

O. ADDENDA: No. _____, dated _____, 2022.

CITY OF RIFLE
AGREEMENT

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the GENERAL CONDITIONS such amounts as required by the CONTRACT DOCUMENTS.
7. This AGREEMENT shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this AGREEMENT in triplicate, each of which shall be deemed an original on the date first above written.

CITY OF RIFLE
OWNER:_____
BY:_____
NAME:_____
(SEAL) TITLE:_____

ATTEST (OWNER):_____
(Please Type)

NAME:_____

TITLE:_____

CONTRACTOR:_____
BY:_____
NAME:_____
ADDRESS:_____
(SEAL) _____

ATTEST (CONTRACTOR): _____
(Please type)
NAME: _____
TITLE: _____

Contingency Allowances Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Department's estimate for force account items included in the Contract. The estimated amounts marked with an asterisk will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with PWM Section 2.30. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at $5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

Force Account Item	Quantity	Estimated Amount
F/A Winter Conditions/Weather Protection	F.A.	$10,000

Force Account Descriptions

F/A Minor Contract Revisions – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract drawings or specifications, and is necessary to accomplish the scope of work of this contract.

Preliminary Construction Schedule

W. Second Sidewalk	May '22	May '22	June '22	July '22	August '22	September '22
Bid Advertisement						
Bids Due						
Council Award						
Contract Execution						
Construction						

Certificate of Insurance

Certificates of Insurance from the contractor and subcontractor's insurance carriers shall name both the City of Rifle and CDOT as additional insured parties. Submission of Certificates of Insurance shall be provided prior to commencing any work.

Performance Bond Form

KNOW ALL MEN BY THESE PRESENTS that

_____
Name of Contractor

_____
Address of Contractor

a _____
Corporation, Partnership or Individual

Hereinafter called Principal, and _____
Name of Surety

_____
Address of Surety

Hereinafter called Surety, are held and firmly bound unto_____

_____
Name of Owner

_____
Address of Owner

Hereinafter called OWNER, in the penal sum of _____
_____ Dollars ($_____) in lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, _____, a copy of which is hereto attached and made a part hereof for the construction of:

_____

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms conditions and agreements of said contract during the original term thereof, and any extensions thereof, which may be granted by the OWNER, with or without notice to the SURETY and during the one-year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall full indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PEFORMANCE BOND

PROVIDED, FURTHER, THAT THE SAID surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the terms of the contract or to the WORK to be performed hereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
IN WITNESS WHEREOF, this instrument is executed in _____
(number of copies)
counterparts, each one of which shall be deemed an original, this ____ day of _____, _____.

_____
Principal (signature)

By_____
Type/print

_____
Address

ATTEST:

_____

_____
(Principal) Secretary

(SEAL)

_____
Witness as to Principal

_____

_____
Address

SURETY:_____

By:_____
Attorney-in-Fact

_____

_____
Address

ATTEST:

_____
Witness as to Surety

_____

_____
Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.
IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the WORK is located.

Payment Bond Form

The following additional provision shall constitute an amendment to Payment Bond No. _____.

PROVIDED, FURTHER, that the Principal and Surety, for value received, shall indemnify and save harmless the Owner to the extent of any payments required to be made by the Principal under the terms of the Contract. Subcontractors, material men, mechanics, and others shall have the right of action for amounts lawfully due them from the Principal or Subcontractor directly against the Principal and Surety of this bond. In the event the Principal or his Subcontractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, pro-vendor, or other supplies used or consumed by such Principal or his Subcontractor in performance of the Work contracted be done, the Surety shall pay the same in an amount not exceeding the sum specified in the bond, together with interest, at the rate of eight percent (8%) per annum.

IN WITNESS WHEREOF, this Amendment is executed in four counterparts, each one of which shall be deemed an original, this _____ day of _____.

_____
Principal

ATTEST:

_____ By:_____
(Principal) Secretary

_____
(Address)

Witness as to Principal

(Witness as to Principal)

_____

_____
(Address)
Surety

By:_____
Attorney-in-Fact

_____
Address

ATTEST:

_____ Address_____

CITY OF RIFLE
NOTICE OF AWARD

Dated

TO:_____
Bidder

OWNER'S PROJECT NO._____

PROJECT:____2022 Steet and Asphalt Improvements__

CONTRACT FOR:_____FULL CONSTRUCTION SERVICES_____

****

You are notified that your Bid dated_____, 2022, for the above Contract has been considered. You are the apparent successful Bidder and have been awarded a contract for CONSTRUCTION SERVICES AS PER PLANS DATED_____.

Contract Price of your Contract is _____ Dollars (_____ _____).

Three copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by_____ , 2022_____.

1. You must deliver to the OWNER three fully executed counterparts of the Agreement, including all the Contract Documents, Performance and Payment Bonds. Each of the Contract Documents must bear your signature on the cover.

2. You must deliver with the executed Agreement the Contract Security (Bonds)

3. You must deliver with the executed Agreement, proof of insurance coverage as specified in the General Conditions (section 2.32) and Supplementary General Conditions (paragraph 2.00). Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited. Within ten days after you comply with those conditions, OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

_____City Of Rifle_____
Owner

By: _____
Authorized Signature

Civil Engineer_____
Title

CITY OF RIFLE

NOTICE TO PROCEED

To:_____ Date:_____
Project: _____

You are hereby notified to commence WORK in accordance with the Agreement

dated _____, 2022, on or before _____, 2022_.

By: _____
Owner

Title: _____

ACCEPTANCE OF NOTICE Receipt of the above NOTICE TO PROCEED is hereby acknowledged

By _____

this the _____ day of _____ , 2022 .
By: _____
Title: _____

General Conditions

PWM Section 2.1. ADDITIONAL INSTRUCTIONS, MODIFICATIONS AND DETAIL DRAWINGS

The engineer may, during the duration of the contract agreement and in accordance with Sections 2-16, 2-17, and 2-18 of these General Conditions, furnish the contractor written instructions, modifications or detail drawings necessary to illustrate changes in the work.

The additional written instructions and detailed drawings thus supplied shall become a part of the contract documents, without invalidating the contract agreement, and the contractor shall perform the work as modified or altered.

PWM Section 2.2. EXECUTION, CORRELATION, INTENT, INTERPRETATION AND FURNISHING OF CONTRACT DOCUMENTS

The contract documents shall be executed in triplicate by the owner and contractor.

By executing the contract agreement the contractor represents that he has visited the sight of the work, familiarized himself with the locale, subsurface and site conditions under which the work is to be performed, and correlated his observations with the available information included with and required by the contract documents.

The contract documents are complementary and what is required by any one shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and incidentals necessary for the proper execution and completion of the work. It is not intended that work not covered under any heading, section, class or trade of the specifications shall be supplied unless it is required elsewhere in the contract documents or is reasonably inferable there from as being necessary to produce the intended results. Words, which have well known technical or trade meanings, are used herein in accordance with such recognized meanings. Well-known technical standards are used herein in accordance with the latest edition and revisions thereof.

Written interpretations necessary for the proper execution or progress of the work, in the form of drawings or other wise, will be issued with reasonable promptness by the engineer and in accordance with any approved schedule, upon written request from the contractor. Such interpretations shall be consistent with and reasonably inferable from the contract documents and may be effected by field order.

Unless otherwise provided in the contract documents, the contractor will be furnished, free of charge, three (3) copies of drawings and specifications necessary for the execution of the work. All drawings and specifications thus furnished shall not be reused on any other project.

PWM Section 2.3. SCHEDULES, REPORTS AND RECORDS

The contractor shall submit to the owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the owner may request concerning work performed or to be performed.

Prior to the first partial payment estimate the contractor shall submit to the engineer schedules indicating:

A. Partial payments that he anticipates he will earn during the course of the work.

B. The order in which he proposes to carry on the work, including dates at which he will start the various parts of the work, estimated date of completion of each part; and as applicable:

1. The dates at which special detailed drawings will be required from the engineer.
2. The date that the contractor will submit shop drawings to the engineer.
3. Respective dates that manufacturing will begin, the testing and the installation of materials, supplies and equipment.

Schedules submitted by the contractor shall reflect:

C. The timely and orderly completion of:

1. Specific portions of the work as called for in the Special Conditions.
2. The work in accordance with allowed contract time.

D. The inability to perform work on Saturdays, Sundays, holidays or between the hours of 7:00 p.m. and 7:00 a.m. on any working day, without written permission from the engineer.

E. The safety, adequacy and efficiency of his plant equipment, tools, labor and methods of performing the work.
F. The availability of materials, equipment and incidentals to be incorporated in the work.
G. Maintenance and control of traffic.

PWM Section 2.4. DRAWINGS, SPECIFICATIONS, CONFLICTS AND DISCREPANCIES

The intent of the drawings and specifications is that the contractor shall furnish all labor, materials, tools, equipment, incidentals and transportation necessary for the proper execution of the work in accordance with the contract documents to complete the project in an acceptable manner, ready for use, occupancy or operation by the owner.

In case of conflict between the drawings and specifications, the specifications shall govern. Figured dimensions on drawings shall govern over scale dimensions, detailed drawings shall govern over General Drawings and Special Conditions shall govern over Standard Specifications. Any discrepancies between the drawings and specifications and site conditions; or any inconsistencies, errors, omissions or ambiguities in the drawings or specifications; or any errors or omissions in the layout as given by survey points and instructions shall be immediately reported to the engineer, in writing, who shall promptly verify and correct such inconsistencies or ambiguities in writing. Work performed by the contractor after such discovery, until authorized or corrected by the engineer, shall be done at the contractor's risk.

PWM Section 2.5. SHOP DRAWINGS AND MATERIAL SAMPLES

The contractor shall provide shop drawings, in triplicate, as may be necessary for the prosecution of the work (i.e. vault piping, electrical systems, reinforcing, non-detailed items, etc.) as required by the contract documents. The engineer shall promptly review all shop drawings. The engineer's approval of any shop drawing shall not release the contractor from responsibility for deviations from the contract documents. The approval of any shop drawing, which substantially deviates, from the requirement of the contract documents shall be evidenced by a Change Order.
When submitted for the engineer's review, shop drawings shall bear the contractor's certification that he has reviewed, calculated non-detailed dimensions, checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents.
Portions of the work requiring a shop drawing or material sample submission shall not begin until the shop drawing or submission has been approved by the engineer. A copy of each approved shop drawing and each approved material sample shall be kept in good order by the contractor at the site and shall be available to the engineer.

PWM Section 2.6. MATERIALS, SERVICES, AND FACILITIES

It is understood that, except as otherwise specifically stated in the contract documents, the contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.
Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.
Manufactured articles, materials and equipment shall be fabricated, furnished, applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer or in accordance with the latest revision to or edition of well known technical standards (i.e. ASTM, AWWA, Colorado Department of Transportation, etc.) referred to in the Specifications or Special Conditions.
Materials, supplies and equipment shall be in accordance with samples submitted by the contractor and approved by the engineer.

Materials, supplies or equipment to be incorporated into the work shall not be purchased by the contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

PWM Section 2.7. INSPECTION AND TESTING

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards and as required by the contract documents.

The owner shall provide technical personnel, acting under the supervision of the engineer, for the inspection and testing of the work in progress to ascertain that the completed work complies in all respects with the requirements of the contract documents.

If the contract documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be inspected, tested, or approved by someone other than the contractor, the contractor will give the engineer timely notice of readiness. The contractor will then furnish the engineer the required certificates of inspection, testing or approval.

Neither observations by the engineer nor inspections, tests or approvals by any person shall relieve the contractor from his obligations to perform the work in accordance with the requirements of the contract documents.

The engineer and his representative will at all times have access to the work whenever it is in preparation or in progress. In addition, authorized representatives and agents of any participating federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The contractor will provide proper facilities for such access and observation of the work and also for any inspection thereof.

If any work is covered contrary to instructions or without approval or consent from the engineer, it must if required by the engineer, be uncovered for his examination and properly restored at the contractor's expense.

If any work has been covered which the engineer has not specifically requested to observe prior to its being covered, or if the engineer considers it necessary or advisable that covered work be inspected or tested by others, the contractor, at the engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the engineer may require, that portion of the work in question, furnishing all necessary labor, materials, tools and equipment. If it is found that such work is defective, the contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective, the contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

PWM Section 2.8. SUBSTITUTIONS

Whenever a material, article or piece of equipment is identified on the drawings or specifications by reference to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The contractor may request, in writing, the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the contract documents by reference to brand name or catalog number, and if, in the opinion of the engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the engineer may approve its substitution and use by the contractor. Any cost differential shall be deductible from the contract price and the contract documents shall be appropriately modified by Change Order. The contractor warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the contractor without a change in the contract price or contract time.

PWM Section 2.9. PATENTS

The contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the owner harmless from loss on account thereof, except that the owner shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified by the owner; notwithstanding anything above to the contrary, if the contractor has reason to believe that the design, process or

product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information, in writing, to the engineer.

PWM Section 2.10. SURVEYS

The owner shall furnish, at no cost to the contractor, field electronic horizontal and vertical control data at only two control points at each site of the work at the owner's choice of location of control points. From the information provided by the owner, the contractor shall be required to make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

The contractor shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

The contractor shall notify the engineer, in writing, forty-eight hours in advance, of the time and place at which he will require lines and grades in order to perform the Work or obtain measurements for record and payment.

PWM Section 2.11. LICENSES, PERMITS, AND REGULATIONS

All contractors and subcontractors performing work on the project shall have a current City of Rifle Municipal or Building Contractor's License, whichever is applicable to their trade. Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the contractor. Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the owner, unless otherwise specified. The contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the engineer in writing, and any necessary changes shall be adjusted as provided in the Contract Documents for changes in the work.

PWM Section 2.12. PROTECTION OF WORK, EMPLOYEES, PUBLIC AND PROPERTY

The contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and the public who may be affected thereby, all the work and all the materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including pedestrian and vehicular traffic, trees, shrubs, lawns, fences, walks, pavements, roadways, structures and utilities, shown or not shown on the plans which are not designated for removal, relocation or replacement in the course of construction.

The contractor will comply with all applicable laws, ordinances, rules, regulations and order of any private or public body having jurisdiction. He will notify owners and users of adjacent utilities when prosecution of the work may affect them. He shall keep adjacent highways, streets and private access open to traffic and free of dirt and litter resulting from handling operations. He shall take reasonable precautions to protect private property adjacent to the project from such nuisances as dust, dirt, rock and excessive noise. The contractor shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except such as may be due to errors in the Contract Documents, or caused by agents or employees of the owner.

PWM Section 2.13. EMERGENCIES

In emergencies affecting the safety of life or the work or property at the site or adjacent thereto, the contractor, without special instruction or authorization from the engineer or owner, shall act to prevent threatened damage, injury or loss.

He will give the engineer prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued

covering the changes and deviations involved, except when the emergency is attributed to acts of the contractor in performing the Work.

PWM Section 2.14. LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS

The contractor shall keep himself fully informed of, and shall comply with all applicable laws, ordinances, rules, regulations and orders of the city, county, state, federal or public bodies having jurisdiction affecting the work. He shall provide, erect and maintain all necessary, police, watchmen, flagmen, firemen, shoring, signing, traffic devices, barricades and sanitary facilities, as required by the conditions and progress of the work, and all other necessary safeguards for safety and protection, as set forth by the United States Department of Labor, Occupational Safety and Health Administration.

The contractor must conform to the rules and regulations of the Industrial Commission of Colorado. Prior to starting excavation the contractor shall obtain from the Commission and file with the engineer a copy of his "Notice of Intent to Excavate."

The contractor shall comply with the requirements of CRS 8-17-101 (1985 Supp.) by employing not less than 80 percent Colorado residents in the several classifications of skilled and common labor employed on the project.

The contractor shall be an equal opportunity employer and adhere specifically to all the City of Rifle resolutions and ordinances pertaining thereto.

The contractor shall protect and indemnify the owner and its agents against any claim or liability arising from or based on the violations of such ordinances, regulations, or laws, caused by the negligent actions of the contractor, his agents or employees.

PWM Section 2.15. SUPERVISION AND DISCIPLINE BY CONTRACTOR

The contractor will supervise and direct the work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The contractor will employ and maintain on the work a qualified supervisor or superintendent who shall have been designated in writing by the contractor as the contractor's representative at the site. The supervisor shall have full authority to act on behalf of the contractor and all communications given to the supervisor shall be as binding as if given to the contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

The contractor shall at all times enforce strict discipline and good order among his employees and shall avoid employing on the project anyone unskilled in the work assigned.

PWM Section 2.16. CHANGES IN THE WORK

At any time during the progress of the work, the owner, through its city manager, may order alterations or changes in the plans, specifications, character or quantity of work, without invalidating the contract agreement. When the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the contract price, bid unit or lump sum prices, where applicable, shall be used. Should the dollar value of the changes exceed 25 percent of the contract price, the value of the changes over 25 percent shall be based on negotiated unit or lump sum prices, where applicable.

The engineer, also, may at any time, by issuing a Field Order, make changes in the details of the work, the contractor shall proceed with the performance of any changes in the work so ordered by the engineer unless the contractor believes that such Field Order entitles him to a change in contract price or time, or both, in which event he shall give the engineer written notice thereof within fifteen days after the receipt of the ordered change, and the contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the owner.

PWM Section 2.17. CHANGES IN CONTRACT PRICE

The contract price may be changed only by a Change Order. The value of any work covered by a Change Order or of any claim for increase or decrease in the contract price shall be determined by one or more of the following methods in the order of precedence listed below.

A. Contract Unit Prices. If a change is ordered in an item of work covered by a contract unit or lump sum price, then an adjustment in the contract price will be made based upon the increase or decrease in quantity of the contract unit or lump sum price.

B. Agreed Prices. Adjustments in contract price for changes ordered that are not covered by contract unit or lump sum price or exceed the limitation in Section 2.16, will be determined by agreement between contractor and owner. If unable to reach agreement, the owner may direct the contractor to proceed on the basis of extra work in accordance with Paragraph C.

C. Extra Work. When the price for extra work cannot be agreed upon, the owner will pay for the extra work based on the accumulation of costs as provided herein below.

1. Daily Reports by Contractor. At the close of each working day, the contractor shall submit a daily report to the engineer, together with applicable delivery tickets, listing all labor, materials, and equipment for that day, and for other services and expenditures when authorized. An attempt shall be made to reconcile the report daily, and it shall be signed by the engineer and the contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the contractor.

a. Labor. The report shall show the names of workers, classifications, and hours worked.

b. Material. The report shall describe and list quantities of materials used.

c. Equipment. The report shall show type of equipment, size and hours of operation, including loading and transport, if applicable.

d. Other Services and Expenditures. Other services and expenditures shall be described in such detail as the engineer may require.

2. Basis for Establishing Costs.

a. Labor. The costs of labor will be the actual cost for wages for each craft or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra work cost will not be permitted unless the contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

b. Materials. The cost of materials, or equipment to be incorporated in the work, shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the quantities involved, plus freight and delivery.

The owner reserves the right to approve materials and sources of supply, or to supply materials to the contractor if necessary for the progress of the extra work. No markup shall be applied to any material provided by the owner.

c. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $400 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed rates approved or authorized by the Colorado Department of Transportation at the time the extra work is performed. (Dataquest-Rental Rate Blue Book)

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals.

Necessary loading and transportation costs for equipment used in performing the extra work shall be included.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the owner than holding it at the work site, it shall be returned, unless the contractor elects to keep it at the work site at no expense to the owner.

The reported rental time for equipment already at the job site shall be the duration of its use on the extra work, commencing at the time it is first put into actual operation on the extra work.

d. Other Items. The owner may authorize other items, which may be required on the extra work. Such items include labor, services, material and equipment which are different in their nature from those required for the work and which are of a type not ordinarily available from the contractor or any of the subcontractors.

Invoices covering all such items in detail shall be submitted with the request for payment.

e. Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the engineer may establish the cost of the item involved at the lowest price which was current at the time of the report.

3. Markup.

a. Work by Contractor. The following percentage shall be added to the contractor's costs and shall constitute the markup for all overhead and profits:

Labor (1.32 x certified payroll) 15

Materials 15

Equipment Rental 15

Other Items and Expenditures 15

To the sum of the costs and markups provided for in this subsection, one percent shall be added as compensation for bond and liability insurance.

b. Work by Subcontractor. When all or any part of the extra work is performed by a subcontractor, the markup established herein shall be applied to the subcontractor's actual cost of such work, to which a markup of five percent on the subcontracted portion of the extra work may be added by the contractor.

4. Any other cause which, in the opinion of the engineer, entitles the contractor to additional time, including but not restricted to acts of the public enemy, acts of any government in either its sovereign or any applicable contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

PWM Section 2.18. CHANGES IN CONTRACT TIME

The contract time may be changed only by a Change Order. The contractor shall notify the engineer promptly and in writing of any occurrence or conditions which, in the contractor's opinion, entitle him to an extension or reduction in contract time. Such notice shall be submitted in ample time to permit full investigation and evaluation of the contractor's claim. Failure to provide such notice shall

constitute a waiver by the contractor of any claim. The engineer shall acknowledge the contractor's notice within seven days of its receipt.

Changes in contract time for the completion of the work shall be stipulated by Change Order:

A. When changes in the work occur.

B. When work is suspended by the owner.

C. For unforeseeable causes beyond the control and without the fault or negligence of the contractor, his subcontractor or supplier and which were not the result of their fault or negligence.

D. When delays in the progress of the work caused by:

1. Any act or neglect of the owner, his employees or agents.
2. Other contractors employed by the owner.
3. Any delay in furnishing of drawings, information or return of shop drawings by the engineer.
4. Any other cause which, in the opinion of the engineer, entitles the contractor to additional time, including but not restricted to acts of the public enemy, acts of any government in either its sovereign or any applicable contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

PWM Section 2.19. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The date of beginning and the time for completion of the work are essential conditions of the contract documents and the work embraced shall be commenced on the date specified in the Notice to Proceed.

The contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between the contractor and the owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

A daily charge will be made against the contractor for each working day, including free time, that any work shall remain uncompleted after elapse of contract time. This daily charge, determined by the original contract amount for the project from the table herein below, will be deducted from any money due the contractor. This deduction will not be considered a penalty but as liquidated damages.

The schedule of liquidated damages set forth below is an amount, agreed to by the contractor and the City of Rifle, as reasonably representing additional construction engineering costs incurred by the City if the contractor fails to complete performance within the contract time.

The schedule of liquidated damages will be:

Original Contract Amount		Daily Charge
From	To and	
More than	Including	
$ 0	$ 25,000	$ 270
25,000	50,000	465
50,000	100,000	540
100,000	500,000	950
500,000	1,000,000	1,250
1,000,000	2,000,000	1,400
2,000,000	4,000,000	1,750
4,000,000	8,000,000	1,970
8,000,000	10,000,000	2,050

Over $10,000,000 - daily charge will increase by $100 increments for each $2,000,000 over $10,000,000.

Permitting the contractor to continue and finish the work or any part thereof after elapse of contract time will not operate as a waiver on the part of the City of any of its rights under the contract.

Any deduction assessed as liquidated damages under this section shall not relieve the contractor from liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed contractor to complete the work according to contract times.

The contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the contractor has promptly given written notice of such delay to the owner or engineer.

A. To any preference, priority or allocation order duly issued by the owner.

B. To unforeseeable causes beyond the control and without the fault or negligence of the contractor, including but not restricted to, acts of God, or of the public enemy, acts of the owner, acts of another contractor in the performance of a contract with the owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

The owner shall have the right to deduct the amount of liquidated damages from any monies due or to become due to the contractor, or to sue for and recover compensation for damages for non-performance of the work, from the contractor and his surety, as stipulated in the contract documents.

PWM Section 2.20. CORRECTION OF WORK

The contractor shall promptly remove from the premises all material and work condemned by the engineer for failing to comply with the contract documents, whether incorporated in the construction or not, and the contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the owner and shall bear the expense of making good all work and material of other contractors destroyed or damaged by such removal or replacement.

All removal and replacement Work shall be done at the contractor's expense. If the contractor does not take action to remove such condemned work and materials within ten days after receipt of written notice, the owner may remove such work and store the materials at the expense of the contractor.

PWM Section 2.21. SUBSURFACE CONDITIONS

The contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, which jeopardizes the safety of the project and/or persons thereon, notify the owner in writing of:

A. Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents.

B. Previously unknown physical or other conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract documents.

The engineer shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the work, an equitable adjustment shall be made and the contract documents shall be modified by a Change Order. Any claim of the contractor for adjustment hereunder shall not be all wed unless he has given the required written notice; provided that the engineer may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

PWM Section 2.22. SUSPENSION, DELAY OR INTERRUPTION OF WORK

The owner may, at any time and without cause, suspend the work or any portion thereof for a period of not more than ninety calendar days or such further time as agreed upon by the contractor, by written notice to the contractor and the engineer which notice shall fix the date on which work shall be resumed. The contractor will resume that work on the date so fixed. The contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to any suspension.

If the performance of all or any portion of the work is suspended, delayed or interrupted as a result of a failure of the owner or engineer to act within the time specified in the contract documents, or if

no time is specified, within a reasonable time, an adjustment in the contract price or an extension of the contract time, or both, shall be made by Change Order to compensate the contractor for the costs and delays necessarily caused by the failure of the owner or engineer.

PWM Section 2.23. OWNER'S RIGHT TO TERMINATE OR ABANDON WORK

If the contractor is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the work or if he disregards the authority of the engineer, or if he otherwise violates any provision of the contract documents, then the owner may, without prejudice to any other right or remedy and after giving the contractor and his surety a minimum of ten days from delivery of a written notice, terminate the services of the contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the contractor, and finish the work by whatever method he may deem expedient. In such case the contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to the contractor. If such costs exceed such unpaid balance, the contractor will pay the difference to the owner. Such costs incurred by the owner will be determined by the engineer and incorporated in a Change Order.

Where the contractor's services have been so terminated by the owner, said termination shall not affect any right of the owner against the contractor then existing or which may thereafter accrue. Any retention or payment of monies by the owner due the contractor will not release the contractor from compliance with the contract documents.

After ten calendar days from delivery of a written notice to the contractor, the owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the contractor shall promptly remove all of his equipment, temporary facilities and supplies from the premise, clean up the project and contiguous properties. Otherwise, the owner shall perform such housekeeping at the expense of the contractor. However, the contractor shall be paid for all work executed and any expense sustained plus reasonable profits as a result of such action by the owner.

PWM Section 2.24. CONTRACTOR'S RIGHT TO TERMINATE OR STOP WORK

If, through no act or fault of the contractor, the work is suspended for a period of more than ninety calendar days by the owner or under an order of court or other public authority, or the engineer fails to act on any request for payment within thirty calendar days after it is submitted, or the owner fails to pay the contractor substantially the sum approved by the engineer within thirty calendar days of its approval and presentation, then the contractor may, after ten calendar days from delivery of a written notice to the owner and the engineer, terminate the contract and recover from the owner payment for all work executed and all expenses sustained. In addition and in lieu of terminating the contract, if the engineer has failed to act on a request for payment or if the owner has failed to make any payment as aforesaid, the contractor may upon ten calendar days notice to the owner and the engineer stop the work until he has been paid all amounts then due, in which event and upon resumption of the work, Change Orders shall be issued for adjusting the contract price or extending the contract time, or both, to compensate for the costs and delays attributable to the stoppage of the work.

PWM Section 2.25. SUBCONTRACTING

The contractor may utilize the services of subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The contractor shall not award work to subcontractor(s), in excess of fifty percent of the total contract price, without prior written approval of the owner.

The contractor shall be fully responsible to the owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the contractor the same power as regards terminating any subcontract that the owner may exercise over the contractor under any provision of the contract documents.

Nothing contained in this contract shall create any contractual relation between any subcontractor and the owner.

PWM Section 2.26. CONTRACT SECURITY

The contractor shall, within seven calendar days after the receipt of the Notice of Award, furnish the owner with a Performance and Payment Bond in the penal sum of the total contract price, conditioned upon the performance by the contractor of all Change Orders, undertakings, covenants, terms, conditions and agreements of the contract documents, and upon the prompt payment by the contractor to all persons supplying labor, equipment and materials in the prosecution of the work provided by the contract documents. Such bond shall be executed by the contractor and a corporate bonding company licensed to transact such business in the State of Colorado and listed in the most recent revision of "Surety Companies Acceptable on Federal Bonds" as published in the U.S. Treasury Department Circular No. 570. The expense of the bond shall be borne by the contractor. If at any time a surety on any such Bond is declared a bankrupt or loses its right to do business in the State of Colorado, or is disapproved by the owner, the contractor shall, within ten calendar days after notice from the owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the owner. The premiums on such bond shall be paid by the contractor. No further partial payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the owner.

PWM Section 2.27. PARTIAL COMPLETION AND OCCUPANCY

At any time during the performance of the work that a portion of the permanent construction has been satisfactorily completed, in accordance with the contract documents, which is not required for the operation of the contractor but is needed or required by the owner, the engineer shall issue to the contractor a written notice of partial completion, and thereupon or at any time thereafter, the owner may take over, occupy, operate and use that portion of the construction therein described.

The notification of partial completion shall in no way be construed to constitute an extension in contract time for the completion of all the work or as a waiver of the right of the owner to require the fulfillment of all the terms of the contract documents. If such prior use should cause an increase in the cost of, or in the time required for, performance of the Work, as determined by the engineer, an equitable adjustment to the contractor shall be made and the contract documents modified by a Change Order.

PWM Section 2.28. MEASUREMENT OF QUANTITIES FOR PAYMENT

Measurement for pay items in the contract shall be as defined in the Measurement and Payment Section of the City of Rifle Standard Specifications for Design and Construction or as modified in the Special Conditions. The methods of measurement and computation to be used in determination of quantities; of work performed, of materials to be furnished and/or installed; will be those methods generally recognized as conforming to good engineering practice.

Sundry items, which are incident to or required in the construction of the work, but are not included as items in the Bid Schedule, shall be considered an integral part of the work to be performed. All labor, materials, etc., required for such items shall be furnished and installed, and the costs shall be included in the applicable contract unit price or lump sum amount bid.

PWM Section 2.29. SCOPE OF PAYMENT

Payment to the contractor will be made only for the actual quantities of contract items constructed and installed in accordance with the plans and specifications.

Payment made at the contract unit price or lump sum amount bid shall be full compensation for furnishing all labor, materials, equipment, appurtenances, taxes, insurance, permits and incidentals necessary to complete the work as shown on the plans and as required by the Specifications. Each item, fixture, piece of equipment, etc., shall be complete in place, operational and accepted.

No additional payment, over the amount bid, will be made for related work to any item unless specifically called for in the contract. Neither will payment be made for materials wasted, rejected or placed outside of plan limit lines.

PWM Section 2.30. PARTIAL PAYMENT AND CERTIFIED TAX REPORTS

The engineer, on or about the twenty-fifth day of the month in which work on the project is performed, shall prepare for contractor's approval, a partial payment estimate of the work performed and materials placed in accordance with the contract documents.

Not more than eighty (80) percent of the cost of materials and equipment delivered and suitably stored at or near the project site, but not incorporated in the work may be included in an estimate; provided however, the contractor furnishes invoices and supportive data establishing title in the name of the owner, to the engineer.

The amount to be retained from partial payments will be ten percent of the value of completed work, exclusive of mobilization and payment for materials on hand. When the retainment on contracts exceeding $80,000 in value has reached five percent of the amount of the contract, no further retainment will be made. Amount of retainment will be held until such time as final payment is made with the following provision: When ninety-seven and one-half percent of the work has been completed, the engineer may, at his discretion and The amount to be retained from partial payments will be ten percent of the value of completed work, exclusive of mobilization and payment for materials on hand. When fifty percent of the work required by contracts exceeding $150,000. has been performed, no further retainment will be made if in the opinion of the City, satisfactory progress is being made on the work. Amount of retainment will be held until such time as final payment is made with the following provision: When ninety-seven and one-half percent of the work has been completed, the engineer may, at his discretion and with the consent of the Surety, reduce the retained amount to twice the value of the work remaining to be done. Any amount retained under this provision shall be subject to the requirements of Colorado Revised Statute § 24-91-103.

Earnings so retained on contracts exceeding $150,000. in value may be withdrawn by the contractor provided the contractor provides the City with an irrevocable letter of credit in a form and from a financial institution acceptable to the owner. Any amounts so retained by the owner under this provision shall be subject to Colorado Revised Statute. § 24-91-105.

The contractor upon receipt of each partial payment estimate shall either indicate his approval by signing and returning a copy to the engineer, or return the estimate unsigned and indicate in writing his reason for refusing payment.

The owner, within fifteen- (15) days of presentation to the engineer of an approved partial payment estimate, shall pay the contractor the amount due thereon.

Upon receipt from the contractor of an approved designated semifinal estimate, as prepared by the engineer:

A. The contractor shall, in writing, request the engineer to make a semifinal inspection in preparation for final acceptance of the work by the owner.

B. The contractor shall prepare and furnish the engineer certified city and county sales and use tax reports covering the equipment and materials incorporated in the work.

The engineer, upon receipt of written request for semifinal inspection, shall promptly make said inspection of the work and issue to the contractor a written notice advising him of any deficiencies, corrective measures or clean up that he must complete prior to preparation of the final payment request.

All work covered by partial payment made shall thereupon become the sole property of the owner, but this provision shall not be construed as relieving the contractor of the sole responsibility for the care and protection of the work upon which payments have been made or the restoration of any

damaged work, or as a waiver of the right of the owner to require the fulfillment of all terms of the contract documents.

PWM Section 2.31. FINAL PAYMENT REQUEST, ACCEPTANCE AND RELEASE

Upon completion of the work, cleanup of the project site, the engineer's receipt from the contractor in triplicate of certified tax receipts, the engineer, within ten calendar days thereafter shall:

A. Prepare a final payment request, for contractor's approval, showing the total value of the work completed in accordance with the contract documents and as modified by any Change Orders, less the value of:

1. Partial payments previously made by the owner to the contractor.
2. Retention of any claims, on file with the owner, against the contractor
3. Estimated costs of completing any incomplete or unsatisfactory items of the work.
4. Payments advanced by the owner, to subcontractors, material and equipment suppliers or others which are known by the contractor to have been made but not previously accounted for.
5. Liquidated damages not previously paid to the owner by the contractor.

B. Advise the owner and contractor by written notice that:

1. The work has been inspected and accepted by him under the conditions of the contract documents.
2. The work, effective the date of the notice, is placed under warranty, at the contractor's expense, for a period of one year.
3. The entire balance shown on the final payment request, as prepared by the engineer, is due and payable within thirty calendar days from date of approval thereof by the contractor.

Upon approving the final payment request, as prepared by the engineer, the contractor by such act, indemnifies and saves the owner and his agents harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men and furnishers of machinery and parts thereof, equipment, tools, and all supplies incurred in the furtherance of the performance of the work. The contractor shall, at the owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the contractor fails to do so, the owner may, after having notified the contractor, either pay unpaid bills or withhold from the contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, in accordance with the terms of the contract documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the owner to either the contractor, his surety, or any third party. In paying any unpaid bills of the contractor, any payment so made by the owner shall be considered as a payment made under the contract documents by the owner to the contractor and the owner shall not be liable to the contractor for any such payments made in good faith.

The acceptance by the contractor of final payment shall be and shall operate as a release to the owner of all claims and all liability to the contractor other than claims in stated amounts as may be specifically excepted by the contractor for all things done or furnished in connection with this work and for every act and neglect of the owner and others relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the contractor or his sureties from the warranty period or any other obligations under the contract documents or the Performance and Payment Bond.

In the event the owner fails to make final payment as herein provided, there shall be added daily interest at the rate of six percent per annum, commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor.

PWM Section 2.32. INSURANCE

The contractor shall at its own expense keep in full force and effect during the term of this contract insurance as follows:

The contractor shall secure and maintain statutory workmen's compensation.

The contractor agrees to secure, at his own cost, a policy or policies of insurance sufficient to insure against the liability assumed by the contractor pursuant to the provisions of paragraph 2.36 of these General Conditions. The contractor's insurer must be rated "B+" or better, according to Best's Key Rating Guide and must be admitted to do business in the State of Colorado. The contractor shall provide the owner with a certificate of insurance from a properly qualified representative of the insurer, that any policy purchased pursuant to this contract complies with the conditions required by this contract. The certificate of insurance must show current name and address of the insured(s) named in the policy. The contractor shall not commence any work under this contract, and shall not allow any subcontractor or any officer, employee, or agent of the contractor or any subcontractor to commence any work under this contract, until any such certification has been received and approved by the owner.

The contractor shall not be relieved of any liability assumed pursuant to the foregoing paragraph by reason if its failure to secure insurance as required by this contract or by reason of its failure to secure insurance in sufficient amounts, of sufficient durations, or of sufficient types to cover such liability. The required policy shall meet the following conditions:

A. The policy limits shall be as follows:

1. The limit for an injury to one person in any single occurrence shall be no less than $1,000,000, and the limit for an injury to two or more persons in any single occurrence shall be no less than $2,000,000. Costs of defense shall not be included within such limits or, if they are so included, the minimum limits shall be $1,000,000 combined single limits.
2. The general aggregate limit shall be unlimited or at least $2,000,000.

B. The policy shall include the owner as an additional insured. The parties hereto understand and agree that the owner is relying on and does not waive or intend to waive by this contract, any provision hereof, including the provisions of this paragraph, the monetary limitations (presently $1,000,000 per person and $2,000,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, C.R.S. 24-10-101, et seq., as from time to time amended, or otherwise available to the owner.

C. The insurer shall give the owner notification of any cancellation or termination by refusal to renew the policy or any change in coverage of the policy in the manner provided by law. If no such notification is provided by law, the insurer shall give the owner at least thirty (30) days prior written notification of any cancellation or termination by refusal to renew the policy or of any change in coverage of the policy, unless cancellation or termination is for non-payment of premium, in which case, the industry standard of ten (10) days prior written notification shall apply.

D. The contractor shall be solely responsible for any deductible losses under the policy.

E. If the policy is a claims made policy, the policy shall provide the contractor the right to purchase, upon cancellation or termination by refusal to renew the policy, an extended reporting period of not less than two years. The contractor agrees to purchase such an extended reporting period should the policy be cancelled or terminated.

F. If the policy is a claims made policy, the policy shall give the owner the right to purchase the extended reporting period described in paragraph E above if the contractor fails to purchase such an extended reporting period as required by this contract. The owner's exercise of such right shall not relieve the contractor of any liability for its failure to purchase such an extended reporting period as required by this contract.

G. If the policy is a claims made policy, the retroactive date of any renewal of such policy shall be no later than the date this contract is signed by the parties hereto.

H. If the contractor purchases a subsequent claims made policy in place of any prior policy, the retroactive date of such subsequent policy shall be no later than the date the contract is signed by the parties hereto.

The contractor shall secure and maintain, at his own expense, if applicable or called for in the Special Conditions, the following insurance coverage:

Fire, extended coverage and vandalism insurance on the project to the full insurable value thereof for the benefit of the owner, the contractor and subcontractors.

"All Risk" type builder's risk insurance for work to be performed. Unless otherwise authorized by the owner, the amount shall not be less than the contract price totaled in the Bid Proposal. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft and smoke during the contract time and until the work is accepted by the owner. The policy shall name as the insured the contractor, the owner and their designated agents.

Special Comprehensive General Bodily Injury and Property Damage for the period of time that work being performed is encroaching on property owned or controlled by individuals, partnerships or corporations such as irrigation companies and railroads, state or federal agencies, and to limits set forth in their permit. The policy shall be issued to the permittee and name as the insured the contractor, the owner and their designated agents.

The contractor must comply with the owner's requirements for filing certificates of insurance, as determined by the Risk Management Division. A certificate of insurance acceptable to the Risk Management Division must be provided at the time the contract is executed by the parties hereto unless both parties arrange otherwise.

The contractor is responsible for submitting certificate(s) of insurance, subject to the insurance requirements described above, for all subcontractors. All certificates of insurance are subject to periodic verification and approval by the owner.

PWM Section 2.33. SEPARATE CONTRACTS

The owner reserves the right to let other contracts in connection with this project, or contiguous thereto. The contractor shall afford other contractors, utility companies or owner's forces reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. If the proper execution or results of any part of the contractor's work depends upon the work of any other contractor, the contractor shall inspect and promptly report to the engineer any defects in such work that render it unsuitable for such proper execution and results.

If the performance of additional work by other contractors, utility companies or the owner is not noted in the contract documents prior to the execution of the contract, written notice thereof shall be given to the contractor by the engineer, prior to starting any such additional work. If the contractor believes that the performance of such additional work by the owner or others entitles him to a change in contract price or time, or both, he may, by written notice to the engineer, request a Change Order as provided under Changes in the Work.

PWM Section 2.34. HOUSEKEEPING AND CLEANUP

At all times during the progress of the work the contractor, at his expense, shall maintain the site, storage yard, adjacent properties, both public and private, policed and free of litter or trash. All material and equipment to be incorporated in the work shall be stored in a neat appearing manner and protected from damage or the elements until accepted in accordance with the contract documents.

Prior to final payment, the contractor, at his expense, shall remove from the project site and from contiguous private and public property, all temporary structures, equipment, rubbish and waste materials resulting from his operations. He shall clean up, police around and over all facilities that the owner will acquire maintenance thereof.

Disposal areas for waste material, from the contractor's operation, shall be those areas that comply in every way with local ordinances and are approved by the engineer.

PWM Section 2.35. ASSIGNMENT

Neither the contractor nor the owner shall sell, transfer, sublet as a whole, or otherwise dispose of the contract or any portion thereof without the written consent of the other and its surety; nor shall the contractor assign any monies due or to become due to him thereunder, except to a bank or financial institution acceptable to the owner.

PWM Section 2.36. INDEMNIFICATION

The contractor agrees to indemnify and hold harmless the owner, its officers, employees, insurers, and self-insurance pool, from and against all liability, claims and demands on account of personal injuries, including without limitation worker compensation claims and death claims, or property loss or damage, or any other loss of any kind whatsoever, which arises out of or are in any manner connected with this contract, whether or not such injury, loss, or damage is caused by, or is claimed to be caused by, the act, omission, negligence or other fault of the contractor, any employees of the contractor, or any other person or entity; or by accident; or by any other cause. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless the owner from any liability or damages directly caused by or attributable to the owner's own negligence. The contractor agrees to investigate, handle, respond to, provide defense for, and defend against, any liability, claims, or demands arising from, connected with, or related to the contract at the sole expense of the contractor regardless of whether the liability, claim, or demand is related to the owner's own negligence and the contractor further agrees to bear all other costs and expenses, related thereto, including court costs and attorney fees, whether or not the claim or claims alleged are groundless, false, or fraudulent. Nothing herein is intended to be, or may be construed as, a waiver or the immunities, protections, or limitations on damages provided to The City of Rifle by the Colorado Governmental Immunity Act, C.R.S. 24-10-101 through 24-10-120, as it may from time to time be amended.

PWM Section 2.37. ENGINEER'S STATUS AND DECISIONS

The engineer shall act as the owner's representative during the construction period. He shall decide questions which arise in the execution of the work. He shall perform technical inspections in the field, in laboratories, at factories, at sources of supply and wherever he feels the necessity to determine the quality and acceptability of material and equipment furnished and work performed. He shall reject all material, equipment and work which fails to conform to the specifications. He shall stop the performance of the work whenever such stoppage may be necessary to insure the proper execution of the contract documents. He shall determine the quantity of work to be paid for and prepare all partial payments, estimates and the final payment request for submittal to the owner after obtaining the contractor's approval thereof.

The engineer will not be responsible for the construction means, controls, techniques, sequences, procedures or construction safety.

The engineer shall, within a reasonable time after presentation, make decisions by written notice on all claims of the owner or the contractor on all matters relating to the execution and progress of the work or the interpretation of the contract documents.

PWM Section 2.38. LAND, RIGHTS-OF-WAY, EASEMENTS AND ENCROACHMENTS

Prior to issuance of Notice to Proceed, the owner shall obtain all land and rights-of-way necessary for carrying out and for the completion of the work to be performed pursuant to the contract documents, unless otherwise stated in the Special Conditions or mutually agreed to.

The owner shall indicate on the drawings or provide to the contractor information which delineates and describes the lands owned, rights-of-way and easements acquired, and encroachments over lands upon which the work is to be performed.

Delays in furnishing land for the work by the owner may be deemed proper cause for a change in the contract price, contract time, or both.

The contractor shall provide, at his own expense and without liability to the owner, any additional land and access thereto that the contractor may desire for temporary construction facilities, or for storage of materials and equipment.

PWM Section 2.39. GUARANTY AND WARRANTY

The contractor shall guarantee all material and equipment incorporated in, and warrant all workmanship on, the project for a period of one year from the date of written notice of acceptance of the project or portions thereof. The contractor shall within forty-eight hours after notification from the owner, subsequently verified by written notice, make all needed repairs and corrections which develop or result from defective workmanship, materials or equipment.

In the event the contractor should fail to make such repairs, adjustments, or performs other necessary work required to correct any deficiencies, the owner may do so and charge the contractor the cost thereby incurred. The Performance and Payment Bond shall remain in full force and effect through the guarantee and warranty period.

PWM Section 2.40. TAXES

The contractor will pay all applicable sales, use and other similar taxes required by the laws of the State of Colorado. When taxes are due, the developers, other responsible parties, and/or their subcontractors, prior to requesting final warranty on their project shall furnish the engineer, in triplicate on the City form, certified receipts of sales, use and other similar taxes, required by law, paid on all materials and equipment incorporated in or used in the performance of the work.

Notwithstanding the above, the contractor shall obtain from the Colorado Department of Revenue a Certification of Exemption indicating, where applicable, that the contractor's purchase of construction or building materials is for use in the building, erection, alteration or repair of public works owned and used by the City of Rifle, in its governmental capacity. The contractor shall file with the engineer a certified copy of the Certification of Exemption, prior to commencing Work.

Where a project is exempt from such tax, the amount of such tax shall not be included in any bid proposal submitted to the City.

PWM Section 2.41. DESIGNING AND PERFORMING WORK WITHOUT A CONTRACT AGREEMENT

All property owners, individuals, partnerships or corporations which engage in the subdividing or improving of land, or in the design or construction of the Work, ultimately to be maintained, operated, occupied or owned by the City of Rifle, other than those directly contracting with the City, shall adhere to this Public Works Manual, Design and Construction of Public Improvements to which these General Conditions are a part.

No portion of the work shall be performed until the engineer has approved the drawings pertaining there to, and then only by a contractor that is licensed and bonded to the City of Rifle.

Those who are responsible for, or cause the work to be performed, and those who actually perform the work, will be considered, for purposes of these General Conditions and Standard Specifications, as having executed a contract agreement, as contractor, with the City of Rifle as owner, even though no agreement exists. As such, they shall comply with all the technical and performance provisions of these Specifications, be subject to inspection and the directives of the engineer.

PWM Section 2.42. CLOSEOUT

To close out a project or development, several items need to be taken into account by the Contractor, Engineer and by the Owner. Several of these items may have been initiated prior to or during the work.

The Contractor of the work shall notify the Engineer and the Owner in writing that he has reached “Substantial Completion” and include a list of work yet to be completed or corrected. If requested by the Engineer, closeout of areas or portions of work may be allowed by the Owner.

The Engineer, along with the Owner’s representative, shall inspect the work to determine if it is substantially complete. If it is substantially complete, a “Certificate of Substantial Completion” will be issued by the Engineer along with a “Punch List” of items to be completed or corrected, to the Contractor and the Owner.

The Contractor shall complete and/or correct the items listed on the punch list, or any other item that becomes known, and again notifies the Engineer and Owner in writing that the work is ready for final inspection. At this time, the Contractor may submit his application for final payment to the Engineer.

The Engineer along with the Owner’s representative will make a final inspection. If the work is found acceptable and complete to the satisfaction of the Owner, a meeting will be scheduled to finalize all other items due. Should the Contractor fail to complete and/or correct all punch list items required by the Owner, the Contractor shall pay for additional “Final Inspections” by the Engineer at the Engineer’s current rates. If the Contractor has any question with regard to any

items found on the punch list, he shall request clarification from the Engineer prior to final inspection.

Prior to release of final payment, a meeting (referred to in the previous paragraph) shall be held to collect from the Contractor and/or the Engineer, for the Owner, the following items:

1. Outside Inspection Certificates, as applicable,
2. Materials Certificates of Compliance,
3. Equipment and Material guarantees,
4. Contractors one-year (or longer, if required) guarantee or warranty using Owner forms,
5. Operation & Maintenance Manuals and Parts list, as applicable,
6. Receipts for Materials delivered to the Owner,
7. Miscellaneous Keys, Tools, etc.
8. Final Application for Payment,
9. Consent of Surety to Final Payment,
10. Contractor's Affidavit of Release of Liens,
11. Project Record Drawings (As-Builts),
12. Quitclaim deed from developer conveying any interest it has in the public improvements to the Owner using Owner format,
13. Bill of Sale conveying all public improvements to the Owner free and clear of liens and encumbrances using Owner format,
1. Final Payment Amount,
2. Contractor acknowledgement of Date of Warranty, and
3. All other documentation.

And the Owner will provide to the Engineer:

1. Public Works Director Certification that the work has been constructed in conformance with the plans and specifications.
2. A letter informing the financier to release the Letter of Credit.

Inspection certificates shall be submitted (Number 1, in the list above) from any State or Other governing body having jurisdiction, such as State electrical certification that the work is in strict conformance with applicable codes.

The Contractor shall remedy any defects due to faulty materials or workmanship and pay for damage to other work resulting there from, for a period of one year (or longer, if required) in accordance with Section 2.39 herein. A written warranty based on the provisions of Section 2.39 shall be provided to the Owner, dated as agreed with the Owner, properly signed and notarized and addressed to the Owner.

All keys to doors, panels or switches, special tools required for equipment and spare parts or supplies, as applicable, shall be accounted for and turned over to the Owner.

The Owner, will initiate action to advertise in the local newspaper regarding final payment to the Contractor and determining the date for payment.

Project Record Drawings (As-Builts) shall consist of one blackline copy of the completed project work with changes clearly marked and clouded and a CD-ROM. The CD-ROM disk shall include the marked up sheets in individual PDF format files and the electronic line work in the latest AutoCad drawing format. The electronic line work should be supplied such that all improvements are located on the Rifle grid i.e. UTM Z13 in metric (meter) scale. All drawings (electronic and hardcopy) should be clearly and neatly marked "RECORD DRAWING" in ½" block letters in the lower right quadrant of the sheet.

Item 14, above, shall be broken down into 1) cost of water system per individual street (including pipe, fittings, valves, services, hydrants, etc.), 2) sewer system (including pipe, services, manholes, etc.) per individual street, 3) storm drain and culvert system per individual street (including pipe, inlets, boxes, flared ends, manholes, etc.) and 4) individual street costs (including signals, signs, striping, asphalt, road base, curb, gutter sidewalk, grading, etc.).

PWM Section 2.43. RIGHTS AND REMEDIES

The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not as a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law, including but not limited to tort remedies. The Contractor

agrees that the economic loss rule as set forth in the Town of Alma v. Azco Construction, Inc., 10 p.3d 1256 (Colo. 2000) shall not serve as a limitation on the Owner's right to pursue tort remedies in addition to other remedies it may have against the Contractor. Such rights and remedies shall survive the acceptance of the Work or any termination of the Contract Documents. Contractor further specifically

waives all provisions of Chapter 8 of Article 20 of Title 13, Colorado Revised Statues, regarding defects in the Work under the Contract. In the event any portion of this provision is deemed un-enforceable by a court of competent jurisdiction, the remaining portions of this provision shall survive.

Supplementary General Conditions

1.00 GENERAL

These Supplementary General Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

2.00 INSURANCE

The Contractor shall provide and maintain adequate Workmen's Compensation Insurance for all labor on the Work under this Contract. Protection under said policies shall extend to the Owner and Contractor. Certifications of such insurance shall be filed with the Owner prior to commencement of operations. Proof of carriage of insurance by subcontractors shall also be furnished.

2.01 Unless otherwise provided in these Supplementary General Conditions, Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these Supplementary General Conditions or required by Law). This insurance shall include the interests of Owner, Contractor and Subcontractor in the Work, shall insure against the perils of fire and extended coverage, shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these Supplementary General Conditions, and shall include damages, losses and expenses arising out of, or resulting from, insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance, or otherwise provided in these Supplementary Conditions, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on or off the site or in transit when such portions of the Work are to be included in an *Application for Payment*. Such coverage shall be provided until the issuance of a certificate of substantial completion. The policies of insurance required to be purchased and maintained by Contractor in accordance with section 2.32 of the Rifle Public Works Manual shall contain a provision that the coverage afforded will not be canceled or materially changed until at least thirty (30) days prior written notice has been given to Owner.

2.02 All equipment shall be covered under the insurance requirements of the Contractor as stated under 2.01 above.

2.03 Coverage Required (minimum):

A. General Liability

1. Limits

a. Bodily Injury - $1,000,000 each person
$2,000,000 each occurrence

b. Property Damage - $1,000,000 each occurrence
$2,000,000 aggregate

2. Coverages

x Comprehensive Form
_ Premises-Operations Explosion
_ Collapse Hazard
_ Underground Hazard
x Products/Completed Operations Hazard
x Contractual Insurance
x Broad Form Property Damage
x Independent Contractors
x Personal Injury

B. Automobile Liability

1. Limits

a. Bodily Injury - $250,000 each person
b. Property Damage - $500,000 each occurrence
c. Combined - $600,000 each occurrence

2. Coverages

x Comprehensive Form
x Owned
x Hired
x Non-Owned

2.05 Certificates of Insurance from the contractor and subcontractor's insurance carriers shall name both the City of Rifle and CDOT as additional insured parties. Submission of Certificates of Insurance shall be provided prior to commencing any work.

3.00 TAX EXEMPTION.

Owner's tax-exempt number, when applicable, to be used as part of this project, will be provided to the successful bidder. The successful bidder shall then apply for sales tax exemption before working on a City Project. See www.revenue.state.co.us/PDF/dr0172.pdf. Subcontractors shall be provided copies of the contractors sales tax exemption certificate to avoid paying taxes when purchasing materials to be incorporated in the City project. Therefore, these taxes should not be included in the cost for performing the work.

4.00 FINAL PAYMENT.

Lien waivers from all prime Contractors and Subcontractors to be provided prior to issuance of final payment.

5.00 COMPLETION TIME.

W. Second Sidewalk	May '22	May '22	June '22	July '22	August '23	September '24
Bid Advertisement						
Bids Due						
Council Award						
Contract Execution						
Construction						

6.00 OWNER'S REPRESENTATIVE.

Unless provided for otherwise in writing by the Owner, any on-site Inspector or Representative of the Owner shall not have the authority to render any binding decisions nor make any binding judgments to the Contractor pertaining to any work which may change the Contract price or time of completion, or to the quality of Work, or to the manner in which the Work is being performed. The Representative of the Owner shall serve as a means of communication between the Owner and the Contractor and shall monitor the Work for the Owner. Any communication given to the Representative of the Owner by the Contractor shall be considered as being given to the Owner.

7.00 SAFETY REQUIREMENTS.

Nothing in the Contract Documents shall be construed as relieving the Contractor from protecting all property and persons or from strictly adhering to all applicable local, state and federal safety requirements. Where there is a conflict between the Contract Documents and any applicable safety requirement, the safety requirement shall take precedence.

8.00 LAWS AND ORDINANCES.

The Contractor shall at all times observe and comply with all federal, state and local laws, ordinances and regulations which in any manner affect the contract or Work, and shall indemnify and save harmless the Owner and the Owner's agent against any claim arising from the violations of any such laws, ordinances and regulations, whether by the Contractor or his employees.

If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules or regulations, and without notice to the Engineer, he shall bear all costs arising there from.

9.00 WAIVER.

It is expressly understood and agreed that any waiver granted by the Engineer or Owner of any term, provision or covenant of this Contract shall not constitute a precedent nor breach of the same or any other terms, provisions or covenants of this Contract. Neither the acceptance of the Work by the Owner nor the payment of all or part of the sum due the Contractor hereunder, shall constitute a waiver by the Owner of any claim which the Owner may have against the Contractor or otherwise.

10.00 PROTECTION OF PUBLIC UTILITIES AND OTHER ADJOINING PROPERTY.

The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to other property at the site or adjacent thereto, and he shall be liable for any and all claims for such damage on account of his failure to fully provide such protection.

The Contractor shall notify all public utility companies at least forty-eight (48) hours prior to commencement of any Work in the vicinity of the utilities. No Work shall commence until the utilities have been located and staked by the utility company or written consent to proceed has been given by the Owner. If utility service must be interrupted, the Contractor shall notify the head of local administrative services (i.e., City Manager, Mayor, and City Clerk), as applicable, and utility users affected by the interruption of service at least twenty-four (24) hours prior to interruption. Notice shall consist of publication in a local newspaper and/or announcement on local radio or television stations as determined by the Owner.

11.00 PROJECT PHOTOGRAPHS/VIDEOS

It is the Contractor's responsibility to take a sufficient number of pre-construction photographs/videos to resolve any disputes, which may arise regarding the conditions prior to and subsequent to construction. The Contractor shall provide copies of the pre-construction photographs/videos to the Owner prior to the start of work. Any potential problems should be identified at that time.

Progress and record photographs/videos shall be provided by the Contractor as appropriate to resolve any disputes and to completely document the work performed as a supplement to the Record Drawings. In general, the photographs/videos should be sufficient to show that all work was properly completed in accordance with the plans and specifications.

12.00 DAMAGE TO CONSTRUCTION.

The Contractor shall safeguard, until all work embraced by this Contract is formally accepted, all construction, both complete and incomplete, against damage and destruction, and should damage result, he will be required to reconstruct or repair it at his expense in a manner conforming to the Plans and Specifications, reconstruction shall be in a manner suitable to the Engineer.

13.00 PRE-CONSTRUCTION CONFERENCE.

A pre-construction conference shall be held within fifteen (15) days after the *Notice To Proceed*, at the Owner's place of business. The purpose of such meeting shall be to explain as required to the Contractor, the requirements of the Contract Documents, the procedures to be used in the administration of the Contract, the requirements of any funding Agencies, and to discuss any item of concern to the Work. The Contractor, Owner and Engineer, or authorized representative of each, shall be required to attend such meeting as a condition of the Contract.

14.00 BIDDER EXPERIENCE.

Upon request, bidder to provide documentation of relevant experience with reference to a minimum of three (3) projects of similar scope and size. Statement shall include equipment and manpower available for utilization on project. Supervisory personnel for project shall be provided. Qualification information shall be submitted as stated in section 3.0 of the "Instructions to Bidders".

16.00 PERFORMANCE AND PAYMENT BONDS.

Payment and Performance Bonds are required (section 2.26 of the general conditions and Agreement Documents section of the Project Manual).

17.00 WARRANTY INSPECTION.

At the Owner's discretion, a warranty inspection will be held during the sixty (60) calendar days prior to the expiration of the two-year warranty period. Contractor agrees to provide an authorized representative at such inspection to represent Contractor's interests. All defects identified during the inspection shall be corrected at Contractor's expense at direction of Owner in a timely manner. Corrective work shall be commenced within ten (10) calendar days after written notice to Contractor.

18.00 SOILS INVESTIGATION

Where available, applicable portions of subsurface soils investigations are included as an attachment to these Specifications). Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not made a part of the Contract Documents. Except for such reliance on such “technical data,” CONTRACTOR may not rely upon or make any claim against OWNER, ENGINEER or any of ENGINEER’S Consultants with respect to: the completeness of such reports and drawings for CONTRACTOR’S purposes, including, but not limited to,

any aspect of the means, methods, techniques, sequences and procedures of construction and programs incident thereto, or other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings, or any CONTRACTOR interpretation of or conclusion drawn from any “technical data” or any such data, interpretations, opinions or information. Contractor shall perform such investigations as he may deem necessary to determine his bid.

19.00 JOB SITE RESTRICTIONS.

19.01 Salvage. All materials to be removed from the project site or demolished on site shall be disposed of by the Contractor off the project site within five days.

19.02 Staging Area. Staging may utilize right of way if the contractor provides adequate warning cones, reflectors, etc. Contractor takes sole responsibility for leaving any equipment or materials in the City right of way.
19.03.Disposal Area. Owner's property is not available for a Contractor disposal area.

19.04 Working Hours. Work will normally be permitted after 7:00 a.m. and before 5:00 p.m. Monday through Friday. Other work hours must be approved by Engineer in writing. Work may be permitted on Saturday with 48 hours prior notification given to the Owner's representative.

20.00 ARBITRATION.

Anything in the General Conditions of the Contract Documents not withstanding the choice to submit any dispute to binding arbitration shall be solely that of the Owner and no other party to this Contract shall have the right to submit any controversy to binding arbitration.

21.00 PAYMENT RETAINAGE.

Retainage on Pay Estimates shall be five (5) percent.

22.00 REFERENCE TO OWNER.

The City of Rifle will be the Owner of this project and will be referred to as Owner in the Agreement.

23.00 NOTIFICATION TO ADJACENT PROPERTY OWNERS.

Contractor shall provide constant communication with adjacent property owners to schedule and discuss impacts the contractor's work will have on their access and utility service.

Access to property owners adjacent to the work site shall be open at all times unless other arrangements are made a minimum of twenty-four (24) hours in advance.

24.00 DRAWING ACCURACY AND EXISTING UTILITIES.

Contractor shall provide constant communication with adjacent property owners to schedule and discuss impacts the contractor's work will have on their access and utility service.

As such, information relating to locations, sizes, or elevation of existing facilities should be considered only approximate. It shall be the responsibility of the Contractor to contact the appropriate representatives of utility companies, or utility locate companies, a minimum of 48 hours prior to the commencement of Work which might affect utility installations and to secure form such representatives information as to accurate location, size and type of such installations. The Contractor shall assume all responsibility for protection, repair and relocation of all such items encountered. Should repair or replacement be required, work shall be performed according to the requirements of the respective utility company.

25.00 ABBREVIATIONS.

Whenever the following abbreviations are used in these Specifications or on the Drawings, they shall be construed the same as the respective expressions represented:

AASHO or AASHTO	American Association of State Highway Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute, Inc.
AWWA	American Water Works Association
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health & Environment
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard, U.S. Department of Commerce
FED. SPEC.	Federal Specifications
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
OSHA	Occupations Safety and Health Act (Federal and/or State)
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.

25.01 Standard Specifications Reference. Where reference is made in these Specifications to other Standard Specifications, it is the intent that the latest available revisions of the CDOT Standard Specifications referenced be used. All portions of the CDOT Standard Specifications referenced shall be considered a part of these Specifications unless specifically superseded herein.

In case of conflict between the drawings and specifications, the specifications shall govern. Figured dimensions on drawings shall govern over scale dimensions, detailed drawings shall govern over General Drawings and Special Conditions shall govern over Standard Specifications.

Any discrepancies between the drawings and specifications and site conditions; or any inconsistencies, errors, omissions or ambiguities in the drawings or specifications; or any errors or omissions in the layout as given by survey points and instructions shall be immediately reported to the engineer, in writing, who shall promptly verify and correct such inconsistencies or ambiguities in writing. Work performed by the contractor after such discovery, until authorized or corrected by the engineer, shall be done at the contractor's risk.

26.00 PERMITS AND EASEMENTS.

The Contractor shall be responsible for securing any and all access rights he may require for construction convenience with private individuals and landowners. The Contractor shall provide the Engineer evidence of agreements for such access rights. All other permits required should be secured prior to commencement of Work at the Contractor’s own expense.

The successful Contractor will be required to obtain a City of Rifle Contractor’s license for construction operation. Proof of insurance shall be required.

27.00 SUBSTITUTION OF MATERIALS.

At no time shall materials be substituted for those shown on the Drawings or called for in the Specifications unless written approval is obtained from the Engineer in writing prior to construction. Any deviation from the Drawings and Specifications shall be accompanied by a written directive of the Engineer or his representatives. (See Article 6, General Conditions).

28.00 CONTROLLED AREA OF WORK.

The Contractor shall confine all the construction work and all related activities to the public roadways, utility easements, or construction areas designated by the Engineer. Access and egress to the work area shall be minimized to specific points.

29.00 INTERPRETATION OF ESTIMATED QUANTITIES.

Bidders are cautioned that the estimated quantities in the Bid Schedule are approximate only and are prepared for the comparison of bids. The basic of payment will be actual quantities of work performed and accepted or as stated in the Measurement and Payment section of each specification section. Prior to mobilization the contractor shall present their verification of quantities and final work plan for all aspects of work.

30.00 TEMPORARY FACILITIES.

The Contractor, at his expense, shall provide all necessary temporary facilities for his own convenience or to meet local, state, or federal requirements, including, but not limited to, potable water, sanitary waste facilities, power, telephone, etc. (See Article 6, General Conditions).

31.00 CLEAN-UP.

The Contractor will be responsible for immediately cleaning the job site during and after construction. A continuing effort shall be made through the duration of the contract to keep all areas clean and free of all rubbish, removed vegetation, construction waste, employee waste, debris and other objectionable materials generated from the project. All materials as part of this work shall be disposed off site in an acceptable manner. Final clean-up must be approved and accepted by the Owner before the contract may be considered complete.

32.00 MEASUREMENTS AND PAYMENT.

Payment for work done shall be as defined in *Bid Schedule*. Payment shall be complete compensation for the work unit completed and shall consist of furnishing and installing all materials, plant, equipment, labor and other items related to the work unless otherwise specified. All incidentals not specifically mentioned, but required to complete the Work, shall be paid for as part of the Work unit they are related to. All bid items shall be measured and paid in accordance with the appropriate section of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction unless revised by the Standard or Project Special Provisions.

33.00 SUBMITTALS.

The Contractor shall submit submittal data, as defined in the General Requirements. Submittals shall be required on all items of the submittal schedule contained in the Technical Specifications. At a minimum, the Engineer will retain Two (2) sets, and the Owner One (1) and the approved or rejected copy returned to the contractor.

34.00 COMMUNICATION.

Project will demand the need for communication with properties impacted by work performed. The Contractor shall notify, twenty-four (24) hours in advance of work, all property owners that may be affected by his work. This notification shall include times and duration of access or traffic interruptions. Anticipated interruptions shall be discussed with the City representatives daily.

The purpose of public notification is to reasonably inform the public of the work and to allow the public to schedule activities that may be impacted by the work. Owner, through its Representative, may stop work not consistent with the schedules prepared by the Contractor, which in the opinion of the Owner causes unreasonable hardship to the public.

Contractor shall designate an Information Coordinator who shall be on site during all work hours an shall be responsible for:

1. Preparing a weekly work schedule that includes planned type of work and areas of affected by work. Once schedule is confirmed, the City shall prepare door hangars for the Contractor to distribute the week prior.

2. Communication with adjacent properties of any change to traffic control that may affect their access via written notice for residents. The Contractor is responsible for any follow-up communications with residents after the initial door hangars are provided.

3. Communication with the media or by other means as appropriate, planned/scheduled changes in traffic control and other items that will affect the public traveling through the site. Also communicate with emergency services as to location of work and impacts.

4. Coordinate performed work to be consistent with weekly work schedule.

35.00 PROJECT SIGN.

A standard traffic sign (Orange Diamond, for example) with “Thank you CONTRACTOR, Phone number” shall be placed at a noticeable location in the neighborhood. The Contractor may, if they so choose, place a sign during active construction for their company contact pending approval by City Staff.

End of Section

Technical Specifications

These Technical Specifications supplement the specifications provided in the City Of Rifle Public Works Manual. All provisions, which are not so amended or supplemented, remain in full force and effect.

Submittal Schedule

Submittals on the items below must be accepted by the City Of Rifle prior to commencement of work.

_____Traffic Control Plans prepared by TCS
_____Asphalt Mix Design
_____Waterline Product Data
_____Striping Product Data
_____Waterproofing Product Data
_____Paving Mat Product Data
_____Bridge Mill and Overlay Method Statement

TRAFFIC CONTROL

I General

Submittal Requirements

The Contractor shall prepare a Transportation Management Plan for each portion of the project. The portions of the project requiring separate traffic control plans are:

- Airport Road Waterline
- Airport Road Mill and Overlay
- Enterprise Court
- Railroad Avenue Bridge Mill and Overlay
- W 7th St

The Contractor shall manage the work zone impacts of the Project in accordance with the Transportation Management Plan (TMP). The TMP shall consist of the Traffic Control Plan (TCP), and Public Information (PI) requirements. The TCP addresses traffic safety and control through the work zone and the PI component requirements shall address communication with the public and concerned stakeholders. The initial TMP shall be submitted at the Pre-construction Conference. The Contractor's superintendent shall implement the TMP.

(a) Traffic Control Plan. The Contractor shall control traffic in accordance with the Traffic Control Plan (TCP), as shown in the Contract. To implement the TCP, the Contractor shall develop and submit a Method for Handling Traffic (MHT) for each different phase of construction which shows the Contractor's proposed construction phasing and proposed traffic control devices consistent with the TCP. If at any time the Contractor desires to change the MHT, it shall be considered a different phase requiring a new MHT.

Any major revisions to the TCP as determined by the Engineer must be authorized by a contract modification order.

Each proposed MHT shall be approved in writing by the Engineer before the corresponding phase of construction will be allowed to begin. The initial MHT shall be submitted at the Pre-construction Conference.

The proposed MHT shall include as a minimum the following:

(1) A detailed diagram which shows the location of all traffic control devices, including advance construction signs and speed limit signs; method, length and time duration for lane closures; and location of flaggers and time duration of the flagging operation. Lane closures shall be kept to a minimum in both length and duration, and cause a minimum of interference to the traveling public, consistent with the work being performed.

(2) A tabulation of all traffic control devices shown in the detailed diagram including, but not limited to: construction signs; vertical panels; vertical panels with light; Type 1 and Type 2 barricades; Type 3 barricades; cones, drum channelizing devices; concrete barrier (temporary); advance warning flashing or sequencing arrow panels. Traffic control devices may be used for more than one operation or phase. However, all devices required for any particular phase must be detailed and tabulated for each phase.

Traffic cone spacing shall be determined as required by the standard plans calculations based on current speed limits. Cone spacing shall not exceed 120 feet. Cones shall be placed a distance of 2 miles on the centerline. The distance and spacing may be adjusted, depending on traffic conditions and terrain, as determined by the Engineer.

(3) A plan for maintaining and controlling pedestrian, bicycle, and other non-vehicular traffic.

(4) A plan for emergency vehicle access.

II Products

Traffic Control Devices shall conform with Section 630 of the CDOT 2019 Standard Specifications

III Execution

The Contractor shall designate an individual, other than the superintendent, to be the Traffic Control Supervisor. The Traffic Control Supervisor shall be certified as a worksite traffic supervisor by either the American Traffic Safety Services Association (ATSSA) or the Colorado Contractors Association (CCA), and shall have a current Department flaggers certificate. A copy of the Traffic Control Supervisor's certifications shall be provided to the Engineer at the Pre-construction Conference.The Contractor's Superintendent and all others serving in a similar supervisory capacity shall have completed a CDOT-approved two-day Traffic Control Supervisor training as offered by the CCA. The one-day ATSSA Traffic Control Technician (TCT) training along with the two-day ATSSA Traffic Control Supervisor training will serve as an alternate. If the alternate is chosen, the Contractor shall provide written evidence that at least an 80 percent score was achieved in both of the two training classes. The certifications of completion or certifications of achievement for all appropriate staff shall be submitted to the Engineer at the Preconstruction Conference.

The Traffic Control Supervisor's duties shall include:

(1) Preparing, revising, and implementing each required Method of Handling Traffic in accordance with the Traffic Control Plan.
(2) Directly supervising project flaggers.
(3) Coordinating all traffic control operations, including those of subcontractors and suppliers.
(4) Coordinating project activities with appropriate police and fire control agencies.
(6) Inspecting traffic control devices on every calendar day that traffic control devices are in use, masked, or turned away from traffic.
These inspections shall include at least one night inspection per week. The TCS or another representative who is certified as a worksite traffic supervisor shall perform these inspections.
(7) Insuring that traffic control devices are functioning as required.
(8) Overseeing all requirements covered by the Contract which contribute to the convenience, safety and orderly movement of traffic. Have an up-to-date copy of the MUTCD and applicable standards and specifications available at all times on the project.
(9) Attending all project scheduling meetings.
(10) Supervising the cleaning and maintenance of all traffic control devices.

A certified worksite traffic supervisor shall be responsible for Traffic Control Management (TCM) on a 24-hour-per-day basis.The TCS shall be on the work site at all times when Traffic Control Management (TCM) is performed and shall be on call at all times.

Asphalt

I General

The job mix formula developed by the Colorado Department of Transportation on the aggregates to be incorporated in the asphaltic concrete surface must be submitted to the City of Rifle Public Works Director for approval prior to commencing the work.
Hot plant mix surfacing material using aggregates from sources that have not been tested by the CDOT, for the purpose of developing a job mix formula, within nine (9) months prior to the date of intended delivery will be rejected.

The job mix formula with allowable tolerances shall be within the master range specified in the material section of these specifications.

II Products

Asphalt shall be HMA SX75 PG64-22

III Execution

15.3.4. Aggregate Base Course

Base course shall be placed and compacted in four (4) inch to six (6) inch layers on a prepared subgrade surface in conformity with the lines, grades and typical cross sections shown on the plans.
Each layer shall be densified to ninety-five (95) percent of the Modified Proctor when tested in accordance with AASHTO T-180. Water shall be uniformly applied during compaction so as to achieve proper consolidation.
The prepared surface, ready to receive the surface course shall be uniformly graded to design elevation so when tested with a ten (10) foot straight edge the variation above or below the testing edge, between any two (2) contact points with the surface, shall not exceed 1/2" for Class 1 or 1/4" for Class 5 or Class 6 base course. Areas that do not conform with these tolerances shall be reworked.
15.3.9. Flexible Pavement
Along the lip lines of gutters and crosspans sufficient bituminous material shall be deposited so that, after compacting, the wearing surface will remain not less than 1/8" nor more than 1/4" above the concrete. For median curb wearing surface will be from 1/4" to 1/2" below concrete.
Longitudinal joints in the wearing surface layer shall be hand luted and provide a uniform transition, after compacting, between passes with the paving machine. They shall also be positioned such that they will overlay any sublayer longitudinal joint by six (6) inches. Longitudinal joints in the wearing surface shall generally be located as follows:

A. For two lane roadways - at the center line of the pavement and at the outside edge of the traveled lanes.

B. For roadways of more than two lanes - at the lane lines and at the outside edge of the travel lanes.

The bituminous mixtures shall be placed within the air temperatures limitation designated herein below and only when the weather conditions otherwise permit the pavement to be properly placed and finished. Asphalt shall be placed at a minimum air and surface temperature of 50ºF.
Asphaltic concrete shall be handled and placed on the prepared subgrade in such a manner as to minimize segregation. All segregated areas behind the pavers shall be removed immediately upon discovery and replaced at contractor's expense, with specification material before the initial rolling. If more than fifty (50) square feet of segregated material is ordered removed and replaced in any 500 linear feet of paver width laydown, paving operations shall be discontinued until the source of the segregation has been found and corrected.
After the asphaltic concrete has been spread, struck off and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling. Rolling of the surface shall begin as soon after spreading as rolling will not cause undue displacement cracking or Page 89

shoving of the mixture. Rolling shall start at the sides and proceed longitudinally parallel with the street centerline, each trip overlapping one-half (1/2) of the roller width, gradually progressing to the crown of the street. Rolling shall be continued until all roller marks are eliminated and a minimum density of ninety-five (95) percent of a laboratory specimen made in the proportions of the job mix formula has been obtained.

On lifts of asphaltic concrete three (3) inches or more in thickness breakdown rolling shall immediately follow the spreading sequence using rubber tired rollers, free of recapped tires, followed by steel wheel rolling. Field density determinations will be made in accordance with Colorado Procedure #44 and #81. Variation between any two (2) contacts with the surface shall not exceed 3/16" in ten (10) feet. All lumps or depressions exceeding the specified tolerance shall be corrected by removing defective work and replacing it with new material as directed.

15.3.15. Cold Milling, Asphalt Surfaces - All valve boxes, manhole rings and covers within the area to be cold milled shall be lowered sufficiently to clear the milling operation, and then raised to within 1/4 inch of the resurfaced finished grade. Electric and phone vaults shall not be lowered, but shall be protected from damage during the performance of the work.

Cold milling shall be performed using mechanical equipment capable of uniformly routing materials while providing a uniform milled level or tapered surface, varying between 6 1/2 to 8 feet wide and zero to 2 1/2 inches in depth, per pass. Milled edges shall be vertical and true with the alignment of each pass of the equipment.

Electric and phone manholes and vaults are to be left with gradual asphalt tapered approaches in alignment with traffic flow, when resurfacing will not immediately follow the milling operation. Such approaches left to facilitate traffic adjacent to vaults, crosspans, utility manholes, structures, etc., shall be milled out or removed by other acceptable means, immediately proceeding the resurfacing operation. Leaving of abrupt vertical edges that will impede traffic will not be allowed.

Where milling is required along and parallel with concrete gutters the router shall be set to provide a uniform tapered slope. The slope shall vary from two (2) inches below the gutter lip line to daylight with the existing asphalt surface, 6 1/2 to 8 feet from and perpendicular to the gutter flow line.

Material recovered during the milling operation shall be disposed of by the contractor at his expense, unless otherwise directed.

Unless otherwise approved, milling and resurfacing shall be performed simultaneously such that both operations are completed during the same day.

Striping

I General

See CDOT Section 708 for water based paints

Waterline

I General

Submittals- Deliver to City all product data and tie in procedures.

Tie in procedures must be submitted to the COR within 48 hours of the planned connection. Only City personnel are to operate existing system valves or new valves if they are connected to the City system.

The contractor must, in writing, advise affected users twenty four (24) hours prior to performing work on a service, distribution or transmission line which will interrupt a customer's supply of water. Contractor prepared notices shall be hand delivered to each customer or occupant. If the occupant cannot be contacted, the written notice shall be left attached to the door knob or screen.

II Products

III Execution

Waterline Fittings

I General

Submittals- Deliver to City all product data and tie in procedures.

Tie in procedures must be submitted to the COR within 48 hours of the planned connection. Only City personnel are to operate existing system valves or new valves if they are connected to the City system.

The contractor must, in writing, advise affected users twenty four (24) hours prior to performing work on a service, distribution or transmission line which will interrupt a customer's supply of water. Contractor prepared notices shall be hand delivered to each customer or occupant. If the occupant cannot be contacted, the written notice shall be left attached to the door knob or screen.

II Products

0.1. MATERIALS

Pipe, fittings and appurtenances to be installed in the City water system shall be equal or exceed the minimum standards as set forth by the: American Society of Testing Materials (ASTM); American Water Works Association (AWWA); American National Standards Institute (ANSI), etc. Referenced standards shall be the latest edition or revision thereof.

Standard specifications applicable to the manufacturing of the various types of pipe and fittings to be used are listed in Table 30-1. Special requirements modifying the standard specification are referred to in Part III Section 120, Table 120-I and under specific items throughout this and the Design Section of these specifications.

Manufacturers of pipe, valves and other in-line appurtenances shall furnish a certified statement that the inspection and all the specified tests have been made and the results obtained comply with the requirements of the applicable standards as herein specified. A copy of the certification shall be sent to the Project Engineer prior to installation.

TABLE 30-I
WATER PIPE

APPLICATION TYPE & MATERIAL	SPECIFICATION		DIAMETER	CLASS	JOINT
	ASTM	ANSI/AWWA			

SERVICE LINES					
(CU) Copper ADD PURECORE	B-251		3/4” - 2” 1” min for wall thickness	TYPE K	Flared *or* Compression (1)
(PVC) Polyvinyl Chloride (Outside vaults)		C900	3” - 8”	CL 150	Bell and spigot or MJ
DISTRIBUTION & TRANSMISSION LINES: (2)					
(PVC) Polyvinyl Chloride Cell 12454 A or B (PVCO) Polyvinyl Chloride Molecular Oriented	D-1784 D-2241	C900	4” ,6”,8” or 12”	CL 200 DR 14	Bell and spigot ASTM F-477, D-3139 AWWA C900, C905, C909 UNI-B-1
		C905	14”-24”	CL 165 DR25	
		C909	6”, 8” or 12”	CL 200 DR 14	

(1) Compression joints allowed are Mueller (110 only), Ford (Q only), AY McDonald (Q only), Cambridge (CB only), James Jones (SG only)

(2) See Section 20 for bedding type, gradation and compaction.

(3) Requires asphaltic protective coating, cement mortar lining, and polyethylene encasement. See Paragraph 30.2.7 of these standards.

(4) Requires AWWA C214 Tape Coating and AWWA C205 Cement Mortar Lining

(5) Requires cathodic protection system.

0.1.1. Fittings for Service Lines, Meters and Mains

A. Service Line Fittings: Service line fittings shall be of the manufacturer and types herein below specified only. Other manufacturers and model numbers must be approved by the Public Works Department prior to installation.

Corporation Stops - Ball Type Only			
Size	Brand	**Mueller**	**AY McDonald**
¾"	Compression	B-25008	4701BQ
1"	Compression	B-25008	4701BQ
1 ½"	Compression	B-25008	4701BQ
2"	Compression	B-25008	4701BQ
Curb Stop Valves - Ball Type Only with 1/4 Turn Check			
Size	Brand	**Mueller**	**AY McDonald**
¾"	Compression	B-25209	6100Q

1"	Compression	B-25209	6100Q
1 ½"	Compression	B-25209	6100Q
2"	Compression	B-25209	6100Q

Curb Stop Box			**Rod**
Size	**Mueller**	**AMETEK**	**AMETEK**
3/4" – 1"	H10314	110183	
1½" – 2"	H10336	110183	110046-33

Meter Pit			
¾" – 1"	20"	Plastic	Simplex or Duplex series 250
1 ½"	20"	Plastic	DFW Plastics Model Number DFW 242148H (48" Height, White Color, ½" wall thickness)
2"	20"	Plastic	Mid States Plastics "B" Series (48" Height, White Interior, ½" wall)

Meter Pit Dome and Cover

Brand	**Castings Inc.**
	M-70 AL or M-70 CI

Service Saddles* - Bronze with Stainless Steel Straps (3/4" – 2" taps)		
Pipe Type	**A.Y. McDonald**	**Mueller**
PVC	3855	BR2S
Ductile or Cast Iron	3855	BR2S
Asbestos Cement	3855	BR2S

* Saddles must be installed in accordance with manufacturer's recommended torque specifications

B. Fittings for PVC and Ductile Iron Distribution and Transmission Lines: Distribution and transmission line fittings for PVC and ductile iron pipe shall be ductile iron and in accordance with ANSI/AWWA C153/A21.53 and ANSI/AWWA C110/A21.10. Fittings shall have a 350 psi pressure rating and be furnished with a cement-mortar lining of standard thickness and a bituminous seal coating as defined in ANSI/AWWA C104/A21.4. Fittings may also be coated both internally and externally with fusion bonded epoxy in accordance with ANSI/AWWA C116. The fittings shall be furnished with mechanical joint ends in accordance with ANSI/AWWA C111/A21.11 and, in addition, the tee-head bolts and hexagon nuts shall conform to ASTM A325, Type 3 and be fabricated from "Cor-Ten" or "Usalloy", a high strength, low alloy steel. 4" through 12" diameter fittings may also be ductile iron One-Bolt type with integral restrained joints as manufactured by One-Bolt, Inc.

Steel Pipe Transmission Line Fittings: All specials and fittings shall conform to the dimensions of AWWA C208. Fittings shall be of the same material and thickness as the pipe. The minimum radius of elbows shall be 2.5 times the pipe diameter, and the maximum miter angle on each section of the elbow shall not exceed 11 1/4 degrees. If elbow radius is less than 2.5 x pipe diameter, stresses shall be checked per AWWA M11 and wall thickness or yield strength increased if necessary. Fittings shall be equal in pressure design strength and shall have the same lining and coatings as the abutting pipe. Fittings shall be made of segmentally welded sections from hydrostatically tested pipe with ends compatible with the type of joint or coupling specified for the pipe.

Concrete Cylinder Pipe Transmission Line Fittings: Special fittings such as wyes, tees and crosses shall be constructed of steel cylinders and shall be mortar lined and coated. Fittings shall be at least equal in strength to the abutting pipe sections in accordance with AWWA C300, C301, C303 and M9. The design shall be approved by the Project Engineer prior to fabrication.

0.1.2. Valves

A. Resilient Wedge Gate Valves (3" - 12"): Gate valves shall be manufactured in accordance with AWWA C-509 "Resilient-Wedge Gate Valves" (3" - 12") for water systems, open left (counterclockwise).

Valves shall be epoxy coated both internally and externally in accordance with ANSI/AWWA C550 and have a non-rising stem. The operating pressure for all gate valves shall be 200 psi gauge.

The stem seal shall consist of two (2) each O-rings, designed to allow replacement of the seal above the thrust collar with the valve operating under pressure in the full open position.

Flat gaskets, either of the ring or full faced type, required at the bonnet connection shall be fabricated from compressed asbestos sheet with a rubber compound binder. Use of homogenous rubber or vegetable fiber sheet is not acceptable.

B. Butterfly Valves (14"-54"): Butterfly valves shall be manufactured in accordance with AWWA C504 "Rubber Seated Butterfly Valves", open left (counterclockwise).

Valves shall be Class 150 B and be drop tight for flows in either direction at a maximum static differential pressure across the valve of 150 psi.

Valve body material shall conform to that shown in Section 5.4 of referenced specification. All flanged end valves shall have a short body laying length conforming to Table 3 of specification, AWWA C504.

Manual valve operators shall be sized and designed to develop output torques for Class 150 B operating service and shall be sufficient to seat, unseat and rigidly hold the disc in any intermediate position for the above conditions. The operator shall be capable of withstanding an overload input torque of 300

ft/lbs at full open or closed position without damage to the valve or valve operator. The maximum input torque required to fully open or close the valve for Class 150 B conditions shall not exceed 150 ft/lbs., when applied to the operating nut. All gearing shall be totally enclosed, full gasketed, grease packed, and sealed from ground water. The operator shall be designed to resist a minimum pressure head of twenty-five (25) feet, when submerged in water.

External and internal valve coating shall be a 6 mil polyamide cured epoxy in accordance with ANSI/AWWA C550.

C. Pressure Reducing Valves: Pressure reducing valves shall operate at a pressure of 150 psi gauge and be capable of reducing a high existing pressure to a pre-adjusted lower downstream pressure for varying rates of flow without causing water hammer on the system. The maximum fluid velocity through the valve shall not exceed fifteen (15) fps at maximum demand flow. The valve shall be designed to provide an access opening into the valve body for removing internal parts without removing the main valve body from the line. Valves shall be supplied with position indicator assembly, open and close speed controls, sustainer and preset pilot valves in accordance with City of Rifle specified pressures.

Pressure reducing valves approved for installation are as follows:

Clayton Model 92-01, manufactured by Cla-Val Co., Newport Beach, California or Singer Valve Model 106-S

D. Air Release-Vacuum Valves: Combination air release-vacuum valves operating to 150 psi shall be of the single body, double orifice type allowing large volumes of air to escape out of the large air vacuum orifice when filling the pipeline and to close watertight when the liquid enters the valve. During closure of the large orifice, the small air release orifice shall open to allow small pockets of air to escape automatically and independently of the large orifice. The large air vacuum orifice shall also allow large volumes of air to enter through the orifice during pipeline drainage to break the vacuum. Valves shall be manufactured in accordance with AWWA C512. Drain plugs shall be removed before installation and broiler drains installed by the contractor before the valve is put into service.

The valve body and cover shall be cast iron conforming to ASTM A-48, Class 30. The body inlet must be baffled to protect the lower and upper floats from direct contact of the rushing air and water to prevent premature valve shut off. All floats shall be stainless steel conforming to ASTM A-240, be hermetically

sealed and designed to withstand a minimum of 1000 psi. The upper float shall be center guided for position shut off.

The valve needle and seat shall be Nitrile Rubber conforming to ASTM SB-800. The seat must be fastened to the valve cover, without distortion, for drop tight shut off.

The level frame shall be Delrin conforming to ASTM D-638 and the lug shall be bronze conforming to ASTM B-124-55.

APCO valve series 143C, 145C, 147C, 149C, 150C and 151C, as manufactured by Valve and Primer Corporation or Val-Matic numbers 201C, 202C, 203C, 204C as manufactured by Val-Matic Valve and Manufacturing Corp. are allowed.

1. Guard Valve: The guard valve to be used with two (2) inch and smaller air valves shall be a Ford or Mueller brass ball valve with female iron pipe threads, or approved equal. Connections between the air and guard valve shall be made using brass nipples conforming to AWWA C-800, "Threads for Underground Service Line Fittings". Large guard valves may be flanged type.

A service saddle shall be used to install taps for all combination air release vacuum valves installed on water mains. Service saddles shall conform to the manufacturer and type shown in Section 30.2 of these specifications. For air release–vacuum valves installed on transmission mains larger than 16” diameter, saddle shall be equivalent to APAC 113 large diameter, double strap all bronze service saddle.

E. Tapping Valves: Tapping valves shall conform to all the requirements set forth herein above for resilient seat gate valves and the following:

The inlet end of the valve shall be Class 125 flange and the outlet end shall be a mechanical joint. Body of the valve and seat opening shall be sized large enough to accommodate the following sizes of shell cutters:

Tapping Valve Nominal Diameter	Shell Cutter Diameter

4"	3- 7/8" ± 1/32"
6"	5-13/16" ± 1/32"
8"	7- 7/8" ± 1/32"
10"	9- 7/8" ± 1/32"
12"	11- 7/8" ± 1/32"

0.1.3. Valve Appurtenances:

A. Flanged Ends: Flanges shall be sized and drilled in accordance with ANSI-B 16.1, Class 125 specifications; flanges shall be machined to a flat face with a finish of 250 micro-inches, or machined to a flat surface with a serrated finish in accordance with AWWA C207 "Steel Pipe Flanges".

B. Mechanical Joint: Mechanical components of this type of joint shall conform with ANSI-A21.11/AWWA C-111 "Rubber Gasketed Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings". The tee-head bolts and hexagon nuts shall be fabricated from a high strength, low alloy steel known in the industry as "Cor-Ten", "Usalloy" or equal.

C. Bolting Material: Bolts and hex nuts used on the bonnet of the valve shall be manufactured from a low-alloy steel for corrosion resistance or electroplated with zinc or cadmium. The hot-dip process, in accordance with ASTM A-153, is not acceptable for the threaded portion of the bolts.

D. Operators and Stem Extension: Operators shall be designed for buried service and to operate indefinitely in a fully buried condition. Operators shall be equipped with a standard AWWA 2" square operating nut. Valves shall open with a left (counterclockwise) rotation of the nut.

Top operating nut stem extensions shall be manufactured from cold rolled steel. Stem extensions shall be equipped with a standard AWWA two (2) inch square operating nut and shall be of sufficient length to place the stem operating nut to between three (3) to five (5) feet of finished grade. Stem extension shall be attached to the valve operating nut by means of two (2) each 5/16" x 1/2" set screws. 1/8" deep dimples shall be drilled into operating nut for set screws to hold on to.

E. Testing: Each valve after shop assembly shall be given the operation and hydrostatic tests in accordance with the applicable specifications.

F. Painting: All surfaces of the valve shall be clean, dry and free from grease before painting. All ferrous surfaces, exterior and interior, except the seating surfaces of flange faces, shall be evenly coated with a suitable primer to inhibit rust or black asphalt varnish in accordance with Federal Specification TT-V-51e, Military Specification C450C, Type 11 or Navy Specification JANT 450. Flange faces shall be shop coated with a rust preventive compound such as Dearborn Chemical "No-OX-Id", Houghton "Rust-Veto 344", or "Rust-O-Leum R-9".

On rubber seated valves, after above painting is complete, a lubricant compatible with the rubber seal shall be applied to the surface of the seal and the mating metal surface to prevent bonding of the two (2) surfaces during shipment and storage. Following application of the seal lubricant, the valve disc shall be placed in the fully closed position for shipment.

G. Valve Boxes: Valve box parts shall be made of gray cast iron and the boxes shall be two (2) piece, adjustable screw type, with 5 1/4" shafts. Extension pieces shall be used where necessary. Lids shall be of the drop type having 1 1/2" skirts and marked for water usage. Slip cheater type are unacceptable.

Tyler Pipe Company, Series 6850 or equal with Small Base are allowed unless a larger valve requires a Wide Base.

30.2.4 Tapping Sleeves for Wet Taps (3" - 12"): All tapping sleeves for use on PVC, ductile iron or existing asbestos cement water mains shall be designed for an operating pressure of 150 psi and shall be fabricated using Smith- Blair 622 or equivalent. Sleeve shall be furnished with gridded virgin SBR compounded gasket for water service that provides full 360° pipe coverage (“full gasket”). Gasket shall be shop glued to the body section of the sleeve and the gasket shall provide adequate seal for the design pressure. Sleeve flange shall be Type 304 (18-8) Stainless Steel having the flange face machined and recessed to receive standard tapping valve in accordance with MSS Standard SP-60 for sizes 4” through 12”. Flange shall conform to AWWA C207 Class D ANSI 150 lb. drilling. Bolts shall be Type 304 (18-8) Stainless Steel per ASTM A193 and A194. The use of two (2) tapping saddles, when side by side or

back to back, as a substitute for a cross will not be allowed. Edge of tapping saddle must be a minimum of 24” away from all joints as measured along the water main.

0.1.5. Fire Hydrants: Dry-Barrel Dry-Top Fire Hydrants: Except as modified or supplemented herein, all fire hydrants shall be designed to operate for a line pressure of 150 psi and manufactured in accordance with AWWA C502 "Dry-Barrel Fire Hydrants". Kennedy K81D Guardian or Mueller Super Centurion 250 are the approved City of Rifle hydrants

A. Size: Hydrants shall have a main valve opening size of 5 1/4 inches.

B. Type: Hydrants shall be the 3-way type with one (1) pumper nozzle and two (2) hose nozzles all located on the same horizontal plane, between eighteen (18) and twenty-four (24) inches above final grade. All extension kits are to be furnished and installed by Contractor. Proper breakaway coupling installation shall be verified by City inspector prior to reinstalling hydrant bonnet.

C. Base Connection: Hydrant base shall be provided with a mechanical joint to accommodate six (6) inch diameter AWWA C-900, CL200 or AWWA C-909, CL150 pipe complete with plain rubber gasket, gland, bolts and nuts all in accordance with ANSI A-21.11/AWWA C111.

The mechanical joint bolts and nuts shall be high strength, low-alloy corrosion resistant steel "Cor-Ten" or equal with a minimum yield of 50,000 psi conforming to ASTM Specification A-242. Incorporated into the base shall be two (2) lugs for rodding or strapping of pipe.

All mechanical joint accessories shall be attached to hydrant for shipment.

D. Traffic Breakaway: Hydrant shall incorporate a traffic breakaway feature of the barrel and stem. Stem coupling shall be of cadmium plated steel or bronze with fasteners of stainless steel.

E. Main Valve Assembly: The main valve of the hydrant shall be 5 1/4" diameter compression type which closes with the water pressure. Seat ring shall be bronze with a machined face and external threads for threading into a bronze drain ring. Provide bronze to bronze threads for the main valve assembly and a fully bronze lined drainway.

Gasket for valve shall be a replaceable type fabricated of a resilient material, with a threaded bottom plate or nut, complete with seal to prevent leakage of the hydrant shaft.

The valve assembly shall include one (1) or more drain valves which will work automatically with the main valve and drain the barrel when the main valve is in the closed position. Drain valves shall be positive, mechanically activated and be an integral part of the main valve assembly. Drain channels shall be bronze lined and sized large enough for the barrel to drain within twelve (12) minutes when the barrel is sized for a five (5) foot trench depth.

All parts of the main valve assembly shall be so designed that removal of the assembly from the barrel is accomplished without excavation in accordance with Section 201.13 of the referenced specification.

F. Operating Shaft and Nut: The operating nut shall be bronze or cast iron #17NS hexagonal shaped with a finish height of 1 1/4". The dimensions from point-to-point are 1 1/2" at the top and at the bottom. Bushings in the bonnet shall be so constructed that it will prevent the operating nut from traveling during opening or closing operation; also the bushing shall house a gasket or seal to prevent moisture or foreign material from entering the lubricant reservoir.

The hydrant shall open by turning the operating nut to the left in a counter clockwise direction and shall have an arrow on top of the bonnet to designate the direction of opening.

G. Pumper Nozzle and Cap: The pumper nozzle shall be 4 1/2" nominal diameter. Threads shall be right-hand and National Standard in accordance with NFPA #194.

Nozzle cap shall be furnished with a synthetic rubber gasket installed in a retaining groove and the dimensions and shape of the nozzle cap nut shall be the same as the operating shaft nut as described in Paragraph F above.

Nozzle caps shall be furnished with security chains with one (1) end of each securely attached to the upper barrel section of the hydrant.

H. Hose Nozzles and Caps: The two (2) hose nozzles shall be 2 1/2" nominal diameter. Threads shall be right-hand and National Standard in accordance with NFPA #194. Each hose nozzle shall include a nozzle cap with nut and security chain the same as described in Paragraph F above.

I. Nozzle Attachment: Outlet nozzles shall be fastened into the barrel by mechanical means. Threaded nozzles shall be secured by a stainless steel pin or screw and sealed by the use of O-rings. All bronze castings shall be of low zinc bronze ASTM B-62. Internal fasteners shall be of ASTM A-276, Type 302 or 305 stainless steel.

J. Painting and Coating: The buried portion of the hydrant shall be given a bituminous coating in accordance with AWWA C-106, Section 6-8. All ferrous metal parts shall be coated in accordance with AWWA C-500, Section 4.5 and Section 2.22. The bonnet and nozzle cap shall then be given one red shop coat of heavy-duty alkyd enamel paint conforming to Federal Specification #13538. The remaining above ground portion of the fire hydrant shall also be shop painted red enamel.

All internal ferrous metal surfaces that are in constant contact with pressured water shall have a minimum of four (4) mils epoxy-coating as outlined in AWWA C550 entitled "Protective Coatings for Valves and Hydrants."

K. Interchangeable Parts: Hydrants shall have interchangeable parts with presently installed hydrants. Kennedy K81D Guardian or Mueller Super Centurion 250 are the approved City of Rifle hydrants.

0.1.6. Restrained Joints for Steel or Concrete Pipe: Restrained Joints for steel or concrete transmission lines shall conform to the requirements set forth in AWWA Manual M9, "Concrete Pressure Pipe" or AWWA M11, "Steel Pipe Manual."

Joints shall be one of the following types as indicated on the construction plans:

1. Lap welded slip joint – The standard bell shall provide for a 2½ inch lap. The minimum lap shall be 1 inch. The design maximum joint deflection or offset shall be a 1” joint pull.

2. Double welded butt strap joint - Butt straps, where required will be a minimum of six (6) inches wide, the same thickness as the pipe wall, and will be welded to one end of each pipe section so the joint can be lapped on the outside of the pipe.

On joints where butt straps are used for realignment, adjustment, or deflection, the pipe ends will be cut straight, and fillet welds shall be made on the outside of the pipe.

3. Flanged and bolted – Flanges shall be in accordance with AWWA C207 Class D for operating pressures to 150 psi and transient pressures to 225 psi. Flange face shall be coated with soluble rust-preventative compound. Bolts for buried flanges shall be type 316 stainless steel conforming to ASTM A193, Grade B8M, Class 1 and ASTM 194, Grade 8M nuts.

4. Mechanical coupling – Mechanical couplings shall be Smith Blair Style 411, Baker Style 200, Brico Depend-O-Loc, or equal. Insulated mechanical couplings shall be double insulated Smith Blair Style 416, Baker Style 216, or equal for working pressures up to 150 psi only. Mechanical couplings shall be harnessed for the maximum pressure in accordance with AWWA M11.

5. Carnegie end rings restrained by means of: circumferential clamps, snap ring, bell bolts or filler rod welded to both the bell and spigot ring.

0.1.7. Exterior Coatings for Pipe and Fittings

A. Steel Pipe Coatings: Exterior coating for steel pipe shall be a multi-layer 80 mil prefabricated Polyken YG-111 Tape System conforming to AWWA C-214 "Tape Coating Systems for the Exterior of Steel Water Pipelines", or a cement mortar coating conforming to AWWA C-205 "Cement Mortar Protective Lining and Coating for Steel Water Pipe four (4) inches and Larger - Shop Applied".

1. Shop Applied Concrete Coating: Type V cement conforming to ASTM C-150 "Specification for Portland Cement" shall be used in concrete placed in the walls of concrete cylinder pipe or on metallic pipe to be coated in accordance with AWWA C-205.

Modified Type II Portland Cement, having a low tricalcium aluminate content, is considered as an equal alternate for Type V cement.

a. Dielectric Coating Over Concrete Coated Pressure Pipe: Prior to shipment, the exterior concrete surface shall be spray seal coated with a 100% solids cool for epoxy, applied at the rate of 61 sq. ft. per gallon and control cured. Epoxy and its application shall conform to the latest requirements of the U.S. Bureau of Reclamation.

2. Shop Applied Tape Coating: Shop applied tape coating shall be a continuous four (4) layer system applied to the exterior of the metallic cylinder and extend from the end of the bell to within 4 1/4" of the spigot. It shall consist of:

a. Primer Layer - applied over a pipe surface prepared as specified in SSPCSP 6, "Surface Preparation Specification #6, Commercial Blast Cleaning or NACE TM-01-75, Visual Standards for Surfaces of New Steel Centrifugally Blast Cleaned with Steel Grit and Shot."

b. Corrosion Protection - wrapped twenty (20) mil tape layer.

c. Inner Mechanical Protection - wrapped thirty (30) mil tape layer.

d. Outer Mechanical Protection - wrapped thirty (30) mil tape layer.

B. Ductile Iron Pipe Coating: Ductile iron pipe shall have a bituminous seal coating in accordance with ANSI/AWWA C151/A21.51, as well as a bituminous coated cement mortar lining in accordance with ANSI/AWWA C104/A21.4.

C. Field Coating Appurtenances: Field applied coatings for inline fittings, valves, welds and appurtenances shall conform to one of the following:

1. Polyethylene Encasement: Polyethylene shall be manufactured in accordance with ANSI/AWWA C105/A21.5 "Polyethylene Encasement for Gray and Ductile Cast Iron Piping for Water and Other Liquids" with the following additional requirements or exceptions.

Materials and Physical Properties: The raw material used to manufacture polyethylene film shall be Type 1, Class A, Grade E-1, in accordance with ASTM D-1248. The film produced shall meet or exceed the following requirements:

Tensile Strength	1200 psi min.
Elongation	300% min.
Dielectric Strength	800 V/mil thickness min.
Thickness	0.008" (8 mils)
Melt Index	0.4 max.

2. Cold Applied Tape Encasement: Cold applied tape shall be Type II as described in AWWA C-209 "Standard for Cold Applied Tape Coatings for Special Sections, Connections and Fittings for Steel Water Lines". Protecto-Wrap #1170 Primer and #200 Mastic Tape or equivalent has been approved for this application.

When pipe is tape coated according to AWWA C-214, the appurtenance shall be field protected using Polyken #927 primer and Polyken #930 and/or #934 tape or equivalent.

0.1.8. Insulators - Cathodic Protection

A. Service Line Insulators: Insulators for service lines at the corporation stop for taps on metallic mains shall be Ford Service Insulators or equal as approved by the Project Engineer.

B. Distribution, Lateral and Transmission Line Insulators: Insulated mechanical couplings on metallic lines, six (6) inches and larger, shall be Rockwell (Smith-Blair) Style 416 or Dresser Style 39,

insulating couplings, or equal. Flanged by flanged joints shall be insulated using PSI-Pacific Seal Gasket with sleeves and double insulating washers.

0.1.9. Harness Rods

A. Lateral and Distribution Lines (6" - 12"): Harness rods shall be manufactured using Mild Steel (MS) conforming to ASTM Specification for "Structural Steel", designation A-36. Hex nuts shall be fabricated in accordance with ASTM Designation A-307, Grade A or B, hexagon heavy series.

B. Distribution and Transmission Lines (14" - 18"): Harness rods shall be manufactured using High Strength (HS) Steel conforming to ASTM Designation A-193, Grade B7. Nuts shall conform to ASTM Standard A-194, Grade 2H.

0.1.10. Retainer Glands - Mechanical joint retainer glands may be used in lieu of harness rods on PVC and Ductile Iron pipe and shall be cast from grade 60-45-12 ductile iron conforming to ASTM A536-80. Bolt circle, holes and bolts shall be dimensioned to be compatible with standard mechanical joint bells as per specification ANSI/AWWA A21.11/C111 and ANSI/AWWA A21.53/C153. These glands shall have serrations or individually actuated gripping surfaces to maximize restraint capability to hold working and test pressures. The retaining glands shall have a pressure rating equal to that of the pipe on which it is used. Retainer glands for PVC pipe shall be equivalent to those as manufactured by EBAA Iron, Inc. Series 2000PV (4”-36”), Uni-Flange Series 1500 (4”-24”) or Star Pipe Products Allgrip Series 3600 (4”-12”). Retainer glands for Ductile Iron pipe shall be equivalent to EBAA Iron, Inc. Series 1100 (30”-48”), Uni-Flange Series 1400 (30”-36”) or Star Pipe Products Allgrip Series 3000 (30”-36”). Retainer gland bolts shall be torqued to manufacturer’s recommended torque specification.

30.2.11. Bell and Spigot Joint Restraints – In lieu of harness rods, restraint devices for bell and spigot joints of PVC or Ductile Iron pipe shall consist of split restraint rings, one installed on the spigot, connected to one installed on the pipe barrel behind the bell. The restraint devices shall incorporate a series of machined serrations on the inside diameter to provide positive restraint, exact fit, 360° contact and support of the pipe wall. A split bell ring in lieu of a serrated ring may also be used behind the pipe bell. Restraint devices shall be of ductile iron, ASTM A536, Grade 65-45-12 and connecting bolts shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11. Restraint devices for PVC pipe shall be equivalent to those manufactured by EBAA Iron, Inc. Series 1600 (4”-12”) and 2800 (14”-36”) or Uni-Flange Series 1390 (4”-36”). Pipe bell restraint devices for Ductile Iron pipe shall be

equivalent to EBAA Iron, Inc. Series 1700 (30”-36”) or Uni-Flange Series 1450 (30”-36”). Joint restraint bolts shall be torqued to manufacturer’s recommended torque specification.

30.1.12. Steel Casing for Bores - Welded steel casing pipe shall meet the requirements of AWWA C200 and shall have an inside diameter of at least twelve (12) inches greater than the outside diameter of the bell joint of the carrier pipe to be installed therein. Casing shall be coal tar epoxy coated. Casing pipe shall be cathodically protected using a minimum of one (1) anode bag per 400 foot length. The minimum wall thickness of the steel tubing shall be:

Wall Thickness	Casing O.D.
3/8”	30" and smaller
1/2”	33”-42”

30.1.13. Casing Spacers and Insulators - APS Model SSI or SI with fusion bonded epoxy or PVC coating as manufactured by Advance Products and Systems, Inc., Lafayette, LA or equal, installed at a maximum center to center spacing of ten (10) feet along the carrier pipe invert with an additional spacer placed within 6” of each end of the casing pipe. Spacers shall be 8” width for carrier pipe 6” to 14” diameter, 12” width for carrier pipe 16” diameter or larger.

30.2.14. End Seals for Casing Pipe – 1/8” thick synthetic rubber wrap around end seals with stainless steel bands shall be installed on casing pipe after carrier pipe insertion. End seals shall be APS Model AW Wrap Around End Seal as manufactured by Advance Products and Systems, Inc. Lafayette, LA or equal.

0.1.15. Miscellaneous Items

A. Concrete and Reinforcing Steel: Concrete and reinforcing steel shall be furnished in accordance with the requirements set forth in Section 10, "Concrete", of these Standard Specifications. Class "A" concrete shall be placed in all vaults and/or structures. Class "B" concrete may be used for kickblocks, protective pads and pipe encasement.

B. Standard Manholes: See Section 25 and Standard Drawings of these specifications.

C. Telemetry and Electrical System for PRV Vaults: The telemetry system installed shall be capable of transmitting signals via telephone to the Ralston Water Treatment Plant at 18975 West 66th Avenue.

Telemetry equipment to be provided and installed by contractor. City crews will install interconnect to Ralston Plant recorder. Equipment shall be as specified in Special Conditions for a specific project or as approved by the Utilities Division.

The equipment shall be electrically powered, connected via telephone and fully operational.

Electrical system to be installed in the vault shall be weather proof and include, but not be limited to, 2 each 75 watt explosion proof light fixtures and bulbs; 2 each non-metallic duplex receptacles with covers; non-metallic junction boxes, breaker box, single pole switches weather head as required. Contractor shall also supply #6 copper grounding rod, 1 inch EMT Riser tubing and wire and install meter setting.

D. Vent Pipe: Vent piping for manholes and vaults shall be 6 5/8" O.D. Schedule 40 PVC pipe or steel with threaded joints. In residential areas, the vent pipe above ground shall be painted green. In parks and range land, the vent pipe shall be painted caterpillar yellow. See Vent Pipe Assembly Standard Drawing W-49.

E. Pipe Detector Wire: Wire shall be AWG, Size #12, type UF or USE cable, UL Listed, and shall have a white plastic insulation jacket and single copper conductor.

F. Water Service Insulation: Insulation shall be IMCOAFLEX, as manufactured by Insulation Materials Corporation of America or equal, one (1) inch minimum wall thickness. Side slits and bolt joints shall be duct taped.

0.1.16. Cathodic Protection and Monitoring Systems - Metallic water transmission lines (18" and larger) shall be cathodically protected by means of a National Association of Corrosion Engineers (NACE) designed sacrificial anode system or an impressed current cathodic protection and monitoring system. Materials to be incorporated into the system shall be as hereinafter listed unless otherwise approved as equals prior to bidding by the Project Engineer.

Item	Manufacturer or Trade Name
Anode Junction Box	Cott
Test Stations, flush to grade	Cott-Fink, Gerome-Testox 500
Galvanic Anodes	Dow Galvomag
Thermite Brazing	Cadweld, Thermoweld
Brazed Coating	Koppers #50 Bitumastic
Voltmeters	D'Arsonral
Graphite Anodes	Harco-Centap-NA Treated
Cable to Anode	Duralar Halar
Calcined Fluid Petroleum Coke	Loresco, DW-2 or DW-3 C.E. Equipment Co.
Rectifier, air cooled	Good-All, Universal
ES-ABS Solid Casing	Armco
Zinc Grounding Cells	Federated Metals
Reference Electrodes	Harco Permacel
Field Bonding Straps	AWG Stranded Copper Wire w/HMWPE insulation
HIRDA Anode System	Harco

III Execution

0.2. PIPE INSTALLATION

Installation of pipe and appurtenances shall be performed in accordance with the acceptable practices set forth by the American Society for Testing Materials (ASTM), the American Water Works Association AWWA C600, "Installation of Ductile-Iron Water Mains and their Appurtenances"; AWWA Manuals M9, M11, AWWA C605, “Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water”, approved plans and as modified herein.

At all times during construction of the pipeline, the contractor shall use every precaution to prevent damage to protective coating on the pipe. No metal tools or heavy objects shall be permitted to come into contact unnecessarily with the finished coating. Workmen will be permitted to walk upon the coating only when necessary, in which case they shall wear shoes with rubber or composition soles and heels. Any damage to the pipe or protective coating from any cause during the storage or installation of the pipeline shall be repaired prior to laying of the pipe, as directed by the Project Engineer, by and at the expense of the Contractor.

0.2.1. Storage of Materials - The contractor shall store and adequately protect all material prior to installation. Any damage to the materials resulting from improper storage or handling by the contractor shall be repaired or replaced by and at the expense of the contractor.

Stored pipe shall at all times be supported on sawdust bags, timbers, sand bags or other suitable support. Bags shall be of sufficient size to prevent contact of the pipe coating with the ground or any obstruction. Rolling pipe sections on its coating surface will not be permitted.

When pipe laying is not in progress, the ends of the pipeline, all special openings and all pipe waiting to be laid shall be kept closed with suitable bulkheads to prevent unauthorized access by persons, animals, water or any other undesirable substances. The bulkheads shall be so designed to prevent drying out of the interior lining of the pipe. The contractor shall introduce water into the pipe to keep the mortar lining moist where moisture has been lost due to damaged bulkheads.

It shall be the responsibility of the contractor to prevent damage to coatings which might be caused by handling and/or embrittlement caused by storage of the completed pipe at low temperature.

PVC Pipe stored outside and to be exposed to sunlight for more than 30 days shall be covered with a solid canvas to block the light. Clear plastic is not allowed as a cover. Air circulation shall be maintained under the covering.

0.2.2. Handling Pipe - Pipes, fittings, etc., shall be carefully handled and protected against damage to lining and coating, impact shocks, and free fall. All pipe handling equipment shall be approved by the Project Engineer. Pipe shall not be placed directly on rough ground but shall be supported in an approved manner which will protect the pipe against injury whenever stored at the trench site or elsewhere. No pipe shall be installed where its coating or lining shows cracks that may be harmful. Damaged coating or lining shall be repaired to the satisfaction of the Project Engineer, or a new undamaged pipe section shall be installed, at no expense to the City.

Pipe shall be handled, hauled, and placed using wide slings and padded cradles of canvas, leather, or other suitable material so designed and constructed to prevent damage to the pipe lining or coating. The use of bare metal cables, chains, hooks, or other equipment which might injure the pipe coating will not be permitted.

A. Pre-installation Coating Inspection: The contractor shall permit and aid in the inspection of all coating on the underside of the pipe, at the time of the installation, and shall repair any damage before lowering the pipe into the trench. While being laid, the pipe shall not be rolled, skidded or otherwise moved when in contact with the ground at any point.

At the trench site, just prior to installing, the contractor shall inspect the pipe coating for flaws, cracks, spalling, etc. Tape coated pipe shall be inspected for holidays with a contractor furnished coil spring or brush type electrode, having a primary wattage no higher than twenty (20) watts and a minimum pulse, at crest voltage, of twenty (20) per second. Where holiday flaws are detected, they shall be repaired to the satisfaction of the Project Engineer before the pipe section is placed in the trench.

Cement mortar coated pipe shall be inspected for cracking or spalling while supported in belted or canvas slings, prior to lowering in the trench. Where coating imperfections are found, and providing there is no visible damage to the pipe lining, straight pipe sections shall be rotated so the damaged coating is atop the pipe after being lowered and set in the trench.

The coating shall then be cement mortar repaired and allowed to cure for a period of 24 hours before backfilling. Concrete coatings on beveled sections, bends and other special sections which cannot be rotated, as herein above described, shall be repaired to the satisfaction of the Project Engineer prior to lowering and setting in the trench.

B. Pipe Struts: Struts in steel and pretensioned concrete cylinder pipe shall be left in place until backfilling operations have been completed. After the backfill has been placed, the struts shall be removed and will remain the property of the contractor.

0.2.3. Excavation, Bedding and Backfill - Excavation, bedding and backfill required for the installation of pipe covered by this section of the specifications shall be performed in accordance with Section 20 of these standard specifications. See Standard Drawings for pay limits of select backfill and trench resurfacing. Valve boxes installed in streets shall be backfilled with special backfill material for the entire width of the trench. Trenches in streets shall be backfilled with special material at the discretion of the Project Engineer.

0.2.4. Alignment and Grade - When called for on approved plans or by the laying diagram, the water lines, including their appurtenances, shall be constructed to the specified line and grade. When not shown on plans, minimum pipe cover shall be four and one half (4½) feet and a maximum of seven (7) feet. Gate valve and curb stop valve operators on services must not be deeper than five (5) feet from finished grade.

The grade and alignment of the pipe, structures and appurtenances shall be controlled by means of laser beams or offset grade stakes, set in the field by professional survey parties. The contractor shall be responsible to accurately transfer said grade and alignment to the trench and construct thereto.

A. Laying Diagram: Each section of pipe shall be laid in the order and position shown on the laying diagram. In laying pipe, it shall be laid to the set line and grade, within a reasonable tolerance, approximately one (1) inch plus or minus. On grades of zero (0) slope, the intent is to lay pipe to grade. Fittings, valves and

hydrants shall be installed at the specified stations and elevation. Three copies of the approved laying diagram signed by the contractor shall be submitted prior to installation.

0.2.5. Pipe Laying - The contractor, with the assistance of the Project Engineer and City Inspector, shall inspect each pipe and fitting to insure that there are no damaged portions of the pipe. Metallic pipe joints will inherently have small amounts of burrs, gouges, weld splatter or other small defect, which the contractor will be required to remove or smooth out. On other than transmission lines, the pipe shall be cut, whenever necessary, to conform to location of fittings, line or grade. All cuts shall be straight and true, in a workmanlike manner so as to leave a smooth end without damaging the pipe. All burrs shall be removed from the ends of cut pipe, and the end lightly rasped or filed.

No dry cutting or beveling of existing asbestos cement pipe will be allowed. MOA-PVC pipe shall be used in place of MOA Asbestos-Cement Pipe.

Before placing pipe in the dry trench, each pipe section valve and fittings shall be thoroughly cleaned of all foreign material, kept clean at all times thereafter, and carefully examined for cracks and other defects before installation. Bell ends and spigot ends are to be examined with particular care. The openings of all pipe and fittings in the trench shall be closed to the satisfaction of the inspector during any interruption to the work, overnight or over the weekend.

A. Frost Foundations: No pipe, fitting or appurtenance shall be installed upon a foundation into which frost has penetrated or at any time when the Project Engineer shall deem there is danger of the formation of ice or penetration of frost at the bottom of the excavation. No pipe shall be laid unless it can be established that the trench will be backfilled before the formation of ice and frost occurs.

B. Order of Laying Pipe:

1. Bell End Ahead and Uphill: Pipe shall be laid with bell ends facing in the direction of laying unless otherwise approved by the Project Engineer. In general, pipe shall be laid starting at the lower end of the line and proceeding uphill. In no case shall pipe be laid in a downhill direction where the slope is greater than ten (10) percent, unless permitted by the Project Engineer in writing.

2. Downhill: When approved, pipe that is laid on a downhill grade shall be blocked and held in place until sufficient support is furnished by the following pipe to prevent movement. All bends shall be properly installed and anchored in place before continuing laying downhill.

3. Curves: When laying pipe on curves, the intent is to lay each section to the alignment. The pipe shall be kept in alignment by placing all deflection joints or bends on the curve. Short lengths of pipe shall be used as necessary to accomplish curvature without exceeding individual deflection specified by the manufacturer. Bends shall be used whenever individual deflections exceed those specified by the manufacturer.

C. Laying Procedure:

1. Holes for Jointing and Sling Removal: Holes for jointing pipe sections and sling removal shall be excavated prior to setting the pipe in the trench. Bell holes shall have a minimum clearance of one (1) foot on each side of the pipe end and not less than eight (8) inches deep to allow room for taping or grouting the joint. For field welded joints the minimum bottom clearance shall be three (3) feet each side of the joint and one (1) foot deep.

2. Lubricating Joint: Following final cleaning of the bell and spigot a non-toxic, water-soluble joint lubricant shall be applied to the gasket, and the spigot end of the pipe. Caution shall be exercised to insure the correct type of gasket is used and the manufacturer's recommendations are followed when joining pipe sections.

3. Rotating and Jointing: When the pipe is being laid, it shall be turned and placed where possible, so that any slight damaged coating will be on top. All damaged lined or coated areas shall be repaired using materials and methods as approved by the Project Engineer.

   Pipe shall be laid directly on bedding material. No blocking will be permitted, and the bedding shall be such that it forms a continuous, solid bearing for the full length of the pipe. The spigot end shall be aligned with the bell end and carefully centered so that the pipe is still supported by the slings such that the gasket will not drag as it is entered into the bell. The pipe shall be pulled together by an approved method such as bands and come-alongs or band and hydraulic jacking head as recommended by the pipe manufacturer. In all cases, the joint shall be assembled with the axis of the pipe lengths in a straight line; and deflection, if required, shall be taken by swinging the pipe end after the joint has been completely assembled. Pipe furnished without a depth mark shall be marked before assembly to assure insertion to the full depth of the joint. The spigot end of field cut pipe lengths shall be filed, or ground to resemble the spigot end of such pipe as manufactured. Care shall be taken to assure that the gasket is not twisted or pulled when the pipe is jointed.

   Where necessary to raise or lower the pipe due to unforeseen obstructions or other causes, the Project Engineer may change the alignment and/or grades. Such change shall be made by the deflection of joints, by the use of bevel adapters, or by the use of additional fittings. However, in no case shall the deflection in the joint exceed the maximum deflection recommended by the pipe manufacturer. No joints shall be out of home any amount which, in the opinion of the Project Engineer, will be detrimental to the strength and water tightness of the finished joint. In all cases, the joint opening, before grouting or finishing with the protective mortar inside the pipe, will be the controlling factor.

4. Detector Wire: The contractor shall furnish and spirally wrap detector wire around PVC water pipe as it is installed into the system. Wire shall be white, AWG size #12, type UF or USE cable, UL listed, with single copper conductor.

   During installation, wire shall be spirally wrapped around the pipe exterior, two (2) wraps minimum per twenty (20) feet of pipe. Splices due to breaks in wire continuity shall be made by stripping insulation from each wire end with wire stripper pliers. Wires shall be joined with a solderless connector

such as a 3M DBY direct bury splice kit by 3M or approved equal installed in accordance with the manufacturer's instructions. The solderless connector shall then be covered with Seal-A-Conn II putty, manufactured by Emmerson Electric, or approved equal.

The wire shall form a continuous electrical circuit between any two contact points on the new pipeline including branch lines and fire hydrant laterals. Wire shall be stubbed out to the point where new pipe connects to existing mains unless otherwise directed by the City representative. Where the wire terminates at a point where there is not an installed wire, the ends of the wire shall be stripped bare a minimum of 18 inches and grounded into the native soil material. Wire shall be extended to each fire hydrant installed and looped through a test station. Tracer wire cannot be coiled in a water valve box. Wire shall not be cut at the test station and shall not be connected to the test station leads. Test station shall only serve as an access point for the wire. Test station shall be a CP Test Services, Glenn Series Glenn-4 with locking lid, 3½ x 4, or approved equal.

5. Bell and Spigot Steel Pipe Joint Seating:

a. Pipe with Carnegie Joint End Rings: As the spigot is thrust home, its advance shall be checked by two (2) steel inserts held in the seat of the bell 180 degrees apart. These inserts shall be removed and a feeler gauge entered into the recess to detect any irregularity in the position of the rubber gasket. If the gasket cannot be felt all around, the joint shall be disassembled. If the gasket is undamaged as determined by the Project Engineer, it may be reused, but only after the bell ring and gasket have been resoaped, as previously specified. After reassembling the joint, the position of the gasket shall again be checked.

The tied joints shall be jointed as above, and then the necessary wedging or clamping shall be done as recommended by the pipe manufacturer.

b. Pipe with Expanded Bell and Rolled Spigot Ends: After the joint has been pulled completely together as indicated by the stab marks, the gasket shall be checked using a feeler gauge. This check shall be made around the complete circumference of each joint to be sure that the gasket has not rolled out. If a gasket has rolled out, the joint shall be pulled apart, the gasket inspected, and, if damaged, shall be discarded and a new gasket installed. It should be noted that it is extremely important to obtain full engagement of the stab joint and to check each joint as it is laid.

Each steel pipe length shall be backfilled at least partially before the next length is installed to prevent pullout or movement of the pipe from expansions and contraction.

0.2.6. <u>Jointing Specials and Fittings</u>

A. Mechanical and Flexible Coupled Joint: When installing mechanical and flexible steel couplings, care shall be taken that the connecting pipe ends, couplings and gaskets are clean and free of all dirt and foreign matter with special attention being

given to the contact surfaces of the pipe, gaskets and couplings. These couplings shall be assembled and installed in conformity with the recommendation and instructions of the coupling manufacturer. All mechanical couplings shall be fusion-bonded epoxy coated with stainless steel bolts.

Wrenches used in bolting couplings shall be of a type and size recommended by the coupling manufacturer. Coupling bolts shall be tightened so as to secure a uniform annular space between the middle ring, follower rings and the body of the pipe with all bolts tightened approximately the same amount. Diametrically opposite bolts shall be tightened progressively and evenly. Final tightening shall be done with torque wrenches set for the torque recommended by the coupling manufacturer. All clamping torque shall be applied to the nut only.

B. Field Welded Joint: When laying pipe requiring a field welded joint, pipe deflection shall be limited to that which will produce a lap of one and one-half (1½) inches.

1. Butt Strap Joint: Butt straps, where required will be a minimum of six (6) inches wide, the same thickness as the pipe wall, and will be welded to one end of each pipe section so the joint can be lapped on the outside of the pipe.

   On joints where butt straps are used for realignment, adjustment, or deflection, the pipe ends will be cut straight, and fillet welds shall be made on the outside of the pipe.

2. Lap Joints: On lap joints, exterior fillet welds shall be made as shown on the drawings. The remaining seal weld, where required, shall be 3/16" minimum. An inside weld will not be required. The clearance, before field welding, between the outside circumference of the spigot end and the inside circumference of the bell end shall be not less than 0.09" nor more than 0.41".

3. Bell and Spigot Joints: Where welding of a bell and spigot joint is required, the all around gap between the bell and spigot as delivered from the manufacturer shall not be less than 1/32 (0.03125) nor more than 3/32 (0.09375) of an inch.

C. Flanged Joint: Before the joint is assembled, the flange faces shall be thoroughly cleaned of all foreign material with a power wire brush. The gasket shall be centered and the connecting flanges drawn up watertight without unnecessarily stressing the flanges. All bolts shall be tightened in a progressive diametrically opposite sequence and torqued with a suitable approved and calibrated torque wrench to a torque value as recommended by the manufacturer. All clamping torque shall be applied to the nuts only.

D. Harnessed Joints: Joint harnessing by use of rods and clamps shall be installed at interference crossings; on fire hydrants, bends, offsets, domestic and fire sprinkler connections.

Rod material required to harness six (6) inch to eighteen (18) inch pipe joints is specified in paragraph 30.2.9 of this specification. After the rods are bolted in place, they shall be double wrapped with eight (8) mil thick polyethylene or other approved cold applied tape. In addition to rodding, restraints, bends, fire hydrants and tees shall be kickblocked against undisturbed soil with concrete.

Harnesses, where required, on twenty (20) inch and larger steel and concrete cylinder pipe transmission lines, shall be of a type as specified in AWWA Manuals M-9 and M-11.

E. Retainer Joints: Mechanical joint retainer glands may be used in lieu of rods and clamps for joint harnessing at interference crossings, fire hydrants, tees, bends, offsets, domestic and fire sprinkler connections on PVC and ductile iron mains. (See Paragraph 30.2.10) After the retainers are bolted in place, they shall be double wrapped with eight (8) mil thick polyethylene or other approved cold applied tape. In addition to the retainer gland, all bends, fire hydrants and tees shall be kickblocked against undisturbed soil with concrete.

F. Insulated Joints: Extra care shall be exercised when installing insulating joints. After the insulating joint has been installed, an electrical resistance test shall be performed by an independent corrosion engineering company selected by the City. Should the resistance be found less than 10,000 ohms, the insulating joint shall be removed and any necessary repairs made. The joint shall then be reinstalled and retested. This process shall continue until the joint is successfully tested. Retesting shall be at contractor's expense. Test results shall be submitted to the Project Engineer.

G. Bonding Joints: The contractor shall provide and make two (2) each electrical bonds between the metallic cylinders of adjoining pipe sections and across all non-insulating joints. In line valves shall be made electrically continuous where called for on the drawings.

Electrical bonds shall be installed, one each side of the Pipe crown centerline, at approximately twenty (20) degrees apart, when measured from the pipe centerline. Bonding rods shall be long enough and provide sufficient slack to allow for a total joint displacement of two (2) inches.

Expanded bell and spigot steel joints shall be bonded using #4 AWG insulated copper wire, Cadweld CA-15 brazing cartridges and thermite weld caps. Carnegie end ring joints shall be bonded by welding each end of a 6" x 3/8" steel jumper rod, rolled to the mean diameter of the annular space between the rings, to the bell and spigot.

Bonding across insulated flanged joints or insulated couplings will not be allowed.

0.2.7. Joint Coating and Lining on Steel and Concrete Cylinder Pipe - The inside and outside of all joint recesses shall be thoroughly wiped clean to the satisfaction of the inspector. In this cleaning operation, all water, loose scale, dirt and other foreign material shall be removed from the surface of the pipe joints to be coated and lined in the field.

A. Interior Joint Lining of Welded Steel Pipe Joints: Material used for mortar lining shall conform to AWWA Standard 205. At welded joints, the contractor shall furnish and tack weld 2" x 4" 13/13 gauge self-furred welded wire fabric to the inside of the joint recess prior to application of mortar. The mortar shall be applied with a uniform pressure producing a smooth surface and a uniform thickness of lining to match the shop applied mortar lining. At no point shall there be an indentation or projection of the mortar which exceeds 1/16 of an inch. Every precaution shall be taken to prevent damage to the lining. After the mortar lining

has set sufficiently, clear seal compound "Protex" or equal, shall be applied to the joint lining to the satisfaction of the Project Engineer.

With the approval of the Project Engineer, Probond or equal may be used in place of the welded wire fabric.

B. Exterior Tape Coated Pipe Joints: The exterior of all joints shall be thoroughly cleaned of all foreign material to the satisfaction of the inspector and primed with Polyken #927 primer and wrapped with two (2) wraps of #930 Polyken tape. Each tape layer shall be thirty five (35) mils thick and applied so that joints lap. The primer and tape shall be manufactured by the same manufacturer as the shop applied tape coating.

C. Exterior Cement Mortar Coated Pipe Joints: After cleaning, the outside joint recess shall be filled with grout composed of one (1) part cement and two (2) parts sand. The grout shall be poured under a polyethylene lined grout band placed around the joint recess and thoroughly rodded with a stiff wire. The joint recess at the top shall then be closed with a stiffer grout of the same mix as above. Except for piped joints, prefabricated joint protectors may be used as an alternative to mortaring the outside of the joint. If such protectors are used they shall be made from a high density polyester, polyurethane foam containing at least the equivalent of nine (9) bags per cubic yard of unhydrated Portland Cement. The protectors shall be of suitable cross section to fully protect the joint rings and shall be supplied in the form of continuous rings.

No backfilling around the outside of the joints shall be done until the grout has set, and the joint has been inspected and approved.

D. Interior Cement Mortar Lined Pipe Joints on Steel and Concrete Pressure Pipe: After cleaning, the inside pipe joint recess shall be dry packed filled with a grout composed of one (1) part cement and one (1) part sand. This grout shall be troweled flush with the interior surface, and all excess shall be removed. At no point shall there be an indentation of projection of the mortar exceeding 1/16".

0.2.8. Coating of Flexible Joints, Valves and Fittings for Steel and Concrete Cylinder Pipe - After assembly and cleaning; the exposed metal surface shall then be primed by brush or spraying and then wrapped with two (2) layers of Type II elastomeric tape, all in accordance with AWWA C-209 "Standard for Cold-Applied Tape Coatings for Special Section Connections and Fittings for Steel Water Pipelines".

NOTE: When line pipe, coated in conformance with AWWA C-214 is installed, the appurtenances shall be primed and tape coated using Polyken Primer and Tape.

The two (2) layers of tape, each thirty five (35) mil thick, shall overlap the adjoining pipe sections a minimum of three (3) inches. A final six (6) inch wide tape wrap shall be placed over the above two tape wraps to seal all seams, folds or overlaps.

A. Coating Non-Metallic Pipe Line Appurtenances: Metallic fittings, valves and inline appurtenances installed in nonmetallic water lines, (existing asbestos cement and polyvinyl chloride) may be wrapped in two (2) layers of polyethylene in lieu of the Type II tape as specified above.

The polyethylene shall have a minimum thickness of eight (8) mils and shall be in accordance with AWWA Standard C-105. A two (2) inch wide, ten (10) mil thick

polyethylene sensitive tape shall be used to close seams and hold folds over overlaps. Damage to polyethylene wrapped fittings and appurtenances in the trench prior to and during backfill shall be repaired to the satisfaction of the City. All polyethylene wrapping shall be repaired and in a state of readiness prior to tapping a line.

0.2.9. Field Welding Procedures for Steel Water Pipe - Field welding shall be performed in accordance with AWWA C-206 "Field Welding of Steel Water Pipe".

All welding shall be done by skilled welders who have had adequate experience in the method and materials to be used. All welding operators shall be qualified under the provisions of Section 4.4 of referenced specification. Welders shall be qualified by a local approved testing agency not more than six (6) months prior to commencing work on the pipeline. Machines and electrodes similar to those used in the work shall be used in qualification test. The test will include welding an actual field section to the top of the pipe.

The contractor shall furnish all materials and bear the expense of qualifying welders and submit to the City, proof of their certification.

A. Pipe Coating Protection During Welding: An eighteen (18) inch wide strip of heat resistant material shall be draped over the top half of the pipe on each side of the coating holdback during welding to avoid damage to the coating by hot weld splatter. No welding ground shall be made on the coated part of the pipe.

B. Stress Relief: Where more than one (1) welding pass is required, the welding procedures set forth in AWWA C-206 shall be strictly adhered to; all dirt, slag and flux shall be removed before the succeeding bead is applied.

0.2.10. Valves and Valve Boxes - Valves shall be handled in such a manner so as to prevent any injury or damage to any part of the valve. Joints shall be thoroughly cleaned and prepared prior to installation. If so ordered by the Project Engineer, valves shall be operated prior to installation to insure proper operation ability.

A line or outlet valve that is to be buried in soil shall be thoroughly cleaned and then wrapped as specified under exterior coating of flexible joint, valves, etc. above.

All valves shall be installed such that the valve stems are plumb and in the location shown on the drawings with disk seat bolts facing nearest access manhole.

A valve box shall be provided with three (3) inch and larger tapping valves. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the valve wrench nut, with the box cover set to finish grade. It is the responsibility of the contractor to insure that valve boxes are plumb and raised to the proper elevation.

Operating nuts for butterfly valves shall be placed to the north and east of the water main.

Valve box and stem extensions shall be furnished and installed on all valves that are installed in lines buried greater than five (5) feet below finish grade. The top elevation of the operating nut on the valve or valve stem extension shall be no greater than five (5) feet, nor less than three (3) feet below finish grade. This also applies to curb stop valves on service lines.

30.3.11. Marker Posts – When valves, manholes (or bends on mains larger than 12”) are installed outside of a paved surface, a marker post shall be installed adjacent to the valve or

manhole or on top of the bend. Marker post shall be a 5 foot long 3” diameter steel post set in concrete to a depth of 2 feet. Post shall be filled with soil and capped with 6” of concrete. Post shall be painted fire hydrant yellow.

0.2.12. Service Taps - Service saddles and corporation stops shall meet the standards shown in Table 30.2.1. Taps shall be made only after release of mains by the Public Works Department following their installation, chlorine and pressure testing, payment of appropriate fees and completion of the tap application papers. Service installations shall be performed by a contractor or plumber licensed and bonded with the City of Rifle.

Notification and requests for tapping on mains shall be made in writing to the Public Works Department twenty four (24) hours prior to the time the tap is to be made. The contractor shall excavate, expose the main at least twenty-four (24) inches on all sides, and provide a safe dry trench perpendicular to the main which is considered as being:

A. Three (3) foot wide by five (5) feet long and excavated to a depth of one (1) foot below the main.

B. When unstable ground conditions exist or the trench is deeper than five (5) feet, the trench must be shored, sheeted or sloped and dewatered before making the tap.

PVC pipe shall not be tapped when the ambient temperature or the temperature of the PVC is less than 32 degrees Fahrenheit. If taps are desired when the temperature is less than 32 degrees Fahrenheit any pipe failures will be the responsibility of the contractor and/or developer.

Under no circumstances shall a main be tapped within twenty four (24) inches of the ends of a pipe or pipe collar or within eighteen (18) inches of an existing tap.

Dry tapping of a distribution or lateral main is strictly prohibited unless approved by the Public Works Department.

C. 3/4" through 1" Service Tap - Connection of a 3/4" or 1" diameter service line to four (4) inch through twelve (12) inch laterals or mains shall be made by wet tapping the line by means of a corporation stop installed by the Contractor into an approved service saddle installed by the Contractor. Direct tapping into the line is not allowed. In all instances, the corporation stop, when in place on the service saddle, shall be at an angle of forty-five (45) degrees above springline and perpendicular to the centerline of the lateral or main being tapped.

D. 1 1/2" through 2" Service Tap – 1 1/2" through 2" diameter service line connections to four (4) inch through twelve (12) inch laterals or mains shall also be made by wet tapping the line by means of a corporation stop installed by the contractor into an approved service saddle. The service saddle shall be mounted on the line such that the corporation stop installed is perpendicular to the centerline and at the springline of the lateral or main being tapped.

E. 3" and Larger Service Tap - Three (3) inch and larger service lines shall be connected to the lateral or main by means of an approved stainless steel tapping saddle and resilient seat tapping valve installed perpendicular thereto. Valve boxes and covers shall be installed directly over the valve operating nut on all valves three (3) inches and larger.

0.2.13. Fire Hydrant Laterals - Piping for fire hydrant lateral shall be rodded and/or mechanically retained and clamped between the mechanical joint end of the valve at the main and the fire hydrant. A concrete thrust block shall also be required.

Pipe for the fire hydrant lateral shall be Class 200 PVC (Polyvinyl Chloride) conforming to AWWA C900 and extend perpendicular from the main. The hydrant shall be set plumb at the end of the lateral, face the main and be adjusted to finish grade. The use of horizontal bends, vertical bends and offsets to install the lateral or tapping into the lateral line is strictly prohibited unless approved by the Project Engineer.

0.2.14. Water Service Lines - Water service line pipe (3/4" - 2") from the main to the curb stop and box or to the meter yoke in the pit shall be one continuous length of seamless copper tube of the type designated as Type "K" (soft) in the industry. Three (3) inch and larger service lines shall utilize ductile iron or PVC pipe. The size of the service line shall be the same size as the meter except for a 5/8" x 3/4" meter the service line shall be 3/4". A 4" tapping sleeve and valve may be used on a 3" service. The service line shall be reduced to 3" diameter just outside the meter vault. The service line through and on both sides of the meter pit must be copper and/or brass only for services 2" or less. Leaded joints and galvanized piping shall not be allowed inside meter vaults or on service lines. Installation of increasers or reducers at or between the corporation stop and the meter yoke will not be allowed except on 3" services and no branch connections will be allowed inside the meter vault. Sprinkler system connections must be made a minimum of 5 feet outside of the downstream side of the meter vault.

A bypass is to be installed on all 1½" and larger meters for domestic use. Irrigation only services do not require a bypass. See Standard Drawings.

Service piping between the meter and the building for ¾" – 2" services shall be Type K copper only. Transition fittings for copper shall be Mueller or Ford (or equal) flared fittings or Mueller #110 or Ford Quick Joint (or equal) compression fittings with integral metal insert. Piping for 3" and larger services shall be PVC outside of the meter vault and Ductile Iron inside the meter vault.

Connection of copper to all metallic water mains shall be electrically insulated by means of an approved insulator fitting installed on the corporation stop. After installation, the fitting shall be cleaned and wrapped with a double layer of eight (8) mil polyethylene tape before backfilling. An insulator fitting shall also be installed on the outlet side of the meter setter.

A. Curb Stop Valve, Valve Boxes and Meters: Single family service line installations shall terminate at a meter yoke in the meter pit or curb stop (under approved conditions only) at a point near the property line. Service lines 1 1/2" and larger shall terminate at a curb stop valve and box at or near the property or easement line. See Standard Drawings. Curb stop valves shall be of the same size as the service pipe. A curb stop valve shall be installed on each service line leaving a manifold.

Locations of meter pits shall be established by the Project Engineer. Installation of curb stop valve and box or meter pit in driveways, parking areas or sidewalks is strictly prohibited. With special approval, heavy duty frames and covers shall be installed in instances where it is impossible to meet the above requirements. See Table 30.2. If the street or ground is not to final grade at the time of meter pit installation, the property owner must raise or lower the meter pit to coincide with final grade when established. Ramneck shall be placed between the dome or set ring and top riser ring and also between all subsequent riser rings. All service line

installations including meter settings must be inspected by a representative of the Engineering Division before backfill.

B. Separation of Water Service and Sanitary Sewer Service or Drains: Except as permitted below, the underground water service pipe and the building drain or building sanitary sewer shall be not less than ten (10) feet apart horizontally and shall be separated by undisturbed or compacted earth. Under extenuating circumstances, the water service pipe may be placed in the same trench with the building drain or building sanitary sewer provided prior written approval is given by the City Engineer and the following conditions are met:

1. The bottom of the water service pipe at all points shall be at least twelve (12) inches above the top of the sewer line at its highest point.

2. The water service pipe shall be placed on a solid shelf excavated at one side of the common trench.

3. The water service line is one (1) continuous section of Type "K" copper tubing, joint free.

4. The material and joints of the sewer service pipe shall be installed in such manner and shall possess the necessary strength and durability to prevent the escape of solids, liquids and gases therefrom under all known adverse conditions such as corrosion, strains due to temperature changes, settlement, vibrations and superimposed loads.

C. Service Line Crossing Curb, Gutter and Sidewalks: The point where the service line crosses under an existing or proposed curb, gutter or sidewalk, the curb shall be marked. The point shall be indicated by chiseling a symbol "V" on the curb directly over the service line.

Service lines shall be pushed, bored or jacked through the soil under existing curb, gutters and sidewalks. Tunneling or open trench cutting beneath existing curbs, gutters and sidewalks is strictly prohibited.

For pipe with an internal diameter of twelve (12) inches or less, the depth of backfill over the pipe, measured from official street grade or finish grade to the top of the pipe, shall be four and one-half (4 1/2) feet and shall be known as the pipe cover. If difficulties arise when crossing interferences and where specifically approved by the Project Engineer, deviations of the four and one-half (4 1/2) foot pipe cover may be permitted at a point in the line. A maximum of seven (7) feet of cover shall be maintained in these instances. When approved by the Project Engineer and where the pipe cover is less than four (4) feet, the carrier pipe shall be insulated against frost with an approved insulating material sufficient in thickness to prevent frost penetration and freezing.

D. Service Line Crossing a Foreign Line: A water service line crossing over a foreign line (storm sewers, water transmission lines, etc.) shall be insulated through areas and at points where its bury is less than 4.5 feet. Imcoaflex or equal insulation shall be of sufficient thickness dependent on bury, to prevent frost penetration and freezing of the service line. Butt joints between sections and side slits in insulation shall be duct or mole taped upon placement around service line.

E. Backfill of Service Lines in Streets: Service line trenches cut through surfaced streets or adjacent to existing curbs, gutters, and sidewalks in public ROW shall be bedded using squeegee and backfilled using material conforming to CDOT Class 6 Base Course, Flow Fill or Flash Fill.

Base course backfill shall be compacted by vibrating, tamping or a combination thereof, to ninety-five (95) percent of maximum proctor density when tested in accordance with AASHTO T180. Granular bedding material shall be compacted to seventy (70) percent relative density for sand materials as determined by the relative density of cohesionless soils test, ASTM D-2049. The trench backfill material shall be compacted to within six (6) inches of the finished street grade and the trench then topped out to finish grade with six (6) inches of CDOT Grading S Asphaltic Concrete. Asphaltic concrete shall be placed and compacted in accordance with these standard specifications.

0.2.15. Interruption of Water Service - The contractor must, in writing, advise affected users twenty four (24) hours prior to performing work on a service, distribution or transmission line which will interrupt a customer's supply of water. Contractor prepared notices shall be hand delivered to each customer or occupant. If the occupant cannot be contacted, the written notice shall be left attached to the door knob or screen.

In addition, the contractor must contact City of Rifle's Collection and Distribution (C & D) Department (970-625-2121, extension 324) and schedule the closing of valves necessary to isolate the line or lines on which work is to be performed. Only City personnel are to operate existing system valves or new valves if they are connected to the City system. Also, it is the contractor's responsibility to advise Rifle Fire Protection District (970-625-1243) as to time and interval the system will be down and also the location of all fire hydrants that will be out of service.

A normal outage shall be a maximum of four (4) hours and between the hours of 8:30 a.m. and 3:00 p.m. If the outage will be greater than four (4) hours, the work shall be done in a manner to minimize the inconvenience to users, such as working at night in a continuous operation until service is restored. A connection which will require an outage longer than four (4) hours shall be subject to review by the City as to the appropriate time for the connection. If in the process of installing a connection there exists a customer, industry or building in the area that cannot be out of water such as a hospital, school, etc., the contractor shall take appropriate means to provide and convey potable water to them at all times during the performance of the work.

0.2.16. Sanitary and Storm Sewer Crossings - It shall be the contractor's responsibility to protect all utility, sanitary and storm sewers which either parallel or cross the line being installed.

Contractor cost for protecting parallel or crossing utility sanitary and storm sewers, sprinkler irrigation lines and raw water irrigation pipes and ditches, shall be included in the unit price bid in the proposal for furnishing and installing pipe.

A. Crossing Over Sanitary Sewer: When a water line crosses over a sanitary sewer with less than a two (2) foot clearance between the sewer and water line, the contractor will encase the sanitary sewer with concrete, to a distance of two (2) feet each side of the outside edge of the water line.

B. Crossing Under Sanitary Sewer: When a water line crosses under a sanitary sewer, any VCP sanitary sewer pipe must be replaced with PVC pipe and all joints on the sewer line within ten (10) feet of the water line shall be concrete encased,

unless otherwise approved by the Project Engineer.

All drains that previously existed under the sanitary or storm sewer shall be restored in a manner that will not allow any flow in the drain to enter and flow down the trench in which the water conduit is laid. When a water line crosses under a storm or sanitary sewer, compacted bedding must be installed to one (1) foot over the storm or sanitary sewer.

C. Paralleling Foreign Conduits: The City reserves the right to require concrete encasement of pipe joints or the entire pipe of sanitary or storm sewer which are within ten (10) feet and/or less than two (2) feet below the flowline of a water line being installed.

0.2.17. Boring of Casing Pipe and Threading of Carrier Pipe – Boring of casing pipe and threading of carrier pipe shall be completed in accordance with Section 25.5 of these Specifications. Carrier pipe for water mains shall be installed in the casing pipe using approved centering, restraining casing spacers and insulators only. Steel banded skids and chocks are not allowed. Sand filler is also not allowed for water main carrier pipes. End seals of casing pipes shall be rubber boots as described in Section 30.2.14

0.2.18. Special Items

A. Vent Piping: Vent piping from manholes and vaults shall be trenched with a minimum cover of eighteen (18) inches and carried to a location as designated by the Project Engineer in the field, at which point the vents shall be projected to a height of four (4) feet above the ground, or flush with the ground, to permit installation of the six (6) inch vent pipe box assembly. The steel and PVC pipe to be supplied shall be Schedule 40.

B. Painting: All metal exposed to atmosphere or buried in the ground, except aluminum, brass, bronze, or copper, shall be painted.

All exposed metal and that portion of the black steel vent pipes that is to be buried shall be given two (2) coats of CA-1180 mastic cold coating or equal as manufactured by Protecto Wrap Company, Denver, CO, except for metal with shop applied coating approved by the Project Engineer. All metal exposed to the atmosphere shall be painted with one (1) coat of red-lead priming paint and two (2) coats of aluminum paint, unless otherwise directed by the Project Engineer.

All surfaces to be painted shall be cleaned of oil, grease, weld spatters, burrs, grit, dust, or other objectionable surface irregularities. Cleaning solvent used shall be mineral spirits or equivalent.

Paint shall not be applied, except under shelter, during wet, damp, or foggy weather, or when windblown dust, dirt, debris, or insects will collect on freshly applied paint. Paint shall not be applied at an air temperature below fifty (50) degrees Fahrenheit, or to surfaces of metals, such as the surface of a valve or pipe containing cold water, with a temperature below fifty (50) degrees Fahrenheit regardless of the air temperature, or when metal temperature and atmospheric conditions cause condensation on the surface of the metal.

Painted surfaces which have become damaged prior to acceptance shall be repainted with the same or equivalent paint used in the original application to the satisfaction of the Project Engineer.

C. Trench Support: The trench shall be adequately supported and the safety of workers provided for as required by the Occupational Safety and Health Administration (OSHA). Sheeting and shoring shall be utilized where required to prevent any excessive widening or sloughing of the trench which may be detrimental to human safety, to the pipe or appurtenances being installed, to existing utilities, to existing structures or to any other existing facility or item. Where excavations are made under severe water conditions, the Project Engineer may require the contractor to use an approved sheet piling, instead of sheeting and shoring.

Excavated material shall not be placed closer than two (2) feet from the top edge of the trench. Heavy equipment should not be used or parked near the sides of the trench unless the trench is adequately braced.

D. Test Site and Anodes: The test site and anode installations shall be as called for on the project drawing. If not specified thereon they shall be as shown on City of Rifle Standard Drawings W-63 and W-64.

E. Manholes and Vaults: The contractor shall furnish materials for and construct all manholes and vaults as shown on the drawings. All manholes and vaults shall be so constructed that they are as watertight as practicable throughout the full depth, including the areas where valve operators or blowoffs extend through the barrel or wall sections.

F. Concrete and Reinforcing Steel: Concrete and reinforcing steel to be incorporated in the project shall be furnished and installed in accordance with Section 10 - "Concrete", of these standard specifications.

G. Thrust Anchor Blocks: Thrust anchor blocks shall be placed behind outlets, bulkheads, bends, branches, tees, fire hydrants and fittings which require support due to unbalanced thrust. These anchor blocks shall be Class "B" concrete and of the size and shape indicated in the standard drawings or on the project drawings. Care shall be taken not to block outlets or to cover bolts, nuts, clamps, or other fittings with concrete, making them inaccessible. A polyethylene bond breaker shall be placed between the pipe and the thrust block to aid in future removal. Thrust anchor blocks larger than one (1) cubic yard shall have a minimum of two lifting hooks placed into the top.

The contractor's attention is particularly called to the requirements that the entire face of the excavation against which the anchor block will bear shall be undisturbed earth and shall be flat and at the proper angle with the pipe unless otherwise specified by the Project Engineer.

All forming for concrete thrust blocks and anchors will be done by bulkheading around the shape of the thrust blocks and anchor with bracing or burlap sacks filled with sand or earth. Sacks shall be left in place in the trench. No horizontal struts or braces required for trench shoring shall remain in the concrete kickblocks. Before any concrete is placed, the excavation for concrete shall be inspected and approved by the Project Engineer and/or City Inspector.

Backfill may be placed over thrust blocks once the surface has set sufficiently to resist the weight of the backfill. However, no tamping or compacting of the backfill

shall be allowed above the thrust block for a minimum of twenty four hours (24) after placement of the concrete.

H. Progress of Work - The maximum amount of open trench allowed shall be that amount which, in the opinion of the Project Engineer, is reasonable and prudent for conditions existing at any particular location. That amount may be as little as sixty (60) feet at some locations. It is not the intention of this specification to impede the contractor's progress; however, the Project Engineer will be the judge of the amount of open trench allowed.

In streets, the complete backfilling operation to the finished grade and cleanup operation shall proceed on a continuous basis and shall follow within 150 feet of the installation of the pipe. However, at the end of each working day, pipe backfill shall cover the installed pipe sufficiently to protect the coating and/or lining of the installed pipe. Any deviation from the above requirements shall be made only with the written approval of the Project Engineer.

0.3. TESTING AND CLEAN UP

0.3.1. Testing Cathodic Protection System - The contractor shall furnish all material and properly construct and connect in place a cathodic protection system where called for in strict accordance with contract documents. The contractor shall locate, expose and repair all points along the pipeline, where by testing, there is a lack of electrical continuity or improper isolation. Test stations shall be free of debris or dirt and test leads left with sufficient slack for easy testing and repair. Test stations shall be tagged with the words "City of Rifle" and the diameter of the water main in inches that they are connected to.

The City and/or contractor will employ a corrosion engineering firm to conduct tests and report results obtained during and after completion of the installation or the work may by conducted by City Personnel as determined by the City Engineer. Testing will be performed in accordance with accepted practices as recommended by NACE - "National Association of Corrosion Engineers".

All insulated fittings shall be tested for proper isolation. Electrical continuity tests of the bonded and tied portion of the pipeline shall also be performed. Structure for soil potential measurements, shall be recorded on all protected structures along with DC current outputs of the components. Testing shall be repeated and repairs made, at contractor's expense, until the system is functional and operating to the standard it was designed for.

30.4.2. Testing Pipe Detector Wire – Electrical continuity in the wire must be restored and maintained. City personnel will test for electrical continuity and alignment after trench backfill is complete and after permanent asphalt surfacing is installed, as a condition of warranty acceptance.

0.3.3. Hydrostatic Testing and Disinfecting Lines - Potable water lines shall be hydrostatic tested, disinfected and flushed prior to being placed into service. Line disinfection performed simultaneously with hydrostatic testing must satisfy the requirements of the Colorado Health Departments.

Hydrostatic testing shall only be performed after the line has been cleaned of debris, concrete anchor blocks have cured and all backfill is in place. Water Division personnel shall be the sole operators of existing valves through which water for testing, disinfecting and flushing is obtained.

A. Disinfection of Water Lines: Disinfection of potable water lines shall be performed in accordance with AWWA C651 "Disinfecting Water Mains" and to the satisfaction of the Colorado Health Departments.

Following twenty-four (24) hour soak and absorption time, the residual chlorine content of the water shall be no less than twenty-five (25) milligrams per liter, when tested at any one or all fire hydrants, blow-offs, corporation stops, stub ends, etc., on the line.

Suggested methods of chlorination and their limitations are:

1. Tablet Method: Five (5) gram calcium hypochlorite tablets, each containing 3.75 grams available chlorine, shall only be used when the line cannot be flushed prior to chlorination. The tablet method shall not be used when trench water or foreign materials have entered the water line during installation or the ambient temperature is below forty-one (41) degrees Fahrenheit. The tablets shall be secured to the crown of each pipe section, as it is installed in the trench, with "red" PERMATEX or other approved adhesive. Under normal conditions to obtain the 25 MG/L residual chlorine concentration, after twenty-four (24) hour solution time, will require the use of the number of tablets called for under pipe diameter and opposite pipe joint length as listed below.

Pipe	Tablets per Joint					
Joint Length	6"	8"	10"	12"	14"	16"
13'	2	2	3	5	7	9
20'	3	4	5	7	11	14

2. Continuous Feed Method: This method shall be used when it is necessary to flush the line prior to chlorination or for rechlorination.

Water from an existing distribution source shall be made to flow at a constant rate through the line to be disinfected. Chlorine is then pumped into the line from the water supply source at a rate which will result in a chlorine concentration of no less than 50 MG/L, when tested at any or all accessible discharge locations. The amount of chlorine to be inserted per 100 feet of pipe, to produce 25 MG/L residual concentration after a twenty-four (24) hour solution time, will normally be as shown below.

Pipe Dia. In.	100% Cl. lbs/100 ft.	1% of Cl. Solution gal/100 ft.
6	0.061	0.73
8	0.108	1.30
10	0.170	2.04
12	0.240	2.88
14	0.333	3.98
16	0.435	5.20

3. Slug Method: The slug method shall be used for 18" and larger transmission mains or where use of the tablet or continuous feed method are impractical.

   Chlorine in gaseous or super chlorinated liquid form shall be introduced at the water supply source, after the line has been filled. The chlorine slug shall be caused to traverse the entire length of the line, at a velocity, length and concentration, such that the entire interior surface of the pipe is exposed to the equivalent of 300 MG/L of chlorine for at least three (3) hours.

4. Cut and Repair Method: When a water line breaks or is cut into and it is impossible or impractical to rechlorinate using the continuous feed or slug methods, the following procedure shall be used.

   All fittings, valves, couplings and make up pipe sections shall be swabbed with a 5% sodium hypochlorite solution (Clorox) or a 350 MG/L available chlorine solution made from calcium hypochlorite, just prior to being installed. (One 5 g. tablet as specified under the tablet method, dissolved in 10 liters of water is equal to 350 MG/L).

B. Pressure Testing Lines: Once the line has been cleaned of debris and backfilled, the pipe shall be filled with potable water. Filling for pressure and/or chlorination testing shall be done at a velocity rate at which air can be released to atmosphere through fire hydrants, air valves, blow-offs, etc., on the line, without causing surges or damage to the line and its appurtenances. All air within the pipe shall be purged therefrom, and twenty-four (24) hours lapsed time allowed for water absorption into the pipe lining, before pressure testing.

   The hydrostatic test pressure shall be the higher of 150 psig at the lowest point in the line or section under test or 1 ½ times normal operating pressure at the connection. Test pressure shall be maintained continuously for a minimum period of two (2) hours. Pressure shall be applied in a manner satisfactory to the Project Engineer with all testing apparatus furnished by the contractor.
   Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain the specified leakage test pressure after the air in the pipeline has been expelled and/or displaced with water. No pipe installation will be accepted if the leakage in U.S. gallons per hour is greater than that set forth herein below in accordance with AWWA C600, C605 and M11:
   Allowable leakage for steel pipe is for O-ring rubber gasket joints only. The allowance shall be zero on all-welded or mechanically coupled steel pipe.

ALLOWABLE LEAKAGE - ELASTOMERIC JOINT PIPE

U.S. GALLONS PER HOUR

Pipe Diameter Inches		Nominal Allowable Leakage per 1000 ft. DIP	PVC	Steel
4		0.37	0.33	
6		0.55	0.50	
8		0.74	0.66	
12		1.10	0.99	
14		1.29	1.16	
16		1.47	1.32	
18		1.66	1.49	
20		1.84	1.66	
24		2.21	1.99	
30		2.76	2.48	5.91
36	3.31	2.98	7.09	
42		3.85		8.27
48		4.41		9.45
54		4.97		10.63

The City reserves the right to substitute its own calibrated meter and/or pump for the contractor's meter or pump for testing.

C. Flushing Super Chlorinated Water Lines: Prior to connecting super chlorinated lines to the City system, the lines shall be flushed with potable water until the residual chlorine does not exceed 1.0 parts per million. Care in flushing must be taken to prevent erosion and/or killing desirable vegetation. The contractor is responsible in providing any special materials or supplies to meet this requirement.

Super chlorinated water in the line must be dechlorinated so that no more than 1.0 ppm chlorine residual is detected prior to release to streets or into storm sewers, ditches, streams and/or their tributaries. Contractors proposed method of dechlorination must be approved by the City Engineer and be performed within the limits set forth in the NPDES permit, as issued to the City by the Colorado Department of Health. Sodium Thiosulfate Pentahydrate XTL can be used as a dechlorinator, available from Van Waters & Rogers, Inc. If the super chlorinated water is released to a dirt area that will not run to a receiving water then the requirement to dechlorinate may be waived by a representative of the City's Water Quality Section.

A City representative shall be present and operate all valves during flushing and dechlorination of lines.

0.3.4. Connecting to City System - Connection to the City system shall be in a neat and workmanlike manner. An inspector shall be present at all times during the construction of the connection. Under no circumstances shall a non-disinfected main, which cannot be isolated, be connected to an existing disinfected main. Disinfection of the line shall meet the requirements of the City of Rifle, Jefferson County and Colorado Health Departments.

The City is not responsible for water tightness of its valves and existing facilities. If existing valves leak, the City will assist in reducing the influx of water as much as possible, but the contractor must use methods at his own disposal at his own cost to work with the resulting leakage.

When connecting lines to the City water system, it may be necessary to operate new and existing valves. Valves on or connected to the City system must be operated by City personnel only. The City system includes lines that have been recently placed in service even though no taps have been made off of the mains. The contractor shall give the inspector twenty-four (24) hours notice to arrange for operating the valves. Both the contractor and the inspector shall be present when the valves are being operated.

A. Placing Line in Service: A line will only be accepted for tapping and/or placing in service after all of the following conditions have been met:

1. The main has been installed to the satisfaction of the inspector and all pertinent notes and measurements have been made.

2. The main has been successfully filled, chlorinated, de-chlorinated and pressure tested to the requirements of the City of Rifle.

Bridge Deck Waterproofing

I General

Supply Product Data

II Products

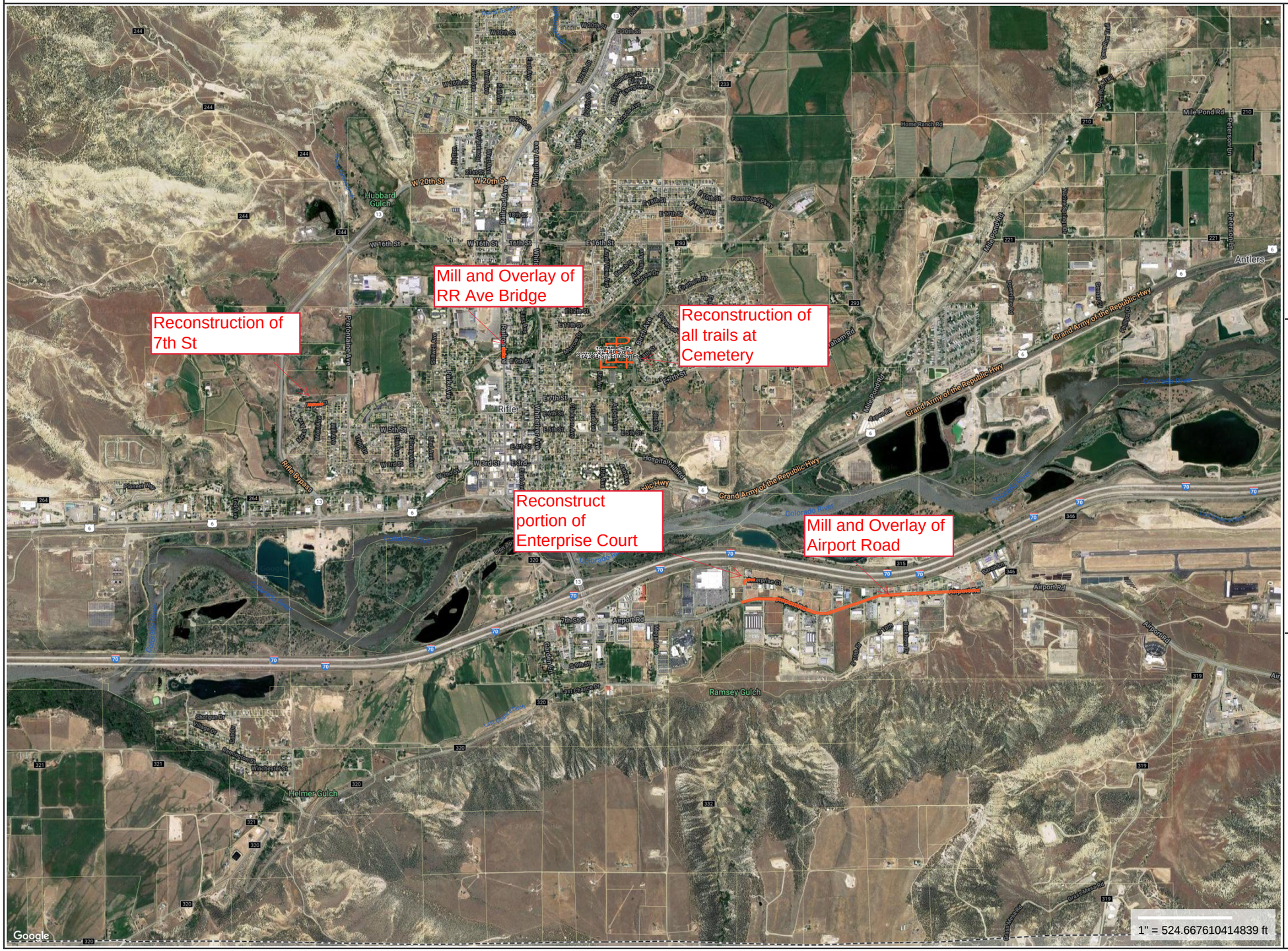
515.02 The waterproofing membrane shall consist of one of the following: (1) A prefabricated reinforced membrane and primer or, (2) A single component, hot-applied elastomeric membrane and primer if required. Materials for the waterproofing membrane shall meet the requirements specified in the following subsections: Protective Covering 705.07 Prefabricated, Reinforced Membrane and Primer 705.08 Single Component, Hot Applied, Elastomeric Membrane 705.09 515.03 Concrete sealer shall consist of an alkyl-alkoxy silane and shall be a penetrating type with 40 percent solids in water or a high flash organic solvent. The sealer shall be compatible with the curing compound used on the concrete and shall be one that is included on the approved products list of the Department. A certificate of compliance shall be provided with each shipment of sealer

III Execution

515.04 Waterproofing Membrane. (a) Condition of Concrete Deck for Application of Waterproofing Membrane. The entire deck and the sides of the curbs for a height of 2 inches above the plan thickness of the hot mix asphalt shall be free of all foreign material such as dirt, grease, old pavement and primer. All decks shall be sand blasted or shot blasted. Immediately prior to the application of primer or any type of membrane, all dust and loose material shall be removed. The deck condition will be approved before application of the membrane. (b) Weather and Moisture Limitations for Application of Waterproofing Membrane. Application of primer or membrane shall not be done during inclement weather conditions, or when deck and ambient air

temperatures are below 50 °F. The deck surface shall be dry at the time of application of primer and membrane. (c) Application, Prefabricated, Reinforced Membrane. Primer shall be applied to the prepared concrete surface at the rate and according to the procedure recommended by the membrane manufacturer. Placement of the membrane shall not begin until the volatile material in the primer has dissipated. The membrane shall be placed in such a manner that a shingling effect will be achieved and any accumulation of water will be directed toward curbs and drains. Primer and membrane shall be placed on the curb faces for a height of 2 inches above the plan thickness of the hot mix asphalt. The entire membrane shall be essentially free of wrinkles, air bubbles and other placement defects. Blisters or bubbles larger than 2 inches in diameter, which develop after placement of the membrane and before placement of protective covering, shall be punctured, the air expelled and membrane patched in a manner satisfactory to the Engineer. At all expansion joints, and other joints, membrane shall be flashed up to the top of the joint and secured with primer. At drain pipes, membrane shall be placed in such a manner that it extends down inside the drain and is secured with primer. (d) Application, Single Component, Hot Applied, Elastomeric Membrane. Hot applied membrane shall be applied to the prepared deck surface at a uniform minimum rate of ½ gallon per square yard thickness of 90 to 110 mils, 1 mil = 0.001 inch. During application the thickness may be measured by the Engineer. Lack of uniform application shall be cause for termination of the work until remedial measures are taken. Primer, if required, and membrane shall be placed up the curb faces for a height of 2 inches above the plan thickness of hot mix asphalt. (e) Application of Protective Covering. As soon as practical, but in all cases the same day as membrane application, protective covering shall be placed from gutter line to gutter line. Protective covering shall be laid parallel to the centerline of the bridge. The protective covering shall be butted together at longitudinal and transverse joints. Overlapping will not be permitted. The maximum allowable space between adjoining sections of protective covering shall be 1 inch. Following 515.05 5-66 placement of protective covering, a bead of compatible mastic or hot applied membrane shall be applied where the protective covering contacts the curbs, and in cracks between adjoining sections that are apart by more than ⅜ inch. The bead shall fill the void preventing water from entering at this point. (f) Inspection. Upon completion of the membrane and protective covering the Engineer will inspect the membrane system. Approval in writing from the Engineer shall be obtained before application of hot mix asphalt. The Contractor shall be responsible for maintaining the condition of the membrane system on the bridge deck until covered with hot mix asphalt to the thickness required by the Contract. (g) Overlay. Hot mix asphalt shall be placed, spread and compacted, in accordance with the specifications or as approved. 515.05 Concrete Sealer. (a) Condition of Surface for Application of Sealer. The surface of bridge deck, approach slabs, sidewalks, and curbs and the interior concrete surface of drains shall be free of all residue and other surface contaminants. Within 48 hours prior to the application of the sealer these surfaces shall be cleaned with dustless abrasive shot blasting. Other methods of blasting, power washing, or cleaning may be used if approved. The amount of shot blasting or cleaning shall be sufficient to remove all visual evidence of curing compound residue, dirt, grease, and surface contaminants. When wet methods are used the

surface shall be dried in accordance with subsection 515.04. (b) Weather and Moisture Limitations for Application of Sealer. Sealer shall not be applied when the deck or ambient air temperature is below 40 °F, above 90 °F, or outside the manufacturer's recommended temperature range. The concrete shall have aged a minimum of 28 days and the surface shall be dry at the time of application of the sealer. When the surface is wet because of inclement weather, power washing, or other moisture, it shall be permitted to dry at least 24 hours before the sealer is applied. (c) Application of Sealer. Sealer shall be applied uniformly at the manufacturer’s recommended rate. The sealer shall be applied to the surface of the concrete bridge deck, approach slabs, curbs including the face of concrete bridge rail for 6 inches above the bridge deck, sidewalks, and the interior concrete surface of drains. Two copies of the manufacturer's literature for the sealer including the recommended application procedure shall be provided to the Engineer prior to application. The literature shall include a product material safety data sheet. All solvents, coatings, or other chemical products, or solutions, shall be mixed, handled, applied, stored and disposed of in such a manner that spills, splashes, and drips shall be contained without contamination of the soil, vegetation, streams, or other water bodies. The Contractor shall provide two approved respirators for use by Department personnel. Traffic shall not be allowed on the treated surface until the sealer has penetrated the concrete and the liquid sealer is no longer visible on the surface. The Contractor shall follow all the manufacturer's recommendations, including penetration time, prior to opening to traffic.



MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

The City of Rifle Colorado makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 9/8/2021
Data updated 9/8/2021

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

CITY OF RIFLE
PURCHASE REQUEST

1.	**Vendor Name** NEW: W-9 attached ☐
	Frontier Paving, Inc.

2.	**Vendor Address**
	854 Bedrock Lane
	Rifle, CO 81650

3.	**For the Purchase of (description)**
	Construction of 2022 Asphalt and Street Improvements

4.	**Amount Requested**	**Amount Budgeted**	**Finance Director Verified Funds Avail.**
	$1,477,868.42	$1,700,000	

5.	**Dept. Name**	**General Ledger Acct #**
	Public Works/Cemetery/Water	201-4312-400-734($1,100,000.00)/201-4312-400-641($52,437.10)/310-4333-400-739($171,010.00)/206-4900-400-740($254,021.32)

6.		**Type of Purchase**
	x	Capital Construction
		Capital Construction – Change Order
		Capital Equipment
		Plant Equipment
		Materials, supplies, non-profession/technical services (includes computer/software maint.)
		Professional Services
		Utilities (includes equipment installation)
		Land, easements, ROW

7.		**Purchasing Process Required**
		Cooperative Purchasing
		Open Market
		Comparative Pricing
		Request for Proposal (attach bid tab)
	x	Formal Bid (attach bid tab and advertisement)
		Single Source (attach an explanation)

8.		**Authorization Required**
		City Manager
	x	City Council

9.	**Signatures**		
	Position	**Signature**	**Date**
	Department Director		
	City Manager		
	City Council Approval (meeting date)		
10.	**Purchase Order # assigned by Finance**		

General summary of purchasing ordinance (Section 4, Art. III)

TYPE OF CONTRACT	ESTIMATED AMOUNT	PROCESS	Purchase Order? Purchase Request?	**CITY COUNCIL APPROVAL** REQUIRED?
Capital Construction	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3) vendors/suppliers)	Purchase Request	
	$20,001-$100,000	Competitive Bid (see Code Sec 4-3-40)		
	> $100,000	Bonded Competitive Bid		
Capital Construction Change orders	< = 10% of approved contract	When total change orders to date are < 10% - Dept Head or City Manager Approval	Purchase Request	Yes if total change orders to date are greater than 10%
	> 10% of approved contract			
Capital Equipment	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	> $20,000	Competitive Bid (see Code Sec 4-3-40)		
Plant Equipment Replacement (purchases necessary for replacement of existing equipment that is component part of any water, wastewater, or physical plant)	< $7,500	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $75,000
	$7,500-$75,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	>$75,000	Competitive Bid (see Code Sec 4-3-40)		
Materials, Supplies, Non-Professional Services and Technical Services (including software/hardware maintenance technical services)	< $10,000	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $20,000
	>$10,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
Professional Services (note- process for appointed positions such as auditor, attorney, engineer, or municipal judge to be determined by Council)	< $25,000	Open Market (informal evaluation by purchasing agent)	All - Purchase Request	Yes if anticipated to exceed $25,000 per year to a single vendor
	> = $25,000	Written requests for written proposals must be sent to at least 3 firms or individuals		
Utilities including installation of equipment (purchases to secure utility services such as natural gas, electricity, local telephone, water, or sewer)	any amount	Single Source (negotiations, where appropriate, after good faith determination that only one viable source exists in relevant supply area - keep records for one year)	> $5,000 - PO >= $5,000 - Purchase Request	No
Real Property Interest (including easements and rights of way)	any amount	Single Source (see above)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $5,000.

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #7.b.

Agenda Item Name:
Consider Awarding Contract to Andale Construction for Construction Services on the 2022 High-Density Mineral Bond Coatings

Presenter:
Craig Spaulding, Civil Engineer

Item Description:
This project will install High-Density Mineral Bond (HA5) in North Rifle, Highlands East, and North Pasture. HA5 is an asphalt preventative maintenance coating used to prevent UV exposure and water infiltration. It has been in use for over 20 years and public works has gone to watch it installed and also inspect roads where it has been in service for 20 plus years in Grand Junction, Co. HA5 will extend the life of Rifle's Streets in conjunction with other maintenance practices. The bid was posted on BidNet and received one bid. The bid is qualified and within budget.

Recommended Action:
Move to approve the contract for construction services in the amount of $172,661.50 for the 2022 HA5 Project to Andale Construction, Inc.

Fiscal Impact:
N/A

Operational Impact:
N/A

Prior Board Motions:
N/A

Background Information:
HA5 was discussed in 2019 by Staff and Council. At the time, Rifle was behind on crack seal and more roads could receive preventative maintenance with crack seal for less money than HA5. The plan was to crack seal all roads in Rifle that were in good enough condition to do so and then begin HA5 as an additional preventative maintenance measure. Rifle has caught up on crack seal and has crack sealed 16 of the 24 miles of roadway since 2019. HA5 will now begin in the same location as the crack seal and follow the operation with a three year lag.

Executive Summary:
N/A

Notification Requirements:
N/A

Prepared By:
Craig Spaulding, Civil Engineer

Attachments:
1. HA5 2022 Project Manual
2. 2022 HA5 Map_5-25-22
3. PURCHASE REQUEST-2022 HA5_Andale 5-26-22

Crack Sealing 2022

PROJECT MANUAL

CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, COLORADO 81650

2020

Pre-Bid Meeting: N/A
Bid Due Date: May 20, 2022
Award Date: June 1, 2022
Construction Start Date: August 24, 2020
Construction Completion Date: October 2, 2020

Project Directory

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- 2022 HA5 Map

ADVERTISEMENT FOR BIDS

Separate sealed BIDS for the construction of the **Crack Sealing 2022** will be received at the **Council Chambers, Rifle City Hall, 202 Railroad Avenue, Rifle, CO.** until 2:00pm, on May 20, 2022, at which time they will be publicly opened and read aloud.

> This project involves public notification, traffic control, preparation and installation High Density Mineral Bond on 42,148 SY of Streets in North Rifle. It will be the responsibility of the contractor to coordinate and schedule public notifications necessary to perform the work. Lay down space is available at the City of Rifle O&M Shop (1221 E Centennial Parkway. Rifle, CO 81650.) to use during the operation.

A Bid Bond in the amount of 5% of bid price is required, and a Performance and a Payment Bond, each in the amount of 100% of bid, will be required. Bid Award will be the June 1, 2022 Council Meeting. Time of Commencement of the Work is anticipated to be no later than August 24, 2020, with completion by October 2, 2020.

A PREFERENCE FOR LOCAL CONTRACTORS WILL BE APPLIED BY THE OWNER WHEN SELECTING A CONTRACTOR.

There will be no mandatory pre-bid meeting. Site visit meetings can be scheduled using the contact information below.

Digital copies of the Contract Documents may be downloaded from the City website at http://www.rifleco.org/216/Projects-Out-To-Bid **for free. Contact Craig Spaulding,** cspaulding@rifleco.org**, 970-665-6556 for questions or issues with downloading the documentation.**

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Instructions to Bidders

1.0 Defined Terms

Terms used in these Instructions to Bidders, which are defined in the General Conditions of the City of Rifle Public Works Manual, have the meaning assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a Bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement for Bids, Instructions to Bidders, the Bid Form, and the Contract Documents (including all Addenda issued prior to receipt of Bids).

2.0 Copies of Bidding Documents

2.1 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. The City of Rifle Public Works Manual, Part I-General Conditions, Part II-Construction Materials and Methods and Part III Minimum Design Standards, shall be followed unless otherwise specified herein. In case of conflict, follow the Supplementary General Conditions section 25, Precedence of Contract Documents. Copies of the Public Works Manual are available on Rifle's web site www.rifleco.org.

2.2 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the work and do not confer a license or grant for any other use.

3.0 Qualifications of Bidders

The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and to demonstrate qualifications to perform the Work. Each Bidder must be prepared to submit within five days of Owner's request written evidence of the types set forth in the Supplementary Conditions, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

4.0 Examination of Contract Documents and Site

4.1 It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider federal, state and local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

4.2 Information and data reflected in the Contract documents with respect to Underground Facilities at or contiguous to the site are based upon information and data furnished to Owner and Engineer by owners of such underground facilities or other, and Owner does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.3 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work and which Bidder deems necessary to determine its Bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.4 On request, in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill and patch all holes, clean up, and restore the site to its former condition upon completion of such exploration.

4.5 The lands upon which the work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by Contractor in performing the work, are identified in the Contract Documents. All additional lands, and access thereto, required for temporary construction facilities or storage of materials and equipment, are to be provided by Contractor.

4.6 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of performance and furnishing of the work.

5.0 Interpretations and Addenda

5.1 All questions about the meaning or intent of the Contract Documents are to be directed to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five (5) days prior to the date of opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

6.0 Conditions of Work

Each Bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor or danger to the public.

7.0 Substitute or "Or-Equal" Items

The Contract, if awarded, will be on the basis of materials and equipment described in the drawings or specified in the specifications, without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the drawings or specified in the Specifications that substitute or "or-equal" items of materials or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the effective date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth

in the General Conditions and may be supplemented by the Supplementary Conditions.

8.0 Subcontracts

The Bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the Owner. The bidder shall submit, with their bid, a completed list of subcontractors they propose to use on this contract.

9.0 Bid Form

9.1 The Bid Form is included with the Bidding Documents; additional copies may be obtained from City Hall of Rifle, 202 Railroad Avenue, Rifle, Colorado.

9.2 All blanks on the Bid Form must be completed in ink, by typewriter, or electronically and printed. NOTE: The spreadsheet is offered for your convenience only. The contractor is responsible for use and confirmation of any formulae or calculations therein. The submittal may be on the pdf. All tracking of project progress will be through that spreadsheet.

9.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

9.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

9.5 All names must be typed or printed below the signature.

9.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

9.7 The address, email, and telephone number for communications regarding the Bid must be shown.

10.0 Submission of Bids

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of the Bidder and accompanied by the required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation “BID ENCLOSED” on the face of it. Any submission received after the advertised Bid Opening shall be returned unopened to the sender.

11.0 Modification and Withdrawal of Bids

11.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

11.2 If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and Engineer and promptly thereafter demonstrates to the reasonable satisfaction of Owner

and Engineer that there was a material and substantial mistake in the presentation of its Bid, that Bidder may withdraw its Bid.

12.0 Bids to Remain Subject to Acceptance

All Bids will remain subject to acceptance for sixty (60) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid prior to that date.

13.0 Award of Contract

13.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities, and to negotiate Contract terms with the Successful Bidder, and the right to disregard all nonconforming, non-responsible, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the bid is not responsible or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner.

13.2 In evaluation of Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

13.3 Owner may consider the qualifications and experience of subcontractors, suppliers and other persons and organizations proposed for those portions of the work as to which the identity or subcontractors, suppliers, and other persons and organizations may be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the work when such data is required to be submitted prior to the Notice of Award.

13.4 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed subcontractors, suppliers and other persons and organizations to perform and furnish the work in accordance with the Contract Documents to Owner’s satisfaction within the prescribed time.

13.5 If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project.

13.6 Section 2.26 of the General Conditions of the City of Rifle’s Public Works Manual and section 16.00 of the Supplementary Conditions set forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

13.7 If the Contract is to be awarded, Owner will give the successful Bidder a Notice of Award within sixty (60) days after the date of the Bid opening.

14.0 Laws and Regulations

The Bidders’ attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

15.0 Complete Prices

All lump sum, alternate, and unit prices must include all required General Conditions line items necessary to complete the work, including, but not limited to the following (as required): all permits, insurance, and taxes (except as specified in Article 3.0 of the Supplementary General Conditions); supervision; layout and survey as needed; protection of all surrounding materials; lifting/hoisting; equipment and personnel; off-site management and administrative assistance; trash disposal to a separate dumpster; miscellaneous equipment; mobilization; as-built drawings; fuel, watchmen, flagmen, and site security; scheduling; small tools; drawings and printing expenses and mailing costs.

15.1 On bid items to be paid as lump sum that may extend beyond a single pay estimate, a schedule of values shall be submitted to OWNER a minimum of 10 days prior to commencement of work. Adequate detail shall be given to allow a value to be placed on work completed during any given pay estimate.

16.0 Permits and Fees

Bids shall include all sales tax (except as specified in Article 3.0 of the Supplementary General Conditions) and all other applicable taxes and fees related directly to the construction of this project. Fees for permits and inspections directly related to this construction will be paid by the BIDDER; however, no tap fees or access charges for this or subsequent work will be the responsibility of the BIDDER. City has Tax Exemption, a copy of which will be provided to the Contractor. Contractor and all subcontractors shall hold a current license to perform work in Rifle, Garfield County, and the State of Colorado.

17.0 Authorities

Technical Specifications included herein supplement the Standard Specifications and take precedence. Work shall be completed as per these specifications and accepted by the Owner or proper agencies having jurisdiction before final payment is requested of the Owner.

18.0 Subsurface Investigations

Geotechnical reports, if available, are included in the appendix of the Project Manual. Contractor use of such reports shall be in accordance with section 18.00 “Soils Investigation”, of the Supplemental General Conditions.

19.0 Completion of Work

Work shall be completed as per the City of Rifle Public Works Manual (and as modified by these specifications) and accepted by the Owner or proper agencies having jurisdiction before final payment is requested of the Owner.

**Contractor shall provide a daily estimate of progress to the Public Works Director or City representative to verify quantities and that we shall stay within the contracted price. <u>The City shall not pay for work above the contract price.</u>

20.0. Bid Bond

Bid security shall be made payable to the Owner in the amount of 5% of the bidder’s maximum bid price in the form of a certified check or a bid bond, using the form herein, issued by a surety meeting the requirements of the Supplementary General Conditions. The bid security of the successful bidder will be retained until such bidder has executed the agreement and furnished the required contract security whereupon it will be returned; if the successful bidder fails to execute and deliver the agreement and

furnish the required contract security within ten (10) days of the Notice of Award, the Owner may annul Notice of award and the bid security of that bidder will be forfeited. Owner will return bid bonds or checks of unsuccessful bidder within or by 60 days after the bid submittal date.

21.0 Payment Bond

Payment Bond form is found in Agreement Documents section of this package.

22.0 Performance Bond

Performance Bond form is found in Agreement Documents section of this package.

23.0 Work By Illegal Aliens Prohibited

Work By Illegal Aliens Prohibited. Pursuant to Section 8-17.50191, C.R.S., *et. Seq.*,

Contractor warrants, represents, acknowledges, and agrees that:

1. Contractor does not knowingly employ or contract with an illegal alien.

2. Contractor shall not knowingly employ or contract with an illegal alien to perform works or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

3. Contractor has participated in or attempted to participate in the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, administered by the Department of Homeland Security (hereinafter, "Basic Pilot Program") in order to verify that Contractor does not employ illegal aliens. If Contractor is not accepted into the Basic Pilot Program prior to entering into this Agreement, Contractor shall forthwith apply to participate in the Basic Pilot Program and shall submit to the City written verification of such application within five (5) days of the date of this Agreement. Contractor shall continue to apply to participate in the Basic Pilot Program, and shall verify such application to the City in writing, every three (3) months until Contractor is accepted or this Agreement is completed, whichever occurs first. This Paragraph 3 shall be null and void if the Basic Pilot Program is discontinued.

4. Contractor shall not use the Basic Pilot Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

5. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
(a) notify the subcontractor and the City within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
(b) terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

6. Contractor shall comply with any reasonable request be the Colorado Department of Labor and Employment ("Department") made in the course of an investigation that the Department is undertaking pursuant to the authority established in subsection 8-17.5-102(5), C.R.S.

7. Contractor violates this Addendum; the City may terminate this Agreement for breach of contract. If this Agreement is so terminated, Contractor shall be liable for actual and consequential damages to the City arising out of said violation.

24.0 Local Contractor Preference

Primary and secondary preference will be given to contractors when determining the lowest responsible bidder for work on this project. Local contractors, who have a principle place of business, are 1) for primary preference, within the City of Rifle or within 3 miles of the City Limits and 2) for secondary preference, outside of the three mile limit but within Garfield County.

For projects of $5,000 or more in value, to determine the lowest bidder, an amount equal to the percentage shown below will be deducted from the total price proposed for the work. The contract however, will be awarded for the total bid price proposed.

Contract Amount	Primary Preference	Secondary Preference
$5,000 to $25,000	6% discount	3% discount
$25,001 to $100,000	5% discount	2.5% discount
$100,001 or above	4% discount	2% discount

25.0 Scopes of Bids

4.7 **General Scope of Project**: This project involves public notification, traffic control, preparation and installation of crack treatments for:

7 Streets in North Pasture, 72585 SY, 17,421 lb sealant

Materials used for crack treatments shall be per the technical specifications contained in the project manual. All cracks including the asphalt to curb and gutter transition shall be cleaned and treated per the project maps. If all cracks on the project map have been treated and there is crack sealant materials remaining crack sealing will continue in same project area until all crack sealant materials have been used. If all cracks on the project have been treated and there is mastic materials remaining, the remaining mastic shall be returned to owner at material cost plus 15%.

Traffic Control shall be a mobile one lane configuration where the flagger in the back of the operation remains far enough behind the placement of crack sealing to ensure temperatures are adequate for live traffic. A minimum of two flaggers shall be required at all intersections and blind corners.

Payment will be made per lb. which shall include all traffic control, mobilization, demobilization, materials, and equipment. All costs incidental to the preparation of the surface prior to application of the hot poured joint and crack sealant will not be paid for separately, but shall be included in the work.
the work.

Bid review and award shall be based on the criteria set forth in section 13 of Instructions to Bidder. Final scope is budget dependent and may be reduced if the lowest qualified bid is above $100,000.00

END OF INSTRUCTIONS TO BIDDERS

Required Bid Documents

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of the Bidder and accompanied by the required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. Any submission received after the advertised Bid Opening shall be returned unopened to the sender. Required Bid Documents are in the Bid Submittal Checklist Below

_____ **Bid Form**

_____ **List of Materials Suppliers/ Subcontractors**

_____ **Contractor's License**

_____ **Bid Schedule**

_____ **Bid Bond**

CITY OF RIFLE

BID FORM

FOR CONSTRUCTION OF:

Crack Sealing 2022

DATE: _____

OWNER: City of Rifle
202 Railroad Avenue
Rifle CO 81650
Attn: Craig Spaulding

BIDDER: Name of Bidder_____

Address of Bidder _____

_____

_____

Phone Number _____

Email Address _____

Contact Name _____

THE UNDERSIGNED BIDDER, having familiarized himself with the Work required by the Contract Documents, the site and conditions where the Work is to be performed, local labor conditions, and all laws, regulations, and other factors affecting performance of the Work, and having satisfied himself of the expense and difficulties attending performance of the Work,

HEREBY PROPOSES and agrees, if this Bid is accepted, to enter into Agreement with the Owner to perform all work, including the assumption of all obligations, duties, and responsibilities necessary to the successful completion of the contract and the furnishing of all materials and equipment required to be incorporated in and form a permanent part of the Work; tools, equipment, supplies, transportation, facilities, labor, superintendence, and services required to perform the Work; and bonds, insurance, submittals; and all fees as indicated or specified in the Contract Documents to be performed or furnished by BIDDER for the amount identified and detailed in the BID SCHEDULE and further totaled below ("Bid Proposal Amount"):

_____Dollars($_____)
(written) (numeric)

CITY OF RIFLE
BID FORM page2

DOCUMENTS AND ADDENDA:
The BIDDER submits that he has carefully examined the site of the proposed work and the existing conditions, as well as the drawings and specifications. Also, he has thoroughly reviewed the proposal form, Instructions to Bidders, General Conditions, Supplementary Conditions, General Requirements, and the Specifications and Drawings, and acknowledges that the following addenda covering revisions to the drawings and/or specifications, and the cost, if any, of such revisions has been included in the Total Bid Price.

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

CHANGES TO THE WORK:
BIDDER agrees to perform all the WORK for the Total Base Bid price identified in the "Bid Proposal Amount." If circumstances arise during construction of this project which dictate a change in quantity, then the pricing for that particular portion of the job will be adjusted up or down with the BIDDER'S Schedule of Values (as included in the Contract Documents) to the revised quantity required by the construction circumstances of these plans. Final payment will be based upon count or measurement of items in place upon completion of the project at the units of measure and unit prices, with the exception of lump sum items.

For changes not covered by a contract unit price, BIDDER proposes that all such changes ordered to the work which increases the Scope of Work shall be priced in advance of the work and such unit prices will be approved by the Owner prior to commencement of work.

PERFORMANCE AND LABOR & MATERIAL PAYMENT BONDS:
By signing and submitting this Bid Proposal, the BIDDER certifies that upon demand, Performance and Labor & Material Payment Bonds can be furnished in amounts sufficient to cover the total proposed cost of work.

TIME OF COMMENCEMENT, COMPLETION, AND DAMAGES:
The BIDDER agrees that, if awarded the Contract, the Work will be substantially complete, ready for occupancy by Owner, according to the schedule submitted by BIDDER of within the indicated construction durations specified within the Contract Documents except for delays caused by Acts of God, neglect of the Owner or the

Representative of the Owner or other causes beyond the BIDDER'S control, and allows for no time due to labor disputes or strikes. Weather (unless severe) is not considered as an excuse for delay of the work.

Time is expressly declared to be of the essence in completion of the Work covered by the Contract Documents. Where additional time is allowed under the Agreement for the Completion of the work, the new time limits shall be of the essence of the Agreement.

GENERAL AGREEMENTS:
The BIDDER agrees to the following:

The BIDDER has had an opportunity to examine the Site of the work and has examined the Contract Documents therefore.

The BIDDER has carefully prepared the bid proposal upon the basis thereof and has carefully examined and checked the Bid Proposal and the materials, equipment and labor required thereunder, the cost thereof, and figures therefore, and hereby states that the amount or amounts set forth in the Bid Proposal is, or are, correct and that no mistake or error has occurred in the Bid Proposal or in the BIDDER's computations upon which the Bid Proposal is based and the BIDDER agrees that no claim for reformation, modification, rescission or correction of the Bid Proposal will be made after the scheduled closing time for the receipt of Bid Proposals.

The BIDDER understands that the Owner reserves the right to reject any or all Bids for any or no reason and to waive any informality in the bidding.

The BIDDER understands that this Bid shall not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

The BIDDER understands that unless a bid item is included on the "Bid Schedule", no separate payment shall be made for items required to complete the work in accordance with the contract. If included on the bid schedule, then work under the item will be paid at the unit or units given and shall include all necessary work complete and in place.

In preparing the Bid Proposal, the BIDDER has verified and is reasonably assured of the availability of all labor, materials, and products in this document.

The BIDDER has carefully reviewed the Bid Documents in their entirety and has agreed to meet these requirements.

CITY OF RIFLE
BID FORM page 4

DOCUMENT EXECUTION:

DATED This _____ day of _____, 2020

_____

(Name of Firm)

_____

(Street Address)

_____

(City, State, Zip)

_____

(Signature)

_____

(Printed Signature)

_____

(Title)

Please check as appropriate:

_____ An individual

_____ A Partnership Between:

_____ A Corporation organized under the laws of the State of _____

END OF BID FORM

LIST OF MATERIALS SUPPLIERS / SUBCONTRACTORS

Provide the name of the materials supplier or subcontractor included in your base bid price. Any changes in the providers listed below can be made only with the approval of the Owner. Any amount of work greater than 10% of the amount bid shall be considered as a subcontractor/Materials Supplier.

Name of Subcontractor /Materials Supplier	Work Item Performed or Provided	% of Value

CITY OF RIFLE

Bid Schedule

N Rifle HA5 2022	Unit	Qty	Unit Cost	Cost
High Density Mineral Bond, CDOT ref. 202	SY	42148		
Mobilization, CDOT ref 626	LS	1.00		
Traffic Control, CDOT ref 630	LS	1.00		
Citizen Notifications, supply and distribute door hangers	LS	1.00		
Minor Contract Revisions	MCR	1.00	15000	15000

TOTAL BID PRICE _____

Total Bid Price in Words _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,_____
_____

_____
_____

as Principal, and_____
_____

held and firmly bound unto_____
_____

in the penal sum of_____
_____

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this_____ day of _____, 2020. The condition of the above obligation is such that whereas the Principal has submitted to the **CITY OF RIFLE, COLORADO**, a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Crack Sealing 2022

NOW, THEREFORE,

[a] If said Bid shall be rejected, or

[b] If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____**(L.S.)**
Principal

_____
Surety

By:_____

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as Amended) and be authorized to transact business in the state where the project is located.

CONTRACTOR'S LICENSING STATEMENT FORM

The undersigned is licensed in accordance with the laws of Colorado providing for the registration of Contractors: License Number_____; Class_____.

Name of Contractor's Firm_____

Business Address and Telephone Number_____

_____

Name of Individual Owner (print)_____

Signature of Owner_____

OR

Signature, Title, and Address of members signing on behalf of the partnership:

Name_____Title_____

Address_____

Name_____Title_____

Address_____

Name_____Title_____

Address_____

OR

Corporation organized under the laws of the State of _____

_____

Signature of President of Corporation

_____

Signature of Secretary of Corporation

(Place Seal Here)

AGREEMENT

THIS AGREEMENT, made this _____ day of_____ , 2020, by and between, **CITY OF RIFLE** hereinafter called "OWNER", and ___,_____ doing business as a Corporation, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of
   Crack Sealing 2022
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other service necessary for the construction and completion of the WORK described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within **14** calendar days after the date of the NOTICE TO PROCEED and will complete the same by **as indicated in the contract documents**, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The Contractor agrees to perform all of the Work described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of ($_____) dollars or as shown in the BID SCHEDULE.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
   - A. ADVERTISEMENT FOR BID
   - B. INSTRUCTIONS TO BIDDERS
   - C. BID
   - D. BID BOND
   - E. AGREEMENT
   - F. GENERAL CONDITIONS (CITY OF RIFLE PUBLIC WORKS MANUAL)
   - G. SUPPLEMENTARY GENERAL CONDITIONS
   - H. PAYMENT BOND
   - I. PERFORMANCE BOND
   - J. NOTICE OF AWARD
   - K. NOTICE TO PROCEED
   - L. List of Drawing Sheets
     - 2022 HA5 Map
   - M. TYPICAL SPECIFICATIONS noted in the City Public Works Manual and CDOT Specifications.
   - N. Technical Specifications
   - O. ADDENDA: No. _____, dated _____, 2020.

CITY OF RIFLE
AGREEMENT

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the GENERAL CONDITIONS such amounts as required by the CONTRACT DOCUMENTS.
7. This AGREEMENT shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this AGREEMENT in triplicate, each of which shall be deemed an original on the date first above written.

CITY OF RIFLE
OWNER:_____
BY:_____
NAME:_____
(SEAL) TITLE:_____

ATTEST (OWNER):_____
(Please Type)

NAME:_____

TITLE:_____

CONTRACTOR:_____
BY:_____
NAME:_____
ADDRESS:_____
(SEAL) _____

ATTEST (CONTRACTOR): _____
(Please type)
NAME: _____
TITLE: _____

Contingency Allowances Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Department's estimate for force account items included in the Contract. The estimated amounts marked with an asterisk will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with PWM Section 2.30. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at $5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

Force Account Item	Quantity	Estimated Amount
F/A Minor Contract Revisions	F.A.	$0.00

Force Account Descriptions

F/A Minor Contract Revisions – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract drawings or specifications, and is necessary to accomplish the scope of work of this contract.

Preliminary Construction Schedule

Crack Seal 2022	Begin	Finish	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
RFB	6-May-22	1-Jun-22							
NOA	01-Jun-22	18-Jun-22							
Construction	24-Aug-22	2-Oct-22							

Certificate of Insurance

Certificates of Insurance from the contractor and subcontractor's insurance carriers shall name both the City of Rifle and CDOT as additional insured parties. Submission of Certificates of Insurance shall be provided prior to commencing any work.

Performance Bond Form

KNOW ALL MEN BY THESE PRESENTS that

_____
Name of Contractor

_____
Address of Contractor

a _____
Corporation, Partnership or Individual

Hereinafter called Principal, and _____
Name of Surety

_____
Address of Surety

Hereinafter called Surety, are held and firmly bound unto_____

_____
Name of Owner

_____
Address of Owner

Hereinafter called OWNER, in the penal sum of _____
_____ Dollars ($_____) in lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, _____, a copy of which is hereto attached and made a part hereof for the construction of:

_____

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms conditions and agreements of said contract during the original term thereof, and any extensions thereof, which may be granted by the OWNER, with or without notice to the SURETY and during the one-year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall full indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PEFORMANCE BOND

PROVIDED, FURTHER, THAT THE SAID surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the terms of the contract or to the WORK to be performed hereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
IN WITNESS WHEREOF, this instrument is executed in _____
(number of copies)
counterparts, each one of which shall be deemed an original, this ____ day of _____, _____.

_____
Principal (signature)

By_____
Type/print

_____

Address

ATTEST:

_____

_____
(Principal) Secretary

(SEAL)

_____
Witness as to Principal

_____

_____
Address

SURETY:_____

By:_____
Attorney-in-Fact

_____

_____
Address

ATTEST:

_____
Witness as to Surety

_____

_____
Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.
IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the WORK is located.

Payment Bond Form

The following additional provision shall constitute an amendment to Payment Bond No. _____.

PROVIDED, FURTHER, that the Principal and Surety, for value received, shall indemnify and save harmless the Owner to the extent of any payments required to be made by the Principal under the terms of the Contract. Subcontractors, material men, mechanics, and others shall have the right of action for amounts lawfully due them from the Principal or Subcontractor directly against the Principal and Surety of this bond. In the event the Principal or his Subcontractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, pro-vendor, or other supplies used or consumed by such Principal or his Subcontractor in performance of the Work contracted be done, the Surety shall pay the same in an amount not exceeding the sum specified in the bond, together with interest, at the rate of eight percent (8%) per annum.

IN WITNESS WHEREOF, this Amendment is executed in four counterparts, each one of which shall be deemed an original, this _____ day of _____.

_____
Principal

ATTEST:

_____ By:_____
(Principal) Secretary

_____
(Address)

Witness as to Principal

(Witness as to Principal)

_____

_____
(Address)
Surety

By:_____
Attorney-in-Fact

_____
Address

ATTEST:

_____ Address_____

CITY OF RIFLE
NOTICE OF AWARD

Dated

TO:_____
Bidder

OWNER'S PROJECT NO._____

PROJECT:____Crack Sealing 2022____

CONTRACT FOR:_____FULL CONSTRUCTION SERVICES_____

****

You are notified that your Bid dated_____, 2020, for the above Contract has been considered. You are the apparent successful Bidder and have been awarded a contract for CONSTRUCTION SERVICES AS PER PLANS DATED_____.

Contract Price of your Contract is _____ Dollars (_____ _____).

Three copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by_____ , 2020_____.

1. You must deliver to the OWNER three fully executed counterparts of the Agreement, including all the Contract Documents, Performance and Payment Bonds. Each of the Contract Documents must bear your signature on the cover.

2. You must deliver with the executed Agreement the Contract Security (Bonds)

3. You must deliver with the executed Agreement, proof of insurance coverage as specified in the General Conditions (section 2.32) and Supplementary General Conditions (paragraph 2.00). Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited. Within ten days after you comply with those conditions, OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

_____City Of Rifle_____
Owner

By: _____
Authorized Signature

Civil Engineer_____
Title

CITY OF RIFLE

NOTICE TO PROCEED

To:_____ Date:_____
Project: _____

You are hereby notified to commence WORK in accordance with the Agreement

dated _____, 2020, on or before _____, 2020_.

By: _____
Owner

Title: _____

ACCEPTANCE OF NOTICE Receipt of the above NOTICE TO PROCEED is hereby acknowledged

By _____

this the _____ day of _____ , 2020 .
By: _____
Title: _____

General Conditions

PWM Section 2.1. ADDITIONAL INSTRUCTIONS, MODIFICATIONS AND DETAIL DRAWINGS

The engineer may, during the duration of the contract agreement and in accordance with Sections 2-16, 2-17, and 2-18 of these General Conditions, furnish the contractor written instructions, modifications or detail drawings necessary to illustrate changes in the work.

The additional written instructions and detailed drawings thus supplied shall become a part of the contract documents, without invalidating the contract agreement, and the contractor shall perform the work as modified or altered.

PWM Section 2.2. EXECUTION, CORRELATION, INTENT, INTERPRETATION AND FURNISHING OF CONTRACT DOCUMENTS

The contract documents shall be executed in triplicate by the owner and contractor.

By executing the contract agreement the contractor represents that he has visited the sight of the work, familiarized himself with the locale, subsurface and site conditions under which the work is to be performed, and correlated his observations with the available information included with and required by the contract documents.

The contract documents are complementary and what is required by any one shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and incidentals necessary for the proper execution and completion of the work. It is not intended that work not covered under any heading, section, class or trade of the specifications shall be supplied unless it is required elsewhere in the contract documents or is reasonably inferable there from as being necessary to produce the intended results. Words, which have well known technical or trade meanings, are used herein in accordance with such recognized meanings. Well-known technical standards are used herein in accordance with the latest edition and revisions thereof.

Written interpretations necessary for the proper execution or progress of the work, in the form of drawings or other wise, will be issued with reasonable promptness by the engineer and in accordance with any approved schedule, upon written request from the contractor. Such interpretations shall be consistent with and reasonably inferable from the contract documents and may be effected by field order.

Unless otherwise provided in the contract documents, the contractor will be furnished, free of charge, three (3) copies of drawings and specifications necessary for the execution of the work. All drawings and specifications thus furnished shall not be reused on any other project.

PWM Section 2.3. SCHEDULES, REPORTS AND RECORDS

The contractor shall submit to the owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the owner may request concerning work performed or to be performed.

Prior to the first partial payment estimate the contractor shall submit to the engineer schedules indicating:

A. Partial payments that he anticipates he will earn during the course of the work.

B. The order in which he proposes to carry on the work, including dates at which he will start the various parts of the work, estimated date of completion of each part; and as applicable:

1. The dates at which special detailed drawings will be required from the engineer.
2. The date that the contractor will submit shop drawings to the engineer.
3. Respective dates that manufacturing will begin, the testing and the installation of materials, supplies and equipment.

Schedules submitted by the contractor shall reflect:

C. The timely and orderly completion of:

1. Specific portions of the work as called for in the Special Conditions.
2. The work in accordance with allowed contract time.

D. The inability to perform work on Saturdays, Sundays, holidays or between the hours of 7:00 p.m. and 7:00 a.m. on any working day, without written permission from the engineer.

E. The safety, adequacy and efficiency of his plant equipment, tools, labor and methods of performing the work.

F. The availability of materials, equipment and incidentals to be incorporated in the work.

G. Maintenance and control of traffic.

PWM Section 2.4. DRAWINGS, SPECIFICATIONS, CONFLICTS AND DISCREPANCIES

The intent of the drawings and specifications is that the contractor shall furnish all labor, materials, tools, equipment, incidentals and transportation necessary for the proper execution of the work in accordance with the contract documents to complete the project in an acceptable manner, ready for use, occupancy or operation by the owner.

In case of conflict between the drawings and specifications, the specifications shall govern. Figured dimensions on drawings shall govern over scale dimensions, detailed drawings shall govern over General Drawings and Special Conditions shall govern over Standard Specifications. Any discrepancies between the drawings and specifications and site conditions; or any inconsistencies, errors, omissions or ambiguities in the drawings or specifications; or any errors or omissions in the layout as given by survey points and instructions shall be immediately reported to the engineer, in writing, who shall promptly verify and correct such inconsistencies or ambiguities in writing. Work performed by the contractor after such discovery, until authorized or corrected by the engineer, shall be done at the contractor's risk.

PWM Section 2.5. SHOP DRAWINGS AND MATERIAL SAMPLES

The contractor shall provide shop drawings, in triplicate, as may be necessary for the prosecution of the work (i.e. vault piping, electrical systems, reinforcing, non-detailed items, etc.) as required by the contract documents. The engineer shall promptly review all shop drawings. The engineer's approval of any shop drawing shall not release the contractor from responsibility for deviations from the contract documents. The approval of any shop drawing, which substantially deviates, from the requirement of the contract documents shall be evidenced by a Change Order.

When submitted for the engineer's review, shop drawings shall bear the contractor's certification that he has reviewed, calculated non-detailed dimensions, checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

Portions of the work requiring a shop drawing or material sample submission shall not begin until the shop drawing or submission has been approved by the engineer. A copy of each approved shop drawing and each approved material sample shall be kept in good order by the contractor at the site and shall be available to the engineer.

PWM Section 2.6. MATERIALS, SERVICES, AND FACILITIES

It is understood that, except as otherwise specifically stated in the contract documents, the contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.

Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.
Manufactured articles, materials and equipment shall be fabricated, furnished, applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer or in accordance with the latest revision to or edition

of well known technical standards (i.e. ASTM, AWWA, Colorado Department of Transportation, etc.) referred to in the Specifications or Special Conditions.

Materials, supplies and equipment shall be in accordance with samples submitted by the contractor and approved by the engineer.

Materials, supplies or equipment to be incorporated into the work shall not be purchased by the contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

PWM Section 2.7. INSPECTION AND TESTING

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards and as required by the contract documents.

The owner shall provide technical personnel, acting under the supervision of the engineer, for the inspection and testing of the work in progress to ascertain that the completed work complies in all respects with the requirements of the contract documents.

If the contract documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be inspected, tested, or approved by someone other than the contractor, the contractor will give the engineer timely notice of readiness. The contractor will then furnish the engineer the required certificates of inspection, testing or approval.

Neither observations by the engineer nor inspections, tests or approvals by any person shall relieve the contractor from his obligations to perform the work in accordance with the requirements of the contract documents.

The engineer and his representative will at all times have access to the work whenever it is in preparation or in progress. In addition, authorized representatives and agents of any participating federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The contractor will provide proper facilities for such access and observation of the work and also for any inspection thereof.

If any work is covered contrary to instructions or without approval or consent from the engineer, it must if required by the engineer, be uncovered for his examination and properly restored at the contractor's expense.

If any work has been covered which the engineer has not specifically requested to observe prior to its being covered, or if the engineer considers it necessary or advisable that covered work be inspected or tested by others, the contractor, at the engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the engineer may require, that portion of the work in question, furnishing all necessary labor, materials, tools and equipment. If it is found that such work is defective, the contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective, the contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

PWM Section 2.8. SUBSTITUTIONS

Whenever a material, article or piece of equipment is identified on the drawings or specifications by reference to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The contractor may request, in writing, the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the contract documents by reference to brand name or catalog number, and if, in the opinion of the engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the engineer may approve its substitution and use by the contractor. Any cost differential shall be deductible from the contract price and the contract documents shall be appropriately modified by Change Order. The contractor

warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the contractor without a change in the contract price or contract time.

PWM Section 2.9. PATENTS

The contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the owner harmless from loss on account thereof, except that the owner shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified by the owner; notwithstanding anything above to the contrary, if the contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information, in writing, to the engineer.

PWM Section 2.10. SURVEYS

The owner shall furnish, at no cost to the contractor, field electronic horizontal and vertical control data at only two control points at each site of the work at the owner's choice of location of control points. From the information provided by the owner, the contractor shall be required to make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

The contractor shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

The contractor shall notify the engineer, in writing, forty-eight hours in advance, of the time and place at which he will require lines and grades in order to perform the Work or obtain measurements for record and payment.

PWM Section 2.11. LICENSES, PERMITS, AND REGULATIONS

All contractors and subcontractors performing work on the project shall have a current City of Rifle Municipal or Building Contractor's License, whichever is applicable to their trade. Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the contractor. Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the owner, unless otherwise specified. The contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the engineer in writing, and any necessary changes shall be adjusted as provided in the Contract Documents for changes in the work.

PWM Section 2.12. PROTECTION OF WORK, EMPLOYEES, PUBLIC AND PROPERTY

The contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and the public who may be affected thereby, all the work and all the materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including pedestrian and vehicular traffic, trees, shrubs, lawns, fences, walks, pavements, roadways, structures and utilities, shown or not shown on the plans which are not designated for removal, relocation or replacement in the course of construction.

The contractor will comply with all applicable laws, ordinances, rules, regulations and order of any private or public body having jurisdiction. He will notify owners and users of adjacent utilities when prosecution of the work may affect them. He shall keep adjacent highways, streets and private access open to traffic and free of dirt and litter resulting from handling operations. He shall take reasonable precautions to protect private property adjacent to the project from such nuisances as dust, dirt, rock and excessive noise. The contractor shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except such as may be due to errors in the Contract Documents, or caused by agents or employees of the owner.

PWM Section 2.13. EMERGENCIES

In emergencies affecting the safety of life or the work or property at the site or adjacent thereto, the contractor, without special instruction or authorization from the engineer or owner, shall act to prevent threatened damage, injury or loss. He will give the engineer prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved, except when the emergency is attributed to acts of the contractor in performing the Work.

PWM Section 2.14. LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS

The contractor shall keep himself fully informed of, and shall comply with all applicable laws, ordinances, rules, regulations and orders of the city, county, state, federal or public bodies having jurisdiction affecting the work. He shall provide, erect and maintain all necessary, police, watchmen, flagmen, firemen, shoring, signing, traffic devices, barricades and sanitary facilities, as required by the conditions and progress of the work, and all other necessary safeguards for safety and protection, as set forth by the United States Department of Labor, Occupational Safety and Health Administration.

The contractor must conform to the rules and regulations of the Industrial Commission of Colorado. Prior to starting excavation the contractor shall obtain from the Commission and file with the engineer a copy of his "Notice of Intent to Excavate."

The contractor shall comply with the requirements of CRS 8-17-101 (1985 Supp.) by employing not less than 80 percent Colorado residents in the several classifications of skilled and common labor employed on the project.

The contractor shall be an equal opportunity employer and adhere specifically to all the City of Rifle resolutions and ordinances pertaining thereto.

The contractor shall protect and indemnify the owner and its agents against any claim or liability arising from or based on the violations of such ordinances, regulations, or laws, caused by the negligent actions of the contractor, his agents or employees.

PWM Section 2.15. SUPERVISION AND DISCIPLINE BY CONTRACTOR

The contractor will supervise and direct the work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The contractor will employ and maintain on the work a qualified supervisor or superintendent who shall have been designated in writing by the contractor as the contractor's representative at the site. The supervisor shall have full authority to act on behalf of the contractor and all communications given to the supervisor shall be as binding as if given to the contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

The contractor shall at all times enforce strict discipline and good order among his employees and shall avoid employing on the project anyone unskilled in the work assigned.

PWM Section 2.16. CHANGES IN THE WORK

At any time during the progress of the work, the owner, through its city manager, may order alterations or changes in the plans, specifications, character or quantity of work, without invalidating the contract agreement. When the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the contract price, bid unit or lump sum prices, where applicable, shall be used. Should the dollar value of the changes exceed 25 percent of the contract price, the value of the changes over 25 percent shall be based on negotiated unit or lump sum prices, where applicable.

The engineer, also, may at any time, by issuing a Field Order, make changes in the details of the work, the contractor shall proceed with the performance of any changes in the work so ordered by the engineer unless the contractor believes that such Field Order entitles him to a change in contract price or time, or both, in which event he shall give the engineer written notice thereof within fifteen days after the receipt of the ordered change, and the contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the owner.

PWM Section 2.17. CHANGES IN CONTRACT PRICE

The contract price may be changed only by a Change Order. The value of any work covered by a Change Order or of any claim for increase or decrease in the contract price shall be determined by one or more of the following methods in the order of precedence listed below.

A. Contract Unit Prices. If a change is ordered in an item of work covered by a contract unit or lump sum price, then an adjustment in the contract price will be made based upon the increase or decrease in quantity of the contract unit or lump sum price.

B. Agreed Prices. Adjustments in contract price for changes ordered that are not covered by contract unit or lump sum price or exceed the limitation in Section 2.16, will be determined by agreement between contractor and owner. If unable to reach agreement, the owner may direct the contractor to proceed on the basis of extra work in accordance with Paragraph C.

C. Extra Work. When the price for extra work cannot be agreed upon, the owner will pay for the extra work based on the accumulation of costs as provided herein below.

1. Daily Reports by Contractor. At the close of each working day, the contractor shall submit a daily report to the engineer, together with applicable delivery tickets, listing all labor, materials, and equipment for that day, and for other services and expenditures when authorized. An attempt shall be made to reconcile the report daily, and it shall be signed by the engineer and the contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the contractor.

a. Labor. The report shall show the names of workers, classifications, and hours worked.

b. Material. The report shall describe and list quantities of materials used.

c. Equipment. The report shall show type of equipment, size and hours of operation, including loading and transport, if applicable.

d. Other Services and Expenditures. Other services and expenditures shall be described in such detail as the engineer may require.

2. Basis for Establishing Costs.

a. Labor. The costs of labor will be the actual cost for wages for each craft or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra work cost will not be permitted unless the contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

b. Materials. The cost of materials, or equipment to be incorporated in the work, shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the quantities involved, plus freight and delivery.

The owner reserves the right to approve materials and sources of supply, or to supply materials to the contractor if necessary for the progress of the extra work. No markup shall be applied to any material provided by the owner.

c. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $400 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed rates approved or authorized by the Colorado Department of Transportation at the time the extra work is performed. (Dataquest-Rental Rate Blue Book)
The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals.

Necessary loading and transportation costs for equipment used in performing the extra work shall be included.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the owner than holding it at the work site, it shall be returned, unless the contractor elects to keep it at the work site at no expense to the owner.
The reported rental time for equipment already at the job site shall be the duration of its use on the extra work, commencing at the time it is first put into actual operation on the extra work.

d. Other Items. The owner may authorize other items, which may be required on the extra work. Such items include labor, services, material and equipment which are different in their nature from those required for the work and which are of a type not ordinarily available from the contractor or any of the subcontractors.

Invoices covering all such items in detail shall be submitted with the request for payment.

e. Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the engineer may establish the cost of the item involved at the lowest price which was current at the time of the report.

3. Markup.

a. Work by Contractor. The following percentage shall be added to the contractor's costs and shall constitute the markup for all overhead and profits:

Labor (1.32 x certified payroll) 15%
Materials 15%
Equipment Rental 15%
Other Items and Expenditures 15%

To the sum of the costs and markups provided for in this subsection, one percent shall be added as compensation for bond and liability insurance.

b. Work by Subcontractor. When all or any part of the extra work is performed by a subcontractor, the markup established herein shall be applied to the subcontractor's actual cost of such work, to which a markup of five percent on the subcontracted portion of the extra work may be added by the contractor.

4. Any other cause which, in the opinion of the engineer, entitles the contractor to additional time, including but not restricted to acts of the public enemy, acts of any government in either its sovereign or any applicable contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

PWM Section 2.18. CHANGES IN CONTRACT TIME

The contract time may be changed only by a Change Order. The contractor shall notify the engineer promptly and in writing of any occurrence or conditions which, in the contractor's opinion, entitle him to an extension or reduction in contract time. Such notice shall be submitted in ample time to permit full investigation and evaluation of the contractor's claim. Failure to provide such notice shall constitute a waiver by the contractor of any claim. The engineer shall acknowledge the contractor's notice within seven days of its receipt.
Changes in contract time for the completion of the work shall be stipulated by Change Order:

A. When changes in the work occur.

B. When work is suspended by the owner.

C. For unforeseeable causes beyond the control and without the fault or negligence of the contractor, his subcontractor or supplier and which were not the result of their fault or negligence.

D. When delays in the progress of the work caused by:

1. Any act or neglect of the owner, his employees or agents.
2. Other contractors employed by the owner.
3. Any delay in furnishing of drawings, information or return of shop drawings by the engineer.
4. Any other cause which, in the opinion of the engineer, entitles the contractor to additional time, including but not restricted to acts of the public enemy, acts of any government in either its sovereign or any applicable contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

PWM Section 2.19. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The date of beginning and the time for completion of the work are essential conditions of the contract documents and the work embraced shall be commenced on the date specified in the Notice to Proceed.

The contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between the contractor and the owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

A daily charge will be made against the contractor for each working day, including free time, that any work shall remain uncompleted after elapse of contract time. This daily charge, determined by the original contract amount for the project from the table herein below, will be deducted from any money due the contractor. This deduction will not be considered a penalty but as liquidated damages.

The schedule of liquidated damages set forth below is an amount, agreed to by the contractor and the City of Rifle, as reasonably representing additional construction engineering costs incurred by the City if the contractor fails to complete performance within the contract time.

The schedule of liquidated damages will be:
Original Contract Amount Daily Charge From To and More than Including
$ 0 $ 25,000 $ 270
25,000 50,000 465
50,000 100,000 540
100,000 500,000 950
500,000 1,000,000 1,250
1,000,000 2,000,000 1,400
2,000,000 4,000,000 1,750
4,000,000 8,000,000 1,970
8,000,000 10,000,000 2,050

Over $10,000,000 - daily charge will increase by $100 increments for each $2,000,000 over $10,000,000.

Permitting the contractor to continue and finish the work or any part thereof after elapse of contract time will not operate as a waiver on the part of the City of any of its rights under the contract.

Any deduction assessed as liquidated damages under this section shall not relieve the contractor from liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed contractor to complete the work according to contract times.

The contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the contractor has promptly given written notice of such delay to the owner or engineer.

A. To any preference, priority or allocation order duly issued by the owner.

B. To unforeseeable causes beyond the control and without the fault or negligence of the contractor, including but not restricted to, acts of God, or of the public enemy, acts of the owner, acts of another contractor in the performance of a contract with the owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

The owner shall have the right to deduct the amount of liquidated damages from any monies due or to become due to the contractor, or to sue for and recover compensation for damages for non-performance of the work, from the contractor and his surety, as stipulated in the contract documents.

PWM Section 2.20. CORRECTION OF WORK

The contractor shall promptly remove from the premises all material and work condemned by the engineer for failing to comply with the contract documents, whether incorporated in the construction or not, and the contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the owner and shall bear the expense of making good all work and material of other contractors destroyed or damaged by such removal or replacement.

All removal and replacement Work shall be done at the contractor's expense. If the contractor does not take action to remove such condemned work and materials within ten days after receipt of written notice, the owner may remove such work and store the materials at the expense of the contractor.

PWM Section 2.21. SUBSURFACE CONDITIONS

The contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, which jeopardizes the safety of the project and/or persons thereon, notify the owner in writing of:

A. Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents.

B. Previously unknown physical or other conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract documents.

The engineer shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the work, an equitable adjustment shall be made and the contract documents shall be modified by a Change Order. Any claim of the contractor for adjustment hereunder shall not be all wed unless he has given the required written notice; provided that the engineer may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

PWM Section 2.22. SUSPENSION, DELAY OR INTERRUPTION OF WORK

The owner may, at any time and without cause, suspend the work or any portion thereof for a period of not more than ninety calendar days or such further time as agreed upon by the contractor, by written notice to the contractor and the engineer which notice shall fix the date on which work shall be resumed. The contractor

will resume that work on the date so fixed. The contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to any suspension.

If the performance of all or any portion of the work is suspended, delayed or interrupted as a result of a failure of the owner or engineer to act within the time specified in the contract documents, or if no time is specified, within a reasonable time, an adjustment in the contract price or an extension of the contract time, or both, shall be made by Change Order to compensate the contractor for the costs and delays necessarily caused by the failure of the owner or engineer.

PWM Section 2.23. OWNER'S RIGHT TO TERMINATE OR ABANDON WORK

If the contractor is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the work or if he disregards the authority of the engineer, or if he otherwise violates any provision of the contract documents, then the owner may, without prejudice to any other right or remedy and after giving the contractor and his surety a minimum of ten days from delivery of a written notice, terminate the services of the contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the contractor, and finish the work by whatever method he may deem expedient. In such case the contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to the contractor. If such costs exceed such unpaid balance, the contractor will pay the difference to the owner. Such costs incurred by the owner will be determined by the engineer and incorporated in a Change Order.

Where the contractor's services have been so terminated by the owner, said termination shall not affect any right of the owner against the contractor then existing or which may thereafter accrue. Any retention or payment of monies by the owner due the contractor will not release the contractor from compliance with the contract documents.

After ten calendar days from delivery of a written notice to the contractor, the owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the contractor shall promptly remove all of his equipment, temporary facilities and supplies from the premise, clean up the project and contiguous properties. Otherwise, the owner shall perform such housekeeping at the expense of the contractor. However, the contractor shall be paid for all work executed and any expense sustained plus reasonable profits as a result of such action by the owner.

PWM Section 2.24. CONTRACTOR'S RIGHT TO TERMINATE OR STOP WORK

If, through no act or fault of the contractor, the work is suspended for a period of more than ninety calendar days by the owner or under an order of court or other public authority, or the engineer fails to act on any request for payment within thirty calendar days after it is submitted, or the owner fails to pay the contractor substantially the sum approved by the engineer within thirty calendar days of its approval and presentation, then the contractor may, after ten calendar days from delivery of a written notice to the owner and the engineer, terminate the contract and recover from the owner payment for all work executed and all expenses sustained. In addition and in lieu of terminating the contract, if the engineer has failed to act on a request for payment or if the owner has failed to make any payment as aforesaid, the contractor may upon ten calendar days notice to the owner and the engineer stop the work until he has been paid all amounts then due, in which event and upon resumption of the work, Change Orders shall be issued for adjusting the contract price or extending the contract time, or both, to compensate for the costs and delays attributable to the stoppage of the work.

PWM Section 2.25. SUBCONTRACTING

The contractor may utilize the services of subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The contractor shall not award work to subcontractor(s), in excess of fifty percent of the total contract price, without prior written approval of the owner.

The contractor shall be fully responsible to the owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the contractor the same power as regards terminating any subcontract that the owner may exercise over the contractor under any provision of the contract documents.

Nothing contained in this contract shall create any contractual relation between any subcontractor and the owner.

PWM Section 2.26. CONTRACT SECURITY

The contractor shall, within seven calendar days after the receipt of the Notice of Award, furnish the owner with a Performance and Payment Bond in the penal sum of the total contract price, conditioned upon the performance by the contractor of all Change Orders, undertakings, covenants, terms, conditions and agreements of the contract documents, and upon the prompt payment by the contractor to all persons supplying labor, equipment and materials in the prosecution of the work provided by the contract documents. Such bond shall be executed by the contractor and a corporate bonding company licensed to transact such business in the State of Colorado and listed in the most recent revision of "Surety Companies Acceptable on Federal Bonds" as published in the U.S. Treasury Department Circular No. 570. The expense of the bond shall be borne by the contractor. If at any time a surety on any such Bond is declared a bankrupt or loses its right to do business in the State of Colorado, or is disapproved by the owner, the contractor shall, within ten calendar days after notice from the owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the owner. The premiums on such bond shall be paid by the contractor. No further partial payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the owner.

PWM Section 2.27. PARTIAL COMPLETION AND OCCUPANCY

At any time during the performance of the work that a portion of the permanent construction has been satisfactorily completed, in accordance with the contract documents, which is not required for the operation of the contractor but is needed or required by the owner, the engineer shall issue to the contractor a written notice of partial completion, and thereupon or at any time thereafter, the owner may take over, occupy, operate and use that portion of the construction therein described.

The notification of partial completion shall in no way be construed to constitute an extension in contract time for the completion of all the work or as a waiver of the right of the owner to require the fulfillment of all the terms of the contract documents. If such prior use should cause an increase in the cost of, or in the time required for, performance of the Work, as determined by the engineer, an equitable adjustment to the contractor shall be made and the contract documents modified by a Change Order.

PWM Section 2.28. MEASUREMENT OF QUANTITIES FOR PAYMENT

Measurement for pay items in the contract shall be as defined in the Measurement and Payment Section of the City of Rifle Standard Specifications for Design and Construction or as modified in the Special Conditions. The methods of measurement and computation to be used in determination of quantities; of work performed, of materials to be furnished and/or installed; will be those methods generally recognized as conforming to good engineering practice.

Sundry items, which are incident to or required in the construction of the work, but are not included as items in the Bid Schedule, shall be considered an integral part of the work to be performed. All labor, materials, etc., required for such items shall be furnished and installed, and the costs shall be included in the applicable contract unit price or lump sum amount bid.

PWM Section 2.29. SCOPE OF PAYMENT

Payment to the contractor will be made only for the actual quantities of contract items constructed and installed in accordance with the plans and specifications.

Payment made at the contract unit price or lump sum amount bid shall be full compensation for furnishing all labor, materials, equipment, appurtenances, taxes, insurance, permits and incidentals necessary to complete the work as shown on the plans and as required by the Specifications. Each item, fixture, piece of equipment, etc., shall be complete in place, operational and accepted.

No additional payment, over the amount bid, will be made for related work to any item unless specifically called for in the contract. Neither will payment be made for materials wasted, rejected or placed outside of plan limit lines.

PWM Section 2.30. PARTIAL PAYMENT AND CERTIFIED TAX REPORTS

The engineer, on or about the twenty-fifth day of the month in which work on the project is performed, shall prepare for contractor's approval, a partial payment estimate of the work performed and materials placed in accordance with the contract documents.

Not more than eighty (80) percent of the cost of materials and equipment delivered and suitably stored at or near the project site, but not incorporated in the work may be included in an estimate; provided however, the contractor furnishes invoices and supportive data establishing title in the name of the owner, to the engineer.

The amount to be retained from partial payments will be ten percent of the value of completed work, exclusive of mobilization and payment for materials on hand. When the retainment on contracts exceeding $80,000 in value has reached five percent of the amount of the contract, no further retainment will be made. Amount of retainment will be held until such time as final payment is made with the following provision: When ninety-seven and one-half percent of the work has been completed, the engineer may, at his discretion and The amount to be retained from partial payments will be ten percent of the value of completed work, exclusive of mobilization and payment for materials on hand. When fifty percent of the work required by contracts exceeding $150,000. has been performed, no further retainment will be made if in the opinion of the City, satisfactory progress is being made on the work. Amount of retainment will be held until such time as final payment is made with the following provision: When ninety-seven and one-half percent of the work has been completed, the engineer may, at his discretion and with the consent of the Surety, reduce the retained amount to twice the value of the work remaining to be done. Any amount retained under this provision shall be subject to the requirements of Colorado Revised Statute § 24-91-103.

Earnings so retained on contracts exceeding $150,000. in value may be withdrawn by the contractor provided the contractor provides the City with an irrevocable letter of credit in a form and from a financial institution acceptable to the owner. Any amounts so retained by the owner under this provision shall be subject to Colorado Revised Statute. § 24-91-105.

The contractor upon receipt of each partial payment estimate shall either indicate his approval by signing and returning a copy to the engineer, or return the estimate unsigned and indicate in writing his reason for refusing payment.
The owner, within fifteen- (15) days of presentation to the engineer of an approved partial payment estimate, shall pay the contractor the amount due thereon.

Upon receipt from the contractor of an approved designated semifinal estimate, as prepared by the engineer:

A. The contractor shall, in writing, request the engineer to make a semifinal inspection in preparation for final acceptance of the work by the owner.

B. The contractor shall prepare and furnish the engineer certified city and county sales and use tax reports covering the equipment and materials incorporated in the work.

The engineer, upon receipt of written request for semifinal inspection, shall promptly make said inspection of the work and issue to the contractor a written notice advising him of any deficiencies, corrective measures or clean up that he must complete prior to preparation of the final payment request.

All work covered by partial payment made shall thereupon become the sole property of the owner, but this provision shall not be construed as relieving the contractor of the sole responsibility for the care and protection of the work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the owner to require the fulfillment of all terms of the contract documents.

PWM Section 2.31. FINAL PAYMENT REQUEST, ACCEPTANCE AND RELEASE

Upon completion of the work, cleanup of the project site, the engineer's receipt from the contractor in triplicate of certified tax receipts, the engineer, within ten calendar days thereafter shall:

A. Prepare a final payment request, for contractor's approval, showing the total value of the work completed in accordance with the contract documents and as modified by any Change Orders, less the value of:

1. Partial payments previously made by the owner to the contractor.
2. Retention of any claims, on file with the owner, against the contractor
3. Estimated costs of completing any incomplete or unsatisfactory items of the work.
4. Payments advanced by the owner, to subcontractors, material and equipment suppliers or others which are known by the contractor to have been made but not previously accounted for.
5. Liquidated damages not previously paid to the owner by the contractor.

B. Advise the owner and contractor by written notice that:

1. The work has been inspected and accepted by him under the conditions of the contract documents.
2. The work, effective the date of the notice, is placed under warranty, at the contractor's expense, for a period of one year.

3. The entire balance shown on the final payment request, as prepared by the engineer, is due and payable within thirty calendar days from date of approval thereof by the contractor.

Upon approving the final payment request, as prepared by the engineer, the contractor by such act, indemnifies and saves the owner and his agents harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men and furnishers of machinery and parts thereof, equipment, tools, and all supplies incurred in the furtherance of the performance of the work. The contractor shall, at the owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the contractor fails to do so, the owner may, after having notified the contractor, either pay unpaid bills or withhold from the contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, in accordance with the terms of the contract documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the owner to either the contractor, his surety, or any third party. In paying any unpaid bills of the contractor, any payment so made by the owner shall be considered as a payment made under the contract documents by the owner to the contractor and the owner shall not be liable to the contractor for any such payments made in good faith.

The acceptance by the contractor of final payment shall be and shall operate as a release to the owner of all claims and all liability to the contractor other than claims in stated amounts as may be specifically excepted by the contractor for all things done or furnished in connection with this work and for every act and neglect of the owner and others relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the contractor or his sureties from the warranty period or any other obligations under the contract documents or the Performance and Payment Bond.

In the event the owner fails to make final payment as herein provided, there shall be added daily interest at the rate of six percent per annum, commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor.

PWM Section 2.32. INSURANCE

The contractor shall at its own expense keep in full force and effect during the term of this contract insurance as follows:

The contractor shall secure and maintain statutory workmen's compensation.

The contractor agrees to secure, at his own cost, a policy or policies of insurance sufficient to insure against the liability assumed by the contractor pursuant to the provisions of paragraph 2.36 of these General Conditions. The contractor's insurer must be rated "B+" or better, according to Best's Key Rating Guide and must be admitted to do business in the State of Colorado. The contractor shall provide the owner with a certificate of insurance from a properly qualified representative of the insurer, that any policy purchased pursuant to this contract complies with the conditions required by this contract. The certificate of insurance must show current name and address of the insured(s) named in the policy. The contractor shall not commence any work under this contract, and shall not allow any subcontractor or any officer, employee, or agent of the contractor or any subcontractor to commence any work under this contract, until any such certification has been received and approved by the owner.

The contractor shall not be relieved of any liability assumed pursuant to the foregoing paragraph by reason if its failure to secure insurance as required by this contract or by reason of its failure to secure insurance in sufficient amounts, of sufficient durations, or of sufficient types to cover such liability. The required policy shall meet the following conditions:
A. The policy limits shall be as follows:
1. The limit for an injury to one person in any single occurrence shall be no less than $1,000,000, and the limit for an injury to two or more persons in any single occurrence shall be no less than $2,000,000. Costs of defense shall not be included within such limits or, if they are so included, the minimum limits shall be $1,000,000 combined single limits.
2. The general aggregate limit shall be unlimited or at least $2,000,000.
B. The policy shall include the owner as an additional insured. The parties hereto understand and agree that the owner is relying on and does not waive or intend to waive by this contract, any provision hereof, including the provisions of this paragraph, the monetary limitations (presently $1,000,000 per person and $2,000,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, C.R.S. 24-10-101, et seq., as from time to time amended, or otherwise available to the owner.
C. The insurer shall give the owner notification of any cancellation or termination by refusal to renew the policy or any change in coverage of the policy in the manner provided by law. If no such notification is provided by law, the insurer shall give the owner at least thirty (30) days prior written notification of any cancellation or termination by refusal to renew the policy or of any change in coverage of the policy, unless cancellation or termination is for non-payment of premium, in which case, the industry standard of ten (10) days prior written notification shall apply.
D. The contractor shall be solely responsible for any deductible losses under the policy.
E. If the policy is a claims made policy, the policy shall provide the contractor the right to purchase, upon cancellation or termination by refusal to renew the policy, an extended reporting period of not less than two years. The contractor agrees to purchase such an extended reporting period should the policy be cancelled or terminated.
F. If the policy is a claims made policy, the policy shall give the owner the right to purchase the extended reporting period described in paragraph E above if the contractor fails to purchase such an extended reporting period as required by this contract. The owner's exercise of such right shall not relieve the contractor of any liability for its failure to purchase such an extended reporting period as required by this contract.
G. If the policy is a claims made policy, the retroactive date of any renewal of such policy shall be no later than the date this contract is signed by the parties hereto.
H. If the contractor purchases a subsequent claims made policy in place of any prior policy, the retroactive date of such subsequent policy shall be no later than the date the contract is signed by the parties hereto.

The contractor shall secure and maintain, at his own expense, if applicable or called for in the Special Conditions, the following insurance coverage:

Fire, extended coverage and vandalism insurance on the project to the full insurable value thereof for the benefit of the owner, the contractor and subcontractors.

"All Risk" type builder's risk insurance for work to be performed. Unless otherwise authorized by the owner, the amount shall not be less than the contract price totaled in the Bid Proposal. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft and smoke during the contract time and until the work is accepted by the owner. The policy shall name as the insured the contractor, the owner and their designated agents.

Special Comprehensive General Bodily Injury and Property Damage for the period of time that work being performed is encroaching on property owned or controlled by individuals, partnerships or corporations such as irrigation companies and railroads, state or federal agencies, and to limits set forth in their permit. The policy shall be issued to the permittee and name as the insured the contractor, the owner and their designated agents.
The contractor must comply with the owner's requirements for filing certificates of insurance, as determined by the Risk Management Division. A certificate of insurance acceptable to the Risk Management Division must be provided at the time the contract is executed by the parties hereto unless both parties arrange otherwise.

The contractor is responsible for submitting certificate(s) of insurance, subject to the insurance requirements described above, for all subcontractors. All certificates of insurance are subject to periodic verification and approval by the owner.

PWM Section 2.33. SEPARATE CONTRACTS

The owner reserves the right to let other contracts in connection with this project, or contiguous thereto. The contractor shall afford other contractors, utility companies or owner's forces reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. If the proper execution or results of any part of the contractor's work depends upon the work of any other contractor, the contractor shall inspect and promptly report to the engineer any defects in such work that render it unsuitable for such proper execution and results.

If the performance of additional work by other contractors, utility companies or the owner is not noted in the contract documents prior to the execution of the contract, written notice thereof shall be given to the contractor by the engineer, prior to starting any such additional work. If the contractor believes that the performance of such additional work by the owner or others entitles him to a change in contract price or time, or both, he may, by written notice to the engineer, request a Change Order as provided under Changes in the Work.

PWM Section 2.34. HOUSEKEEPING AND CLEANUP

At all times during the progress of the work the contractor, at his expense, shall maintain the site, storage yard, adjacent properties, both public and private, policed and free of litter or trash. All material and equipment to be incorporated in the work shall be stored in a neat appearing manner and protected from damage or the elements until accepted in accordance with the contract documents.

Prior to final payment, the contractor, at his expense, shall remove from the project site and from contiguous private and public property, all temporary structures, equipment, rubbish and waste materials resulting from his operations. He shall clean up, police around and over all facilities that the owner will acquire maintenance thereof.
Disposal areas for waste material, from the contractor's operation, shall be those areas that comply in every way with local ordinances and are approved by the engineer.

PWM Section 2.35. ASSIGNMENT

Neither the contractor nor the owner shall sell, transfer, sublet as a whole, or otherwise dispose of the contract or any portion thereof without the written consent of the other and its surety; nor shall the contractor assign any monies due or to become due to him thereunder, except to a bank or financial institution acceptable to the owner.

PWM Section 2.36. INDEMNIFICATION

The contractor agrees to indemnify and hold harmless the owner, its officers, employees, insurers, and self-insurance pool, from and against all liability, claims and demands on account of personal injuries, including without limitation worker compensation claims and death claims, or property loss or damage, or any other loss of any kind whatsoever, which arises out of or are in any manner connected with this contract, whether or not such injury, loss, or damage is caused by, or is claimed to be caused by, the act, omission, negligence or other fault of the contractor, any employees of the contractor, or any other person or entity; or by accident; or by any other cause. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless the owner from any liability or damages directly caused by or attributable to the owner's own negligence. The contractor agrees to investigate, handle, respond to, provide defense for, and defend against, any liability, claims, or demands arising from, connected with, or related to the contract at the sole expense of the contractor regardless of whether the liability, claim, or demand is related to the owner's own negligence and the contractor further agrees to bear all other costs and expenses, related thereto, including court costs and attorney fees, whether or not the claim or claims alleged are groundless, false, or fraudulent. Nothing herein is intended to be, or may be construed as, a waiver or the immunities, protections, or limitations on damages provided to The City of Rifle by the Colorado Governmental Immunity Act, C.R.S. 24-10-101 through 24-10-120, as it may from time to time be amended.

PWM Section 2.37. ENGINEER'S STATUS AND DECISIONS

The engineer shall act as the owner's representative during the construction period. He shall decide questions which arise in the execution of the work. He shall perform technical inspections in the field, in laboratories, at factories, at sources of supply and wherever he feels the necessity to determine the quality and acceptability of material and equipment furnished and work performed. He shall reject all material, equipment and work which fails to conform to the specifications. He shall stop the performance of the work whenever such stoppage may be necessary to insure the proper execution of the contract documents. He shall determine the quantity of work to be paid for and prepare all partial payments, estimates and the final payment request for submittal to the owner after obtaining the contractor's approval thereof.

The engineer will not be responsible for the construction means, controls, techniques, sequences, procedures or construction safety.

The engineer shall, within a reasonable time after presentation, make decisions by written notice on all claims of the owner or the contractor on all matters relating to the execution and progress of the work or the interpretation of the contract documents.

PWM Section 2.38. LAND, RIGHTS-OF-WAY, EASEMENTS AND ENCROACHMENTS

Prior to issuance of Notice to Proceed, the owner shall obtain all land and rights-of-way necessary for carrying out and for the completion of the work to be performed pursuant to the contract documents, unless otherwise stated in the Special Conditions or mutually agreed to.

The owner shall indicate on the drawings or provide to the contractor information which delineates and describes the lands owned, rights-of-way and easements acquired, and encroachments over lands upon which the work is to be performed.

Delays in furnishing land for the work by the owner may be deemed proper cause for a change in the contract price, contract time, or both.

The contractor shall provide, at his own expense and without liability to the owner, any additional land and access thereto that the contractor may desire for temporary construction facilities, or for storage of materials and equipment.

PWM Section 2.39. GUARANTY AND WARRANTY

The contractor shall guarantee all material and equipment incorporated in, and warrant all workmanship on, the project for a period of one year from the date of written notice of acceptance of the project or portions thereof. The contractor shall within forty-eight hours after notification from the owner, subsequently verified by written notice, make all needed repairs and corrections which develop or result from defective workmanship, materials or equipment.

In the event the contractor should fail to make such repairs, adjustments, or performs other necessary work required to correct any deficiencies, the owner may do so and charge the contractor the cost thereby incurred. The Performance and Payment Bond shall remain in full force and effect through the guarantee and warranty period.

PWM Section 2.40. TAXES

The contractor will pay all applicable sales, use and other similar taxes required by the laws of the State of Colorado. When taxes are due, the developers, other responsible parties, and/or their subcontractors, prior to requesting final warranty on their project shall furnish the engineer, in triplicate on the City form, certified receipts of sales, use and other similar taxes, required by law, paid on all materials and equipment incorporated in or used in the performance of the work.

Notwithstanding the above, the contractor shall obtain from the Colorado Department of Revenue a Certification of Exemption indicating, where applicable, that the contractor's purchase of construction or building materials is for use in the building, erection, alteration or repair of public works owned and used by the City of Rifle, in its governmental capacity. The contractor shall file with the engineer a certified copy of the Certification of Exemption, prior to commencing Work.

Where a project is exempt from such tax, the amount of such tax shall not be included in any bid proposal submitted to the City.

PWM Section 2.41. DESIGNING AND PERFORMING WORK WITHOUT A CONTRACT AGREEMENT

All property owners, individuals, partnerships or corporations which engage in the subdividing or improving of land, or in the design or construction of the Work, ultimately to be maintained, operated, occupied or owned by the City of Rifle, other than those directly contracting with the City, shall adhere to this Public Works Manual, Design and Construction of Public Improvements to which these General Conditions are a part.

No portion of the work shall be performed until the engineer has approved the drawings pertaining there to, and then only by a contractor that is licensed and bonded to the City of Rifle.

Those who are responsible for, or cause the work to be performed, and those who actually perform the work, will be considered, for purposes of these General Conditions and Standard Specifications, as having executed a contract agreement, as contractor, with the City of Rifle as owner, even though no agreement exists. As such, they shall comply with all the technical and performance provisions of these Specifications, be subject to inspection and the directives of the engineer.

PWM Section 2.42. CLOSEOUT

To close out a project or development, several items need to be taken into account by the Contractor, Engineer and by the Owner. Several of these items may have been initiated prior to or during the work.

The Contractor of the work shall notify the Engineer and the Owner in writing that he has reached “Substantial Completion” and include a list of work yet to be completed or corrected. If requested by the Engineer, closeout of areas or portions of work may be allowed by the Owner.

The Engineer, along with the Owner’s representative, shall inspect the work to determine if it is substantially complete. If it is substantially complete, a “Certificate of Substantial Completion” will be issued by the Engineer along with a “Punch List” of items to be completed or corrected, to the Contractor and the Owner.

The Contractor shall complete and/or correct the items listed on the punch list, or any other item that becomes known, and again notifies the Engineer and Owner in writing that the work is ready for final inspection. At this time, the Contractor may submit his application for final payment to the Engineer.

The Engineer along with the Owner's representative will make a final inspection. If the work is found acceptable and complete to the satisfaction of the Owner, a meeting will be scheduled to finalize all other items due. Should the Contractor fail to complete and/or correct all punch list items required by the Owner, the Contractor shall pay for additional "Final Inspections" by the Engineer at the Engineer's current rates. If the Contractor has any question with regard to any items found on the punch list, he shall request clarification from the Engineer prior to final inspection.
Prior to release of final payment, a meeting (referred to in the previous paragraph) shall be held to collect from the Contractor and/or the Engineer, for the Owner, the following items:

1. Outside Inspection Certificates, as applicable,
2. Materials Certificates of Compliance,
3. Equipment and Material guarantees,
4. Contractors one-year (or longer, if required) guarantee or warranty using Owner forms,
5. Operation & Maintenance Manuals and Parts list, as applicable,
6. Receipts for Materials delivered to the Owner,
7. Miscellaneous Keys, Tools, etc.
8. Final Application for Payment,
9. Consent of Surety to Final Payment,
10. Contractor's Affidavit of Release of Liens,
11. Project Record Drawings (As-Builts),
12. Quitclaim deed from developer conveying any interest it has in the public improvements to the Owner using Owner format,
13. Bill of Sale conveying all public improvements to the Owner free and clear of liens and encumbrances using Owner format,

1. Final Payment Amount,
2. Contractor acknowledgement of Date of Warranty, and
3. All other documentation.

And the Owner will provide to the Engineer:
1. Public Works Director Certification that the work has been constructed in conformance with the plans and specifications.
2. A letter informing the financier to release the Letter of Credit.

Inspection certificates shall be submitted (Number 1, in the list above) from any State or Other governing body having jurisdiction, such as State electrical certification that the work is in strict conformance with applicable codes. The Contractor shall remedy any defects due to faulty materials or workmanship and pay for damage to other work resulting there from, for a period of one year (or longer, if required) in accordance with Section 2.39 herein. A written warranty based on the provisions of Section 2.39 shall be provided to the Owner, dated as agreed with the Owner, properly signed and notarized and addressed to the Owner.

All keys to doors, panels or switches, special tools required for equipment and spare parts or supplies, as applicable, shall be accounted for and turned over to the Owner.

The Owner, will initiate action to advertise in the local newspaper regarding final payment to the Contractor and determining the date for payment.

Project Record Drawings (As-Builts) shall consist of one blackline copy of the completed project work with changes clearly marked and clouded and a CD-ROM. The CD-ROM disk shall include the marked up sheets in individual PDF format files and the electronic line work in the latest AutoCad drawing format. The electronic line work should be supplied such that all improvements are located on the Rifle grid i.e. UTM Z13 in metric (meter) scale. All drawings (electronic and hardcopy) should be clearly and neatly marked "RECORD DRAWING" in ½" block letters in the lower right quadrant of the sheet.

Item 14, above, shall be broken down into 1) cost of water system per individual street (including pipe, fittings, valves, services, hydrants, etc.), 2) sewer system (including pipe, services, manholes, etc.) per individual street, 3) storm drain and culvert system per individual street (including pipe, inlets, boxes, flared ends, manholes, etc.) and 4) individual street costs (including signals, signs, striping, asphalt, road base, curb, gutter sidewalk, grading, etc.).

PWM Section 2.43. RIGHTS AND REMEDIES

The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not as a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law, including but not limited to tort remedies. The Contractor agrees that the economic loss rule as set forth in the Town of Alma v. Azco Construction, Inc., 10 p.3d 1256 (Colo. 2000) shall not serve as a limitation on the Owner's right to pursue tort remedies in addition to other remedies it may have against the Contractor. Such rights and remedies shall survive the acceptance of the Work or any termination of the Contract Documents. Contractor further specifically waives all provisions of Chapter 8 of Article 20 of Title 13, Colorado Revised Statues, regarding defects in the Work under the Contract. In the event any portion of this provision is deemed un-enforceable by a court of competent jurisdiction, the remaining portions of this provision shall survive.

Supplementary General Conditions

1.00 GENERAL

These Supplementary General Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

2.00 INSURANCE

The Contractor shall provide and maintain adequate Workmen's Compensation Insurance for all labor on the Work under this Contract. Protection under said policies shall extend to the Owner and Contractor. Certifications of such insurance shall be filed with the Owner prior to commencement of operations. Proof of carriage of insurance by subcontractors shall also be furnished.

2.01 Unless otherwise provided in these Supplementary General Conditions, Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these Supplementary General Conditions or required by Law). This insurance shall include the interests of Owner, Contractor and Subcontractor in the Work, shall insure against the perils of fire and extended coverage, shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these Supplementary General Conditions, and shall include damages, losses and expenses arising out of, or resulting from, insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance, or otherwise provided in these Supplementary Conditions, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on or off the site or in transit when such portions of the Work are to be included in an *Application for Payment*. Such coverage shall be provided until the issuance of a certificate of substantial completion. The policies of insurance required to be purchased and maintained by Contractor in accordance with section 2.32 of the Rifle Public Works Manual shall contain a provision that the coverage afforded will not be canceled or materially changed until at least thirty (30) days prior written notice has been given to Owner.

2.02 All equipment shall be covered under the insurance requirements of the Contractor as stated under 2.01 above.

2.03 Coverage Required (minimum):

A. General Liability

1. Limits

a. Bodily Injury - $1,000,000 each person
$2,000,000 each occurrence

b. Property Damage - $1,000,000 each occurrence
$2,000,000 aggregate

2. Coverages

x Comprehensive Form
_ Premises-Operations Explosion
_ Collapse Hazard
_ Underground Hazard
x Products/Completed Operations Hazard
x Contractual Insurance
x Broad Form Property Damage
x Independent Contractors
x Personal Injury

B. Automobile Liability

1. Limits

a. Bodily Injury - $250,000 each person
b. Property Damage - $500,000 each occurrence
c. Combined - $600,000 each occurrence

2. Coverages

x Comprehensive Form
x Owned
x Hired
x Non-Owned

2.05 Certificates of Insurance from the contractor and subcontractor's insurance carriers shall name both the City of Rifle and CDOT as additional insured parties. Submission of Certificates of Insurance shall be provided prior to commencing any work.

3.00 TAX EXEMPTION.

Owner's tax-exempt number, when applicable, to be used as part of this project, will be provided to the successful bidder. The successful bidder shall then apply for sales tax exemption before working on a City Project. See www.revenue.state.co.us/PDF/dr0172.pdf. Subcontractors shall be provided copies of the contractor's sales tax exemption certificate to avoid paying taxes when purchasing materials to be incorporated in the City project. Therefore, these taxes should not be included in the cost for performing the work.

4.00 FINAL PAYMENT.

Lien waivers from all prime Contractors and Subcontractors to be provided prior to issuance of final payment.

5.00 COMPLETION TIME.

Crack Seal 2022	Begin	Finish	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
RFB	6-May-22	1-Jun-22							
NOA	01-Jun-22	18-Jun-22							
Construction	24-Aug-22	2-Oct-22							

6.00 OWNER'S REPRESENTATIVE.

Unless provided for otherwise in writing by the Owner, any on-site Inspector or Representative of the Owner shall not have the authority to render any binding decisions nor make any binding judgments to the Contractor pertaining to any work which may change the Contract price or time of completion, or to the quality of Work, or to the manner in which the Work is being performed. The Representative of the Owner shall serve as a means of communication between the Owner and the Contractor and shall monitor the Work for the Owner. Any communication given to the Representative of the Owner by the Contractor shall be considered as being given to the Owner.

7.00 SAFETY REQUIREMENTS.

Nothing in the Contract Documents shall be construed as relieving the Contractor from protecting all property and

persons or from strictly adhering to all applicable local, state and federal safety requirements. Where there is a conflict between the Contract Documents and any applicable safety requirement, the safety requirement shall take precedence.

8.00 LAWS AND ORDINANCES.

The Contractor shall at all times observe and comply with all federal, state and local laws, ordinances and regulations which in any manner affect the contract or Work, and shall indemnify and save harmless the Owner and the Owner's agent against any claim arising from the violations of any such laws, ordinances and regulations, whether by the Contractor or his employees.

If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules or regulations, and without notice to the Engineer, he shall bear all costs arising there from.

9.00 WAIVER.

It is expressly understood and agreed that any waiver granted by the Engineer or Owner of any term, provision or covenant of this Contract shall not constitute a precedent nor breach of the same or any other terms, provisions or covenants of this Contract. Neither the acceptance of the Work by the Owner nor the payment of all or part of the sum due the Contractor hereunder, shall constitute a waiver by the Owner of any claim which the Owner may have against the Contractor or otherwise.

10.00 PROTECTION OF PUBLIC UTILITIES AND OTHER ADJOINING PROPERTY.

The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to other property at the site or adjacent thereto, and he shall be liable for any and all claims for such damage on account of his failure to fully provide such protection.

The Contractor shall notify all public utility companies at least forty-eight (48) hours prior to commencement of any Work in the vicinity of the utilities. No Work shall commence until the utilities have been located and staked by the utility company or written consent to proceed has been given by the Owner. If utility service must be interrupted, the Contractor shall notify the head of local administrative services (i.e., City Manager, Mayor, and City Clerk), as applicable, and utility users affected by the interruption of service at least twenty-four (24) hours prior to interruption. Notice shall consist of publication in a local newspaper and/or announcement on local radio or television stations as determined by the Owner.

11.00 PROJECT PHOTOGRAPHS/VIDEOS

It is the Contractor's responsibility to take a sufficient number of pre-construction photographs/videos to resolve any disputes, which may arise regarding the conditions prior to and subsequent to construction. The Contractor shall provide copies of the pre-construction photographs/videos to the Owner prior to the start of work. Any potential problems should be identified at that time.

Progress and record photographs/videos shall be provided by the Contractor as appropriate to resolve any disputes and to completely document the work performed as a supplement to the Record Drawings. In general, the photographs/videos should be sufficient to show that all work was properly completed in accordance with the plans and specifications.

12.00 DAMAGE TO CONSTRUCTION.

The Contractor shall safeguard, until all work embraced by this Contract is formally accepted, all construction, both complete and incomplete, against damage and destruction, and should damage result, he will be required to reconstruct or repair it at his expense in a manner conforming to the Plans and Specifications, reconstruction shall be in a manner suitable to the Engineer.

13.00 PRE-CONSTRUCTION CONFERENCE.

A pre-construction conference shall be held within fifteen (15) days after the *Notice To Proceed*, at the Owner's place of business. The purpose of such meeting shall be to explain as required to the Contractor, the requirements of the Contract Documents, the procedures to be used in the administration of the Contract, the requirements of any funding Agencies, and to discuss any item of concern to the Work. The Contractor, Owner and Engineer, or authorized representative of each, shall be required to attend such meeting as a condition of the Contract.

14.00 BIDDER EXPERIENCE.

Upon request, bidder to provide documentation of relevant experience with reference to a minimum of three (3) projects of similar scope and size. Statement shall include equipment and manpower available for utilization on project. Supervisory personnel for project shall be provided. Qualification information shall be submitted as stated in section 3.0 of the "Instructions to Bidders".

16.00 PERFORMANCE AND PAYMENT BONDS.

Payment and Performance Bonds are required (section 2.26 of the general conditions and Agreement Documents section of the Project Manual).

17.00 WARRANTY INSPECTION.

At the Owner's discretion, a warranty inspection will be held during the sixty (60) calendar days prior to the expiration of the two-year warranty period. Contractor agrees to provide an authorized representative at such inspection to represent Contractor's interests. All defects identified during the inspection shall be corrected at Contractor's expense at direction of Owner in a timely manner. Corrective work shall be commenced within ten (10) calendar days after written notice to Contractor.

19.00 JOB SITE RESTRICTIONS.

19.01 Salvage. All materials to be removed from the project site or demolished on site shall be disposed of by the Contractor off the project site within five days.

19.02 Staging Area. Staging may utilize right of way if the contractor provides adequate warning cones, reflectors, etc. Contractor takes sole responsibility for leaving any equipment or materials in the City right of way.
19.03.Disposal Area. Owner's property is not available for a Contractor disposal area.

19.04 Working Hours. Work will normally be permitted after 7:00 a.m. and before 7:00 p.m. Monday through

Friday. Other work hours must be approved by Engineer in writing. Work may be permitted on Saturday with 48 hours prior notification given to the Owner's representative.

20.00 ARBITRATION.

Anything in the General Conditions of the Contract Documents not withstanding the choice to submit any dispute to binding arbitration shall be solely that of the Owner and no other party to this Contract shall have the right to submit any controversy to binding arbitration.

21.00 PAYMENT RETAINAGE.

Retainage on Pay Estimates shall be five (5) percent.

22.00 REFERENCE TO OWNER.

The City of Rifle will be the Owner of this project and will be referred to as Owner in the Agreement.

23.00 NOTIFICATION TO ADJACENT PROPERTY OWNERS.

Contractor shall provide constant communication with adjacent property owners to schedule and discuss impacts the contractor's work will have on their access and utility service.

Access to property owners adjacent to the work site shall be open at all times unless other arrangements are made a minimum of twenty-four (24) hours in advance.

24.00 DRAWING ACCURACY AND EXISTING UTILITIES.

Contractor shall provide constant communication with adjacent property owners to schedule and discuss impacts the contractor's work will have on their access and utility service.

As such, information relating to locations, sizes, or elevation of existing facilities should be considered only approximate. It shall be the responsibility of the Contractor to contact the appropriate representatives of utility companies, or utility locate companies, a minimum of 48 hours prior to the commencement of Work which might affect utility installations and to secure form such representatives information as to accurate location, size and type of such installations. The Contractor shall assume all responsibility for protection, repair and relocation of all such items encountered. Should repair or replacement be required, work shall be performed according to the requirements of the respective utility company.

25.00 ABBREVIATIONS.

Whenever the following abbreviations are used in these Specifications or on the Drawings, they shall be construed the same as the respective expressions represented:

AASHO or AASHTO	American Association of State Highway Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute, Inc.
AWWA	American Water Works Association
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health & Environment
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard, U.S. Department of Commerce
FED. SPEC.	Federal Specifications
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
OSHA	Occupations Safety and Health Act (Federal and/or State)
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.

25.01 Standard Specifications Reference. Where reference is made in these Specifications to other Standard Specifications, it is the intent that the latest available revisions of the CDOT Standard Specifications referenced be used. All portions of the CDOT Standard Specifications referenced shall be considered a part of these Specifications unless specifically superseded herein.

In case of conflict between the drawings and specifications, the specifications shall govern. Figured dimensions on drawings shall govern over scale dimensions, detailed drawings shall govern over General Drawings and Special Conditions shall govern over Standard Specifications.

Any discrepancies between the drawings and specifications and site conditions; or any inconsistencies, errors, omissions or ambiguities in the drawings or specifications; or any errors or omissions in the layout as given by survey points and instructions shall be immediately reported to the engineer, in writing, who shall promptly verify and correct such inconsistencies or ambiguities in writing. Work performed by the contractor after such discovery, until authorized or corrected by the engineer, shall be done at the contractor's risk.

26.00 PERMITS AND EASEMENTS.

The Contractor shall be responsible for securing any and all access rights he may require for construction convenience with private individuals and landowners. The Contractor shall provide the Engineer evidence of agreements for such access rights. All other permits required should be secured prior to commencement of Work at the Contractor’s own expense.

The successful Contractor will be required to obtain a City of Rifle Contractor’s license for construction operation. Proof of insurance shall be required.

27.00 SUBSTITUTION OF MATERIALS.

At no time shall materials be substituted for those shown on the Drawings or called for in the Specifications unless written approval is obtained from the Engineer in writing prior to construction. Any deviation from the Drawings

and Specifications shall be accompanied by a written directive of the Engineer or his representatives. (See Article 6, General Conditions).

28.00 CONTROLLED AREA OF WORK.

The Contractor shall confine all the construction work and all related activities to the public roadways, utility easements, or construction areas designated by the Engineer. Access and egress to the work area shall be minimized to specific points.

29.00 INTERPRETATION OF ESTIMATED QUANTITIES.

Bidders are cautioned that the estimated quantities in the Bid Schedule are approximate only and are prepared for the comparison of bids. The basic of payment will be actual quantities of work performed and accepted or as stated in the Measurement and Payment section of each specification section. Prior to mobilization the contractor shall present their verification of quantities and final work plan for all aspects of work.

30.00 TEMPORARY FACILITIES.

The Contractor, at his expense, shall provide all necessary temporary facilities for his own convenience or to meet local, state, or federal requirements, including, but not limited to, potable water, sanitary waste facilities, power, telephone, etc. (See Article 6, General Conditions).

31.00 CLEAN-UP.

The Contractor will be responsible for immediately cleaning the job site during and after construction. A continuing effort shall be made through the duration of the contract to keep all areas clean and free of all rubbish, removed vegetation, construction waste, employee waste, debris and other objectionable materials generated from the project. All materials as part of this work shall be disposed off site in an acceptable manner. Final clean-up must be approved and accepted by the Owner before the contract may be considered complete.

32.00 MEASUREMENTS AND PAYMENT.

Payment for work done shall be as defined in *Bid Schedule*. Payment shall be complete compensation for the work unit completed and shall consist of furnishing and installing all materials, plant, equipment, labor and other items related to the work unless otherwise specified. All incidentals not specifically mentioned, but required to complete the Work, shall be paid for as part of the Work unit they are related to. All bid items shall be measured and paid in accordance with the appropriate section of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction unless revised by the Standard or Project Special Provisions.

33.00 SUBMITTALS.

The Contractor shall submit submittal data, as defined in the General Requirements. Submittals shall be required on all items of the submittal schedule contained in the Technical Specifications.

34.00 COMMUNICATION.

Project will demand the need for communication with properties impacted by work performed. The Contractor shall notify, twenty-four (24) hours in advance of work, all property owners that may be affected by his work. This notification shall include times and duration of access or traffic interruptions. Anticipated interruptions shall be discussed with the City representatives daily.

The purpose of public notification is to reasonably inform the public of the work and to allow the public to schedule activities that may be impacted by the work. Owner, through its Representative, may stop work not consistent with the schedules prepared by the Contractor, which in the opinion of the Owner causes unreasonable hardship to the public.

Contractor shall designate an Information Coordinator who shall be on site during all work hours an shall be responsible for:

1. Preparing a weekly work schedule that includes planned type of work and areas of affected by work. Once schedule is confirmed, the City shall prepare door hangars for the Contractor to distribute the week prior.

2. Communication with adjacent properties of any change to traffic control that may affect their access via written notice for residents. The Contractor is responsible for any follow-up communications with residents after the initial door hangars are provided.

3. Communication with the media or by other means as appropriate, planned/scheduled changes in traffic control and other items that will affect the public traveling through the site. Also communicate with emergency services as to location of work and impacts.

4. Coordinate performed work to be consistent with weekly work schedule.

End of Section

Technical Specifications

These Technical Specifications supplement the specifications provided in the City Of Rifle Public Works Manual. All provisions, which are not so amended or supplemented, remain in full force and effect.

Submittal Schedule

Submittals on the items below must be accepted by the City Of Rifle prior to commencement of work.

High Density Mineral Bond

I General

1.1. SECTION INCLUDES A. Application of an asphalt-aggregate bond seal coat as a high-density roadway surface preservation treatment

1.2 REFERENCES

A. AASHTO Standards: T 59 Standard Method of Test for Emulsified Asphalts. T 111 Standard Method of Test for Mineral Matter or Ash in Asphalt Materials.

B. ANSI Standards: B74.8 Ball Mill Test for Friability of Abrasive Grain. 25

C. ASTM Standards: C 128 Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate. C 170 Compressive Strength of Dimension Stone. C 1326 Knoop Indentation Hardness of Advanced Ceramics. D 1644 Nonvolatile Content (Solids by weight). D 2196 Rheological Properties of Non-Newtonian Materials by Rotational (Brookfield type) Viscometer. D 2486 Determining Wear Resistance in Cycles. D 2939 Emulsified Bitumens Used as Protective Coatings. D 3740 Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction. D 6937 Determining Density of Emulsified Asphalt. D 3960 Determining Volatile Organic Compound Content of Paints and Related Coatings. E 70 pH of Aqueous Solutions with the Glass Electrode.II Products

1.3 SUBMITTALS

A. Mix Design: Provide the following. Allow ENGINEER 10 days to evaluate the submittal.

1. Date of mix design. If older than 60 days from date of submission, recertify mix design.

2. Proportions of aggregate, filler, water, polymer, and emulsion in the mix.

3. Residual in-place bitumen content, in pounds per square yard.

4. Residual in-place aggregate or mineral solids content, in pounds per square yard.

5. Thickness target for each application coat, in gallons per square yard.

6. Total minimum thickness, in gallons per square yard.

7. Results of a wear resistance test current within one (1) calendar year of the proposed mix design.

B. Before Placement: Submit at least 48 hours before delivery.

1. Traffic control plan.

2. List of construction equipment to be used.

3. Certificate from emulsion supplier stating emulsion meets requirements in this section.

4. Names, certification levels, and years of experience of testing agency's field technicians that are assigned to the Work. Verify laboratory complies with ASTM standards.

5. Warranty.

C. Reports: If requested by ENGINEER, submit the following. 1. List of five (5) projects that have successful product applications on bituminous surfaces. Provide names of project contacts. 2. Source and field quality control testing reports performed by CONTRACTOR and Suppliers.

1.4 QUALITY ASSURANCE

A. Foreman of CONTRACTOR's crew or Supplier's representative has completed at least three (3) projects of similar scope. If crew foreman does not have such experience, Supplier must provide a full-time representative on site during application.

B. Use a laboratory that complies with ASTM D 3740.

C. Verify mixture delivered to site contains the same emulsion specified in the mix design.

D. Do not change source of the asphalt emulsion or aggregate without supporting changes in the mix design.

E. Reject product that does not meet requirements.

1.5 WEATHER

A. Temperature:

1. Apply surface treatment material if air and pavement surface temperatures in the shade are 55 deg F. and rising.

2. Cease application if air or pavement surface temperatures are projected to fall below 45 deg F. within 48 hours.

B. Moisture and Wind:

1. Do not apply surface treatment material to a wet surface (no visible standing water or high sheen), during rain, 24 hours prior to forecast rain, or in unsuitable windy weather.

2. Cease work if weather or other conditions prolong opening pavement surface to traffic.

1.6 NOTICE

A. Follow Laws and Regulations concerning when and to whom notices are to be given at least three (3) days before applying surface treatment material.
B. Indicate application time and when the surface can be used. If necessary, include a map showing closed-off areas.
C. Provide phone numbers of at least two (2) individuals who represent the CONTRACTOR who can be reached at any time during the work.
D. Warn of potential vehicle tow away and other construction issues affecting neighborhood.
E. Should work not occur on specified day, issue an updated notice.

1.7 ACCEPTANCE

A. General:

1. Acceptance is by Lot.
2. If non-complying material has been installed and no price for the material is specified, apply price adjustment against cost of work requiring complying material as part of its installation.
3. Dispute resolution.
4. Opening surface treatment to vehicular traffic does not constitute acceptance.
5. Observation of CONTRACTOR's field quality control testing does not constitute acceptance. Such testing, however, may be used by ENGINEER for acceptance if requirements are met.

B. Asphalt Binder:

1. Lot size is total contracted product placement. Sub-lot size is one (1) day's production.
2. Of all sub-lot samples collected, randomly select one and test it for the physical properties in this section. The lot is acceptable if this single test meets requirements. If the test does not meet requirements, continue testing other samples for compliance.
3. At ENGINEER's discretion, a lot with deficient sub-lot properties may be accepted if pay for the lot is reduced using one of the following applicable pay factors, or lot may be accepted at 50 percent pay if lot is in Reject.

Pay Factor	Number of Non-Complying Tests
1.00	0
0.90	1
0.80	2
0.70	3
Reject	4

C. Placement:
1. Mat appearance.
a. No runoff onto concrete curbs, gutter pans, and shoulders.
b. No streaking, drilling, drag marks, or squeegee marks.
c. No light spots.
d. No de-bonding.
e. Straight longitudinal edges with proper joints.
2. Mat thickness, bitumen content and aggregate content.
a. Lot size is one (1) day's production. Sub-lot size is 0.5 lane mile.
b. Collect and test five (5) equally spaced samples from the initial sub-lot. Upon review of the initial sub-lot test results and at ENGINEER's discretion, acceptance of subsequent sub-lots may be based upon one or less samples from each subsequent sub-lot.
c. Pay Adjustment: Not applicable. Correct mat deficiencies at no additional cost to OWNER.

1.8 WARRANTY

A. Both the CONTRACTOR and Supplier shall provide a five (5) year minimum written warranty when the existing pavement is in an appropriate condition (CONTRACTOR and Supplier to determine condition). Warranty covers delaminating, peeling and pre-mature surface wear.
1. Before placement notify ENGINEER if pavement condition or application condition voids the warranty.
2. ENGINEER may allow or cancel product application at no cost to OWNER if warranty cannot be given.
B. Acceptable performance after five (5) year period is no delaminating, peeling, or inter-aggregate loss in surface wear. Mechanical

disturbances by snow plow chatter, studded tires, etc. are excluded from warranty. Repair defective coverage at no additional cost to OWNER.

PART 2 PRODUCTS

2.1 ASPHALT BINDER

A. Crack Pouring Asphalt: Rubberized asphalt or asphalt rubber hot pour.

B. Tack Coat: SS or CSS grade. Use a tack coat that is compatible with seal coat application.

C. Emulsified Asphalt: Inorganic, non-ionic, thixotropic mineral colloid at 25 deg C that meets the following requirements.

Inorganic is defined as a non-carbon based emulsifier.

Table 1 – Emulsion Properties

Criterion	Standard	Min	Max
Brookfield Viscosity at 77 deg F (Spindle 5, 20 rpm), cPs	ASTM D 2196	11,000	20,000
pH	ASTM E 70	5.0	7.5
Density, lbs/gal	AASHTO T 59	8.5	9.0
Asphalt Cement Content, percent by weight	ASTM D 2172	45	50
Solids Content, percent by weight	AASHTO T 59	50	54
Ash Content, percent by weight	AASHTO T 111	4.0	6.0

2.2 AGGREGATE

A. Clean and free from organic matter or other detrimental substances. Composed of sand, clay, slate and corundum. Properties of slate and corundum as follows.

1. Slate

Table 2 – Slate

Physical Properties			
Criterion	**ASTM**	**Min**	**Max**
Specific gravity	C 128		2.7
Compression, psi	C 170	11,000	

2. Refined Corundum:

Table 3 – Corundum

Physical Properties			
Criterion	**Standard**	**Min**	**Max**
Specific Gravity	ASTM C 128	3.9	
Knoop 100 Hardness	ASTM D 1326	2,000	
Ball Mill Friability (14 grit)	ANSI B74.8		50

2.3 ADDITIVES

A. Water is clean, non-detrimental, and free from salts and contaminant.
B. Polymers and other additives as necessary to achieve mix design performance.

2.4 MIX DESIGN

A. Completed high density mineral bond material, prior to being loaded for install, must meet the following requirements

Table 4 – Mix Properties

Criterion	Standard	Min	Max
Asphalt Content, percent by weight	ASTM D 2172	17	20
Solids Content, percent by weight	ASTM D 1644	55	63
Initial Brookfield Viscosity at 77°F (Spindle 4, 20 rpm), cPs	ASTM D 2196	5,500	9,000
Ash Content, percent by weight	AASHTO T 111	38	
Ash Content of Solids, percent by weight (a)	AASHTO T 111	65	
Density, lbs/gal	AASHTO T 59	11	
pH	ASTM E 70	6.0	8.0
Total Inorganic Aggregate Content, percent by weight (b)	AASHTO T 111	37	
Total Sand Content, percent by weight			6.0
Maximum VOC, g/L	ASTM D 3960		5
Resistance to Re-emulsification	ASTM D 2939	No re-emulsification	
Wear Resistance, percent loss by weight (c)	ASTM D 2486		4

NOTES:
(a) Ash content as a percentage of solids content.
(b) Ash content of completed mix minus ash content of base non-ionic emulsion.

Total inorganic aggregate content is defined as slate, refined corundum, and sand.

(c) ASTM D 2486 (Modified): Prepare sample at 48 wet mils on glass panel. Dry at 77 deg F for three (3) days. Immerse in water for 24 hours at 77°F. Test scrub resistance with 1,000 gram brass brush for 12,000 cycles. Report percent of dry film lost.

PART 3 EXECUTION

3.1 CONSTRUCTION EQUIPMENT

A. Paver: Use a continuous flow mixing unit.

1. Capable of applying at least 15,000 square yards of material per day.
2. Equipped with full sweep agitation system to assure proper suspension of fine aggregates.
3. Equipped with an operator control station that adjusts material spread rate in accordance with project calibration process.
4. Equipped with a filtering system to catch particles that plug nozzles.
5. Equipped with a retractable spray bar capable of applying mixture without drilling. The bar should be positioned to meet calibration requirements.

B. Storage Tanks:
1. When delivering mix from the central mixing plant to a job site storage tank, use only storage tanks with a capacity to contain the entire transport load.
2. Ensure that all site storage tanks have internal full sweep mixing mechanisms and mixing capability that can provide at any given point in the tank a homogenous mix.

3.2 PREPARATION

A. Paver Calibration: On a test strip at least 300 feet long, determine the correct pump settings, spray bar height, and ground speed for the application equipment. Apply material with pump settings at 80 percent of maximum output (plus or minus 5 percent) and a ground speed of 300 to 400 feet per minute.
1. Do not begin or continue application without ENGINEER's knowledge of the calibration process and equipment settings.
2. Do not deviate from calibration settings without ENGINEER's knowledge.

B. Surface Repair: Method of payment to be determined by ENGINEER if any of the following repairs are required.
1. Raising low areas to grade, lowering high areas to grade, hole patching, inlays.
2. Providing tack coat on highly absorbent, polished, oxidized, or raveled asphalt surfaces or on brick and concrete surfaces.
3. Crack sealing and crack repairing.
4. Pushing or shoving pavement repairs.
a. Mill damaged area at least three (3) inches below required surface elevation.
b. Install and compact three (3) inches of PG64-22, SX-75 asphalt concrete.

C. Masking: Mask-off Street Fixtures, end of streets, intersections.

D. Traffic Control:
1. Implement traffic control plan requirements. Provide safe passage for pedestrians and vehicles. Do not proceed without flaggers if work requires maintaining two-way vehicular traffic.
2. Grind off existing pavement markings and lane stripes. If existing markings and stripes are to be reestablished, use reflective tabs to mark existing locations before applying surface treatment material. Unless specified otherwise, cost is included in the work of this section.

E. Cleaning:

1. Remove loose material, mud spots, sand, dust, oil, vegetation and other objectionable material.
2. Do not flush water, or apply pressurized water over cracked pavement unless ENGINEER allows its' use and a sufficient time is allowed for drying.

3.3 PROTECTION

A. Trees, Plants, Ground Cover:
1. Protect trees, plants and other ground cover from damage.
2. Prune trees properly to allow equipment passage underneath. Repair tree damage at no additional cost to OWNER.

B. Protect structures, curb, gutter, sidewalks, guard rails, guide posts, etc. from physical damage.

3.4 APPLICATION

A. General: Two separate applications coats are required. The first application must be thoroughly set and free of any damp areas before the second application begins.

B. Spreading:
1. Keep material delivery at a constant rate even if forward speed of lay-down machine varies.
2. Do not reduce application rate along edges or around manhole covers.
3. Apply both applications right to the edge of the pavement. Do not leave uncovered areas near curbs, Street Fixtures, or edges on either application.
4. Make straight lines at all locations.
5. Place product out to right-of-way line on side streets and intersections.
6. Use hand squeegees to spread mix in areas that cannot be reached with distribution spray bar.
   a. Provide complete and uniform coverage.
   b. Avoid unsightly appearance from hand work.

C. Joints:
1. Make transverse joints straight-cut butt type, not over-lap type.
2. Place longitudinal joints on lane lines. Limit overlap to three (3) inches maximum.
3. Stop and correct paving operation if longitudinal or transverse joints have uncovered areas or unsightly appearance.

D. Lines:
1. Make straight lines along lip of gutters, shoulders, end of streets, and in street intersections. No runoff on these areas will be permitted.
2. Vary edge lines no more than one (1) inch per 100 feet.

3.5 TOLERANCES

A. First application = ***0.20 gallons per square yard minimum.***
B. Second application = ***0.16 gallons per square yard minimum***.

3.6 FIELD QUALITY CONTROL

A. Emulsion density testing, AASHTO T 59. If testing shows material non-compliance, remove installed product and halt operations until new material is delivered and is known to be in compliance.

B. Measure the total amounts of material installed, and verify it meets the application rate.

3.7 AFTER APPLICATION

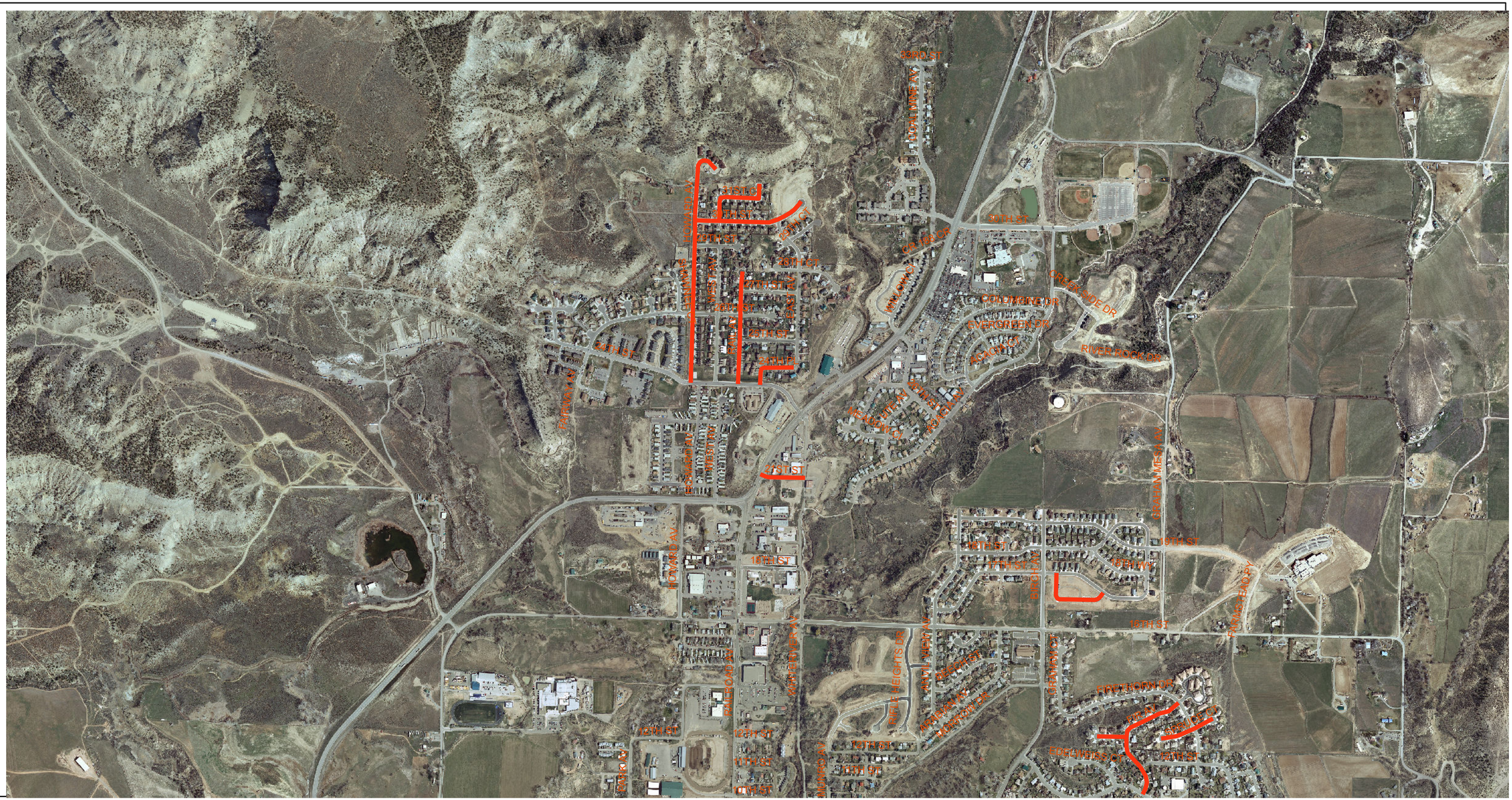
A. Raise reflective tabs that were covered over by application.
B. Clean Street Fixtures.
C. Do not apply permanent pavement markings or striping material until layout and method of payment has been determined by ENGINEER, and final application of surface treatment material has been in place at least 10 days, or as permitted by ENGINEER. Layout must be verified by ENGINEER prior to application.

3.8 REPAIR

A. Remove delaminated or non-compliant product found after installation and apply acceptable product.
B. Remove spatter, mar and overcoat from curb, gutter, sidewalk, guard rails, guide posts, etc.
C. Remove overcoat from Street Fixtures.
D. Make edge and end lines straight. Provide a good appearance.
E. Leave no streaks, holes, bare spots, or cracks through which liquids or foreign matter could penetrate to the underlying pavement.
F. Repair collateral damage caused by construction.

3.9 OPENING TO TRAFFIC

A. Cure time depends on type of asphalt, mixture characteristics and weather. Keep traffic off surface until material does not track out.



NAME

City of Rifle
2022 High Density Mineral Bond

N

Coordinate System: NAD 1983 UTM Zone 13N
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -105.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

2022 HA5

CITY OF RIFLE
PURCHASE REQUEST

1.	**Vendor Name** NEW: W-9 attached ☐
	Andale Construction, Inc.

2.	**Vendor Address**
	3170 N. Ohio St.
	Witchita, KS 67219

3.	**For the Purchase of (description)**
	Construction of 2022 HA5

4.	**Amount Requested**	**Amount Budgeted**	**Finance Director Verified Funds Avail.**
	$172,661.50	$200,000.00	

5.	**Dept. Name**	**General Ledger Acct #**
	Public Works	201-4312-400-641

6.		**Type of Purchase**
	x	Capital Construction
		Capital Construction – Change Order
		Capital Equipment
		Plant Equipment
		Materials, supplies, non-profession/technical services (includes computer/software maint.)
		Professional Services
		Utilities (includes equipment installation)
		Land, easements, ROW

7.		**Purchasing Process Required**
		Cooperative Purchasing
		Open Market
		Comparative Pricing
		Request for Proposal (attach bid tab)
	x	Formal Bid (attach bid tab and advertisement)
		Single Source (attach an explanation)

8.		**Authorization Required**
		City Manager
	x	City Council

9.	**Signatures**		
	Position	**Signature**	**Date**
	Department Director		
	City Manager		
	City Council Approval (meeting date)		
10.	**Purchase Order # assigned by Finance**		

General summary of purchasing ordinance (Section 4, Art. III)

TYPE OF CONTRACT	ESTIMATED AMOUNT	PROCESS	Purchase Order? Purchase Request?	**CITY COUNCIL APPROVAL** REQUIRED?
Capital Construction	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3) vendors/suppliers)	Purchase Request	
	$20,001-$100,000	Competitive Bid (see Code Sec 4-3-40)		
	> $100,000	Bonded Competitive Bid		
Capital Construction Change orders	< = 10% of approved contract	When total change orders to date are < 10% - Dept Head or City Manager Approval	Purchase Request	Yes if total change orders to date are greater than 10%
	> 10% of approved contract			
Capital Equipment	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	> $20,000	Competitive Bid (see Code Sec 4-3-40)		
Plant Equipment Replacement (purchases necessary for replacement of existing equipment that is component part of any water, wastewater, or physical plant)	< $7,500	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $75,000
	$7,500-$75,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	>$75,000	Competitive Bid (see Code Sec 4-3-40)		
Materials, Supplies, Non-Professional Services and Technical Services (including software/hardware maintenance technical services)	< $10,000	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $20,000
	>$10,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
Professional Services (note- process for appointed positions such as auditor, attorney, engineer, or municipal judge to be determined by Council)	< $25,000	Open Market (informal evaluation by purchasing agent)	All - Purchase Request	Yes if anticipated to exceed $25,000 per year to a single vendor
	> = $25,000	Written requests for written proposals must be sent to at least 3 firms or individuals		
Utilities including installation of equipment (purchases to secure utility services such as natural gas, electricity, local telephone, water, or sewer)	any amount	Single Source (negotiations, where appropriate, after good faith determination that only one viable source exists in relevant supply area - keep records for one year)	> $5,000 - PO >= $5,000 - Purchase Request	No
Real Property Interest (including easements and rights of way)	any amount	Single Source (see above)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $5,000.

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #7.c.

Agenda Item Name:
Consider Awarding Contract to Armor Proseal for Construction Services on the 2022 Crack Sealing

Presenter:
Craig Spaulding, Civil Engineer

Item Description:
This project involves public notification, traffic control, preparation and installation of crack treatments for:

7 Streets in North Pasture, 72585 SY, 17,421 lb sealant

Materials used for crack treatments shall be per the technical specifications contained in the project manual. All cracks, including the asphalt to curb and gutter transition, shall be cleaned and treated per the project maps. If all cracks on the project map have been treated and there are crack sealant materials, the remaining crack sealing will continue in the same project area until all crack sealant materials have been used. If all cracks on the project have been treated and there are mastic materials remaining, the remaining mastic shall be returned to owner at material cost plus 15%. Traffic Control shall be a mobile one-lane configuration where the flagger at the back of the operation remains far enough behind the placement of crack sealing to ensure temperatures are adequate for live traffic. A minimum of two flaggers shall be required at all intersections and blind corners. Payment will be made per lb. which shall include all traffic control, mobilization, demobilization, materials, and equipment. All costs incidental to the preparation of the surface prior to application of the hot poured joint and crack sealant will not be paid for separately but shall be included in the work.

After a competitive bid process, Aromor Proseal was the only responsive bidder. The bid was qualified and within budget.

Recommended Action:
Move to approve the contract for construction services in the amount of $37,976.41 for the 2022 Crack Sealing to Armor Proseal.

Fiscal Impact:
N/A

Operational Impact:
N/A

Prior Board Motions:
N/A

Background Information:
N/A

Executive Summary:
N/A

Notification Requirements:
N/A

Prepared By:
Craig Spaulding, Civil Engineer

Attachments:
1. Crack Sealing 2022 Project Manual
2. 2022 Crack Seal
3. PURCHASE REQUEST-2022 Crack Seal_Armor Proseal 5-26-22

Crack Sealing 2022

PROJECT MANUAL

CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, COLORADO 81650

2020

Pre-Bid Meeting: N/A
Bid Due Date: May 20, 2022
Award Date: June 1, 2022
Construction Start Date: August 24, 2020
Construction Completion Date: October 2, 2020

Project Directory

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Craig Spaulding
202 Railroad Ave
Rifle, CO 81650
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cspaulding@rifleco.org

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Rifle, CO 81650
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- 2022 Crack Seal

ADVERTISEMENT FOR BIDS

Separate sealed BIDS for the construction of the **Crack Sealing 2022** will be received at the **Council Chambers, Rifle City Hall, 202 Railroad Avenue, Rifle, CO.** until 2:00pm, on May 20, 2022, at which time they will be publicly opened and read aloud.

This project involves public notification, traffic control, preparation and installation of crack treatments for:

7 Streets in North Pasture, 72585 SY, 17,421 lb sealant

Materials used for crack treatments shall be per the technical specifications contained in the project manual. All cracks including the asphalt to curb and gutter transition shall be cleaned and treated per the project maps. If all cracks on the project map have been treated and there is crack sealant materials remaining crack sealing will continue in same project area until all crack sealant materials have been used. If all cracks on the project have been treated and there is mastic materials remaining, the remaining mastic shall be returned to owner at material cost plus 15%.

Traffic Control shall be a mobile one lane configuration where the flagger in the back of the operation remains far enough behind the placement of crack sealing to ensure temperatures are adequate for live traffic. A minimum of two flaggers shall be required at all intersections and blind corners.

Payment will be made per lb. which shall include all traffic control, mobilization, demobilization, materials, and equipment. All costs incidental to the preparation of the surface prior to application of the hot poured joint and crack sealant will not be paid for separately, but shall be included in the work.

A Bid Bond in the amount of 5% of bid price is required, and a Performance and a Payment Bond, each in the amount of 100% of bid, will be required. Bid Award will be the June 1, 2022 Council Meeting. Time of Commencement of the Work is anticipated to be no later than August 24, 2020, with completion by October 2, 2020.

A PREFERENCE FOR LOCAL CONTRACTORS WILL BE APPLIED BY THE OWNER WHEN SELECTING A CONTRACTOR.

There will be no mandatory pre-bid meeting. Site visit meetings can be scheduled using the contact information below.

Digital copies of the Contract Documents may be downloaded from the City website at http://www.rifleco.org/216/Projects-Out-To-Bid **for free. Contact Craig Spaulding,** cspaulding@rifleco.org**, 970-665-6556 for questions or issues with downloading the documentation.**

****

Instructions to Bidders

1.0 Defined Terms

Terms used in these Instructions to Bidders, which are defined in the General Conditions of the City of Rifle Public Works Manual, have the meaning assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a Bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement for Bids, Instructions to Bidders, the Bid Form, and the Contract Documents (including all Addenda issued prior to receipt of Bids).

2.0 Copies of Bidding Documents

2.1 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. The City of Rifle Public Works Manual, Part I-General Conditions, Part II-Construction Materials and Methods and Part III Minimum Design Standards, shall be followed unless otherwise specified herein. In case of conflict, follow the Supplementary General Conditions section 25, Precedence of Contract Documents. Copies of the Public Works Manual are available on Rifle's web site www.rifleco.org.

2.2 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the work and do not confer a license or grant for any other use.

3.0 Qualifications of Bidders

The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and to demonstrate qualifications to perform the Work. Each Bidder must be prepared to submit within five days of Owner's request written evidence of the types set forth in the Supplementary Conditions, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

4.0 Examination of Contract Documents and Site

4.1 It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider federal, state and local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

4.2 Information and data reflected in the Contract documents with respect to Underground Facilities at or contiguous to the site are based upon information and data furnished to Owner and Engineer by owners of such underground facilities or other, and Owner does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.3 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work and which Bidder deems necessary to determine its Bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.4 On request, in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill and patch all holes, clean up, and restore the site to its former condition upon completion of such exploration.

4.5 The lands upon which the work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by Contractor in performing the work, are identified in the Contract Documents. All additional lands, and access thereto, required for temporary construction facilities or storage of materials and equipment, are to be provided by Contractor.

4.6 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of performance and furnishing of the work.

5.0 Interpretations and Addenda

5.1 All questions about the meaning or intent of the Contract Documents are to be directed to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five (5) days prior to the date of opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

6.0 Conditions of Work

Each Bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor or danger to the public.

7.0 Substitute or "Or-Equal" Items

The Contract, if awarded, will be on the basis of materials and equipment described in the drawings or specified in the specifications, without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the drawings or specified in the Specifications that substitute or "or-equal" items of materials or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the effective date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth

in the General Conditions and may be supplemented by the Supplementary Conditions.

8.0 Subcontracts

The Bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the Owner. The bidder shall submit, with their bid, a completed list of subcontractors they propose to use on this contract.

9.0 Bid Form

9.1 The Bid Form is included with the Bidding Documents; additional copies may be obtained from City Hall of Rifle, 202 Railroad Avenue, Rifle, Colorado.

9.2 All blanks on the Bid Form must be completed in ink, by typewriter, or electronically and printed. NOTE: The spreadsheet is offered for your convenience only. The contractor is responsible for use and confirmation of any formulae or calculations therein. The submittal may be on the pdf. All tracking of project progress will be through that spreadsheet.

9.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

9.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

9.5 All names must be typed or printed below the signature.

9.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

9.7 The address, email, and telephone number for communications regarding the Bid must be shown.

10.0 Submission of Bids

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of the Bidder and accompanied by the required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation “BID ENCLOSED” on the face of it. Any submission received after the advertised Bid Opening shall be returned unopened to the sender.

11.0 Modification and Withdrawal of Bids

11.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

11.2 If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and Engineer and promptly thereafter demonstrates to the reasonable satisfaction of Owner

and Engineer that there was a material and substantial mistake in the presentation of its Bid, that Bidder may withdraw its Bid.

12.0 Bids to Remain Subject to Acceptance

All Bids will remain subject to acceptance for sixty (60) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid prior to that date.

13.0 Award of Contract

13.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities, and to negotiate Contract terms with the Successful Bidder, and the right to disregard all nonconforming, non-responsible, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the bid is not responsible or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner.

13.2 In evaluation of Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

13.3 Owner may consider the qualifications and experience of subcontractors, suppliers and other persons and organizations proposed for those portions of the work as to which the identity or subcontractors, suppliers, and other persons and organizations may be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the work when such data is required to be submitted prior to the Notice of Award.

13.4 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed subcontractors, suppliers and other persons and organizations to perform and furnish the work in accordance with the Contract Documents to Owner’s satisfaction within the prescribed time.

13.5 If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project.

13.6 Section 2.26 of the General Conditions of the City of Rifle’s Public Works Manual and section 16.00 of the Supplementary Conditions set forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

13.7 If the Contract is to be awarded, Owner will give the successful Bidder a Notice of Award within sixty (60) days after the date of the Bid opening.

14.0 Laws and Regulations

The Bidders’ attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

15.0 Complete Prices

All lump sum, alternate, and unit prices must include all required General Conditions line items necessary to complete the work, including, but not limited to the following (as required): all permits, insurance, and taxes (except as specified in Article 3.0 of the Supplementary General Conditions); supervision; layout and survey as needed; protection of all surrounding materials; lifting/hoisting; equipment and personnel; off-site management and administrative assistance; trash disposal to a separate dumpster; miscellaneous equipment; mobilization; as-built drawings; fuel, watchmen, flagmen, and site security; scheduling; small tools; drawings and printing expenses and mailing costs.

15.1 On bid items to be paid as lump sum that may extend beyond a single pay estimate, a schedule of values shall be submitted to OWNER a minimum of 10 days prior to commencement of work. Adequate detail shall be given to allow a value to be placed on work completed during any given pay estimate.

16.0 Permits and Fees

Bids shall include all sales tax (except as specified in Article 3.0 of the Supplementary General Conditions) and all other applicable taxes and fees related directly to the construction of this project. Fees for permits and inspections directly related to this construction will be paid by the BIDDER; however, no tap fees or access charges for this or subsequent work will be the responsibility of the BIDDER. City has Tax Exemption, a copy of which will be provided to the Contractor. Contractor and all subcontractors shall hold a current license to perform work in Rifle, Garfield County, and the State of Colorado.

17.0 Authorities

Technical Specifications included herein supplement the Standard Specifications and take precedence. Work shall be completed as per these specifications and accepted by the Owner or proper agencies having jurisdiction before final payment is requested of the Owner.

18.0 Subsurface Investigations

Geotechnical reports, if available, are included in the appendix of the Project Manual. Contractor use of such reports shall be in accordance with section 18.00 “Soils Investigation”, of the Supplemental General Conditions.

19.0 Completion of Work

Work shall be completed as per the City of Rifle Public Works Manual (and as modified by these specifications) and accepted by the Owner or proper agencies having jurisdiction before final payment is requested of the Owner.

**Contractor shall provide a daily estimate of progress to the Public Works Director or City representative to verify quantities and that we shall stay within the contracted price. <u>The City shall not pay for work above the contract price.</u>

20.0. Bid Bond

Bid security shall be made payable to the Owner in the amount of 5% of the bidder’s maximum bid price in the form of a certified check or a bid bond, using the form herein, issued by a surety meeting the requirements of the Supplementary General Conditions. The bid security of the successful bidder will be retained until such bidder has executed the agreement and furnished the required contract security whereupon it will be returned; if the successful bidder fails to execute and deliver the agreement and

furnish the required contract security within ten (10) days of the Notice of Award, the Owner may annul Notice of award and the bid security of that bidder will be forfeited. Owner will return bid bonds or checks of unsuccessful bidder within or by 60 days after the bid submittal date.

21.0 Payment Bond

Payment Bond form is found in Agreement Documents section of this package.

22.0 Performance Bond

Performance Bond form is found in Agreement Documents section of this package.

23.0 Work By Illegal Aliens Prohibited

Work By Illegal Aliens Prohibited. Pursuant to Section 8-17.50191, C.R.S., *et. Seq.*,

Contractor warrants, represents, acknowledges, and agrees that:

1. Contractor does not knowingly employ or contract with an illegal alien.

2. Contractor shall not knowingly employ or contract with an illegal alien to perform works or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

3. Contractor has participated in or attempted to participate in the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, administered by the Department of Homeland Security (hereinafter, "Basic Pilot Program") in order to verify that Contractor does not employ illegal aliens. If Contractor is not accepted into the Basic Pilot Program prior to entering into this Agreement, Contractor shall forthwith apply to participate in the Basic Pilot Program and shall submit to the City written verification of such application within five (5) days of the date of this Agreement. Contractor shall continue to apply to participate in the Basic Pilot Program, and shall verify such application to the City in writing, every three (3) months until Contractor is accepted or this Agreement is completed, whichever occurs first. This Paragraph 3 shall be null and void if the Basic Pilot Program is discontinued.

4. Contractor shall not use the Basic Pilot Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

5. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
(a) notify the subcontractor and the City within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
(b) terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

6. Contractor shall comply with any reasonable request be the Colorado Department of Labor and Employment ("Department") made in the course of an investigation that the Department is undertaking pursuant to the authority established in subsection 8-17.5-102(5), C.R.S.

7. Contractor violates this Addendum; the City may terminate this Agreement for breach of contract. If this Agreement is so terminated, Contractor shall be liable for actual and consequential damages to the City arising out of said violation.

24.0 Local Contractor Preference

Primary and secondary preference will be given to contractors when determining the lowest responsible bidder for work on this project. Local contractors, who have a principle place of business, are 1) for primary preference, within the City of Rifle or within 3 miles of the City Limits and 2) for secondary preference, outside of the three mile limit but within Garfield County.

For projects of $5,000 or more in value, to determine the lowest bidder, an amount equal to the percentage shown below will be deducted from the total price proposed for the work. The contract however, will be awarded for the total bid price proposed.

Contract Amount	Primary Preference	Secondary Preference
$5,000 to $25,000	6% discount	3% discount
$25,001 to $100,000	5% discount	2.5% discount
$100,001 or above	4% discount	2% discount

25.0 Scopes of Bids

4.7 **General Scope of Project**: This project involves public notification, traffic control, preparation and installation of crack treatments for:

7 Streets in North Pasture, 72585 SY, 17,421 lb sealant

Materials used for crack treatments shall be per the technical specifications contained in the project manual. All cracks including the asphalt to curb and gutter transition shall be cleaned and treated per the project maps. If all cracks on the project map have been treated and there is crack sealant materials remaining crack sealing will continue in same project area until all crack sealant materials have been used. If all cracks on the project have been treated and there is mastic materials remaining, the remaining mastic shall be returned to owner at material cost plus 15%.

Traffic Control shall be a mobile one lane configuration where the flagger in the back of the operation remains far enough behind the placement of crack sealing to ensure temperatures are adequate for live traffic. A minimum of two flaggers shall be required at all intersections and blind corners.

Payment will be made per lb. which shall include all traffic control, mobilization, demobilization, materials, and equipment. All costs incidental to the preparation of the surface prior to application of the hot poured joint and crack sealant will not be paid for separately, but shall be included in the work.
the work.

Bid review and award shall be based on the criteria set forth in section 13 of Instructions to Bidder. Final scope is budget dependent and may be reduced if the lowest qualified bid is above $100,000.00

END OF INSTRUCTIONS TO BIDDERS

Required Bid Documents

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of the Bidder and accompanied by the required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. Any submission received after the advertised Bid Opening shall be returned unopened to the sender. Required Bid Documents are in the Bid Submittal Checklist Below

_____ **Bid Form**

_____ **List of Materials Suppliers/ Subcontractors**

_____ **Contractor's License**

_____ **Bid Schedule**

_____ **Bid Bond**

CITY OF RIFLE

BID FORM

FOR CONSTRUCTION OF:

Crack Sealing 2022

DATE: _____

OWNER: City of Rifle
202 Railroad Avenue
Rifle CO 81650
Attn: Craig Spaulding

BIDDER: Name of Bidder_____

Address of Bidder _____

_____

_____

Phone Number _____

Email Address _____

Contact Name _____

THE UNDERSIGNED BIDDER, having familiarized himself with the Work required by the Contract Documents, the site and conditions where the Work is to be performed, local labor conditions, and all laws, regulations, and other factors affecting performance of the Work, and having satisfied himself of the expense and difficulties attending performance of the Work,

HEREBY PROPOSES and agrees, if this Bid is accepted, to enter into Agreement with the Owner to perform all work, including the assumption of all obligations, duties, and responsibilities necessary to the successful completion of the contract and the furnishing of all materials and equipment required to be incorporated in and form a permanent part of the Work; tools, equipment, supplies, transportation, facilities, labor, superintendence, and services required to perform the Work; and bonds, insurance, submittals; and all fees as indicated or specified in the Contract Documents to be performed or furnished by BIDDER for the amount identified and detailed in the BID SCHEDULE and further totaled below ("Bid Proposal Amount"):

_____Dollars($_____)
(written) (numeric)

CITY OF RIFLE
BID FORM page2

DOCUMENTS AND ADDENDA:
The BIDDER submits that he has carefully examined the site of the proposed work and the existing conditions, as well as the drawings and specifications. Also, he has thoroughly reviewed the proposal form, Instructions to Bidders, General Conditions, Supplementary Conditions, General Requirements, and the Specifications and Drawings, and acknowledges that the following addenda covering revisions to the drawings and/or specifications, and the cost, if any, of such revisions has been included in the Total Bid Price.

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

CHANGES TO THE WORK:
BIDDER agrees to perform all the WORK for the Total Base Bid price identified in the "Bid Proposal Amount." If circumstances arise during construction of this project which dictate a change in quantity, then the pricing for that particular portion of the job will be adjusted up or down with the BIDDER'S Schedule of Values (as included in the Contract Documents) to the revised quantity required by the construction circumstances of these plans. Final payment will be based upon count or measurement of items in place upon completion of the project at the units of measure and unit prices, with the exception of lump sum items.

For changes not covered by a contract unit price, BIDDER proposes that all such changes ordered to the work which increases the Scope of Work shall be priced in advance of the work and such unit prices will be approved by the Owner prior to commencement of work.

PERFORMANCE AND LABOR & MATERIAL PAYMENT BONDS:
By signing and submitting this Bid Proposal, the BIDDER certifies that upon demand, Performance and Labor & Material Payment Bonds can be furnished in amounts sufficient to cover the total proposed cost of work.

TIME OF COMMENCEMENT, COMPLETION, AND DAMAGES:
The BIDDER agrees that, if awarded the Contract, the Work will be substantially complete, ready for occupancy by Owner, according to the schedule submitted by BIDDER of within the indicated construction durations specified within the Contract Documents except for delays caused by Acts of God, neglect of the Owner or the

Representative of the Owner or other causes beyond the BIDDER'S control, and allows for no time due to labor disputes or strikes. Weather (unless severe) is not considered as an excuse for delay of the work.

Time is expressly declared to be of the essence in completion of the Work covered by the Contract Documents. Where additional time is allowed under the Agreement for the Completion of the work, the new time limits shall be of the essence of the Agreement.

GENERAL AGREEMENTS:
The BIDDER agrees to the following:

The BIDDER has had an opportunity to examine the Site of the work and has examined the Contract Documents therefore.

The BIDDER has carefully prepared the bid proposal upon the basis thereof and has carefully examined and checked the Bid Proposal and the materials, equipment and labor required thereunder, the cost thereof, and figures therefore, and hereby states that the amount or amounts set forth in the Bid Proposal is, or are, correct and that no mistake or error has occurred in the Bid Proposal or in the BIDDER's computations upon which the Bid Proposal is based and the BIDDER agrees that no claim for reformation, modification, rescission or correction of the Bid Proposal will be made after the scheduled closing time for the receipt of Bid Proposals.

The BIDDER understands that the Owner reserves the right to reject any or all Bids for any or no reason and to waive any informality in the bidding.

The BIDDER understands that this Bid shall not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

The BIDDER understands that unless a bid item is included on the "Bid Schedule", no separate payment shall be made for items required to complete the work in accordance with the contract. If included on the bid schedule, then work under the item will be paid at the unit or units given and shall include all necessary work complete and in place.

In preparing the Bid Proposal, the BIDDER has verified and is reasonably assured of the availability of all labor, materials, and products in this document.

The BIDDER has carefully reviewed the Bid Documents in their entirety and has agreed to meet these requirements.

CITY OF RIFLE
BID FORM page 4

DOCUMENT EXECUTION:

DATED This _____ day of _____, 2020

_____

(Name of Firm)

_____

(Street Address)

_____

(City, State, Zip)

_____

(Signature)

_____

(Printed Signature)

_____

(Title)

Please check as appropriate:

_____ An individual

_____ A Partnership Between:

_____ A Corporation organized under the laws of the State of _____

END OF BID FORM

LIST OF MATERIALS SUPPLIERS / SUBCONTRACTORS

Provide the name of the materials supplier or subcontractor included in your base bid price. Any changes in the providers listed below can be made only with the approval of the Owner. Any amount of work greater than 10% of the amount bid shall be considered as a subcontractor/Materials Supplier.

Name of Subcontractor /Materials Supplier	Work Item Performed or Provided	% of Value

CITY OF RIFLE

Bid Schedule

2022 Crack Seal, North Pasture				
	Roads	**Qty [lb.]**	**Unit Cost**	**Cost**
Crack Sealing: shall include all traffic control, mobilization, demobilization, materials, and equipment. All costs incidental to the preparation of the surface prior to application of the hot poured joint and crack sealant will not be paid for separately, but shall be included in the work. per lb	17th Street, 18th Street, 18th Way, Anvil Court, Anvil View, Birch, Trappers Court	17420.37		
		_____	_____	_____

TOTAL BID PRICE _____

Total Bid Price in Words _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,_____
_____

_____
_____

as Principal, and_____
_____

held and firmly bound unto_____
_____

in the penal sum of_____
_____

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this_____ day of _____, 2020. The condition of the above obligation is such that whereas the Principal has submitted to the **CITY OF RIFLE, COLORADO**, a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Crack Sealing 2022

NOW, THEREFORE,

[a] If said Bid shall be rejected, or

[b] If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____**(L.S.)**
Principal

_____
Surety

By:_____

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as Amended) and be authorized to transact business in the state where the project is located.

CONTRACTOR'S LICENSING STATEMENT FORM

The undersigned is licensed in accordance with the laws of Colorado providing for the registration of Contractors: License Number_____; Class_____.

Name of Contractor's Firm_____

Business Address and Telephone Number_____

_____

Name of Individual Owner (print)_____

Signature of Owner_____

OR

Signature, Title, and Address of members signing on behalf of the partnership:

Name_____Title_____

Address_____

Name_____Title_____

Address_____

Name_____Title_____

Address_____

OR

Corporation organized under the laws of the State of _____

_____

Signature of President of Corporation

_____

Signature of Secretary of Corporation

(Place Seal Here)

AGREEMENT

THIS AGREEMENT, made this _____ day of_____ , 2020, by and between, **CITY OF RIFLE** hereinafter called "OWNER", and ___,_____ doing business as a Corporation, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of Crack Sealing 2022
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other service necessary for the construction and completion of the WORK described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within **14** calendar days after the date of the NOTICE TO PROCEED and will complete the same by **as indicated in the contract documents**, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The Contractor agrees to perform all of the Work described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of ($_____) dollars or as shown in the BID SCHEDULE.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
   - A. ADVERTISEMENT FOR BID
   - B. INSTRUCTIONS TO BIDDERS
   - C. BID
   - D. BID BOND
   - E. AGREEMENT
   - F. GENERAL CONDITIONS (CITY OF RIFLE PUBLIC WORKS MANUAL)
   - G. SUPPLEMENTARY GENERAL CONDITIONS
   - H. PAYMENT BOND
   - I. PERFORMANCE BOND
   - J. NOTICE OF AWARD
   - K. NOTICE TO PROCEED
   - L. List of Drawing Sheets
     - 2022 Crack Seal Map
   - M. TYPICAL SPECIFICATIONS noted in the City Public Works Manual and CDOT Specifications.
   - N. Technical Specifications
   - O. ADDENDA: No. _____, dated _____, 2020.

CITY OF RIFLE
AGREEMENT

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the GENERAL CONDITIONS such amounts as required by the CONTRACT DOCUMENTS.
7. This AGREEMENT shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this AGREEMENT in triplicate, each of which shall be deemed an original on the date first above written.

CITY OF RIFLE
OWNER:_____
BY:_____
NAME:_____
(SEAL) TITLE:_____

ATTEST (OWNER):_____
(Please Type)

NAME:_____

TITLE:_____

CONTRACTOR:_____
BY:_____
NAME:_____
ADDRESS:_____
(SEAL) _____

ATTEST (CONTRACTOR): _____
(Please type)
NAME: _____
TITLE: _____

Contingency Allowances Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Department's estimate for force account items included in the Contract. The estimated amounts marked with an asterisk will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with PWM Section 2.30. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at $5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

Force Account Item	Quantity	Estimated Amount
F/A Minor Contract Revisions	F.A.	$0.00

Force Account Descriptions

F/A Minor Contract Revisions – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract drawings or specifications, and is necessary to accomplish the scope of work of this contract.

Preliminary Construction Schedule

Crack Seal 2022	Begin	Finish	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
RFB	6-May-20	1-Jun-20							
NOA	01-Jun-20	18-Jun-20							
Construction	24-Aug-20	2-Oct-20							

Certificate of Insurance

Certificates of Insurance from the contractor and subcontractor's insurance carriers shall name both the City of Rifle and CDOT as additional insured parties. Submission of Certificates of Insurance shall be provided prior to commencing any work.

Performance Bond Form

KNOW ALL MEN BY THESE PRESENTS that

_____
Name of Contractor

_____
Address of Contractor

a _____
Corporation, Partnership or Individual

Hereinafter called Principal, and _____
Name of Surety

_____
Address of Surety

Hereinafter called Surety, are held and firmly bound unto_____

_____
Name of Owner

_____
Address of Owner

Hereinafter called OWNER, in the penal sum of _____
_____ Dollars ($_____) in lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, _____, a copy of which is hereto attached and made a part hereof for the construction of:

_____

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms conditions and agreements of said contract during the original term thereof, and any extensions thereof, which may be granted by the OWNER, with or without notice to the SURETY and during the one-year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall full indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PEFORMANCE BOND

PROVIDED, FURTHER, THAT THE SAID surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the terms of the contract or to the WORK to be performed hereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
IN WITNESS WHEREOF, this instrument is executed in _____
(number of copies)
counterparts, each one of which shall be deemed an original, this ____ day of _____, _____.

_____
Principal (signature)

By_____
Type/print

_____
Address

ATTEST:

_____

_____
(Principal) Secretary

(SEAL)

_____
Witness as to Principal

_____

_____
Address

SURETY:_____

By:_____
Attorney-in-Fact

_____

_____
Address

ATTEST:

_____
Witness as to Surety

_____

_____
Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.
IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the WORK is located.

Payment Bond Form

The following additional provision shall constitute an amendment to Payment Bond No. _____.

PROVIDED, FURTHER, that the Principal and Surety, for value received, shall indemnify and save harmless the Owner to the extent of any payments required to be made by the Principal under the terms of the Contract. Subcontractors, material men, mechanics, and others shall have the right of action for amounts lawfully due them from the Principal or Subcontractor directly against the Principal and Surety of this bond. In the event the Principal or his Subcontractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, pro-vendor, or other supplies used or consumed by such Principal or his Subcontractor in performance of the Work contracted be done, the Surety shall pay the same in an amount not exceeding the sum specified in the bond, together with interest, at the rate of eight percent (8%) per annum.

IN WITNESS WHEREOF, this Amendment is executed in four counterparts, each one of which shall be deemed an original, this _____ day of _____.

_____
Principal

ATTEST:

_____ By:_____
(Principal) Secretary

_____
(Address)

Witness as to Principal

(Witness as to Principal)

_____

_____
(Address)
Surety

By:_____
Attorney-in-Fact

_____
Address

ATTEST:

_____ Address_____

CITY OF RIFLE
NOTICE OF AWARD

Dated

TO:_____
Bidder

OWNER'S PROJECT NO._____

PROJECT:____Crack Sealing 2022____

CONTRACT FOR:_____FULL CONSTRUCTION SERVICES_____

****

You are notified that your Bid dated_____, 2020, for the above Contract has been considered. You are the apparent successful Bidder and have been awarded a contract for CONSTRUCTION SERVICES AS PER PLANS DATED_____.

Contract Price of your Contract is _____ Dollars (_____ _____).

Three copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by_____ , 2020_____.

1. You must deliver to the OWNER three fully executed counterparts of the Agreement, including all the Contract Documents, Performance and Payment Bonds. Each of the Contract Documents must bear your signature on the cover.

2. You must deliver with the executed Agreement the Contract Security (Bonds)

3. You must deliver with the executed Agreement, proof of insurance coverage as specified in the General Conditions (section 2.32) and Supplementary General Conditions (paragraph 2.00). Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited. Within ten days after you comply with those conditions, OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

_____City Of Rifle_____
Owner

By: _____
Authorized Signature

Civil Engineer_____
Title

CITY OF RIFLE

NOTICE TO PROCEED

To:_____ Date:_____
Project: _____

You are hereby notified to commence WORK in accordance with the Agreement

dated _____, 2020, on or before _____, 2020_.

By: _____
Owner

Title: _____

ACCEPTANCE OF NOTICE Receipt of the above NOTICE TO PROCEED is hereby acknowledged

By _____

this the _____ day of _____ , 2020 .
By: _____
Title: _____

General Conditions

PWM Section 2.1. ADDITIONAL INSTRUCTIONS, MODIFICATIONS AND DETAIL DRAWINGS

The engineer may, during the duration of the contract agreement and in accordance with Sections 2-16, 2-17, and 2-18 of these General Conditions, furnish the contractor written instructions, modifications or detail drawings necessary to illustrate changes in the work.

The additional written instructions and detailed drawings thus supplied shall become a part of the contract documents, without invalidating the contract agreement, and the contractor shall perform the work as modified or altered.

PWM Section 2.2. EXECUTION, CORRELATION, INTENT, INTERPRETATION AND FURNISHING OF CONTRACT DOCUMENTS

The contract documents shall be executed in triplicate by the owner and contractor.

By executing the contract agreement the contractor represents that he has visited the sight of the work, familiarized himself with the locale, subsurface and site conditions under which the work is to be performed, and correlated his observations with the available information included with and required by the contract documents.

The contract documents are complementary and what is required by any one shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and incidentals necessary for the proper execution and completion of the work. It is not intended that work not covered under any heading, section, class or trade of the specifications shall be supplied unless it is required elsewhere in the contract documents or is reasonably inferable there from as being necessary to produce the intended results. Words, which have well known technical or trade meanings, are used herein in accordance with such recognized meanings. Well-known technical standards are used herein in accordance with the latest edition and revisions thereof.

Written interpretations necessary for the proper execution or progress of the work, in the form of drawings or other wise, will be issued with reasonable promptness by the engineer and in accordance with any approved schedule, upon written request from the contractor. Such interpretations shall be consistent with and reasonably inferable from the contract documents and may be effected by field order.

Unless otherwise provided in the contract documents, the contractor will be furnished, free of charge, three (3) copies of drawings and specifications necessary for the execution of the work. All drawings and specifications thus furnished shall not be reused on any other project.

PWM Section 2.3. SCHEDULES, REPORTS AND RECORDS

The contractor shall submit to the owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the owner may request concerning work performed or to be performed.

Prior to the first partial payment estimate the contractor shall submit to the engineer schedules indicating:

A. Partial payments that he anticipates he will earn during the course of the work.

B. The order in which he proposes to carry on the work, including dates at which he will start the various parts of the work, estimated date of completion of each part; and as applicable:

1. The dates at which special detailed drawings will be required from the engineer.
2. The date that the contractor will submit shop drawings to the engineer.
3. Respective dates that manufacturing will begin, the testing and the installation of materials, supplies and equipment.

Schedules submitted by the contractor shall reflect:

C. The timely and orderly completion of:

1. Specific portions of the work as called for in the Special Conditions.
2. The work in accordance with allowed contract time.

D. The inability to perform work on Saturdays, Sundays, holidays or between the hours of 7:00 p.m. and 7:00 a.m. on any working day, without written permission from the engineer.

E. The safety, adequacy and efficiency of his plant equipment, tools, labor and methods of performing the work.

F. The availability of materials, equipment and incidentals to be incorporated in the work.

G. Maintenance and control of traffic.

PWM Section 2.4. DRAWINGS, SPECIFICATIONS, CONFLICTS AND DISCREPANCIES

The intent of the drawings and specifications is that the contractor shall furnish all labor, materials, tools, equipment, incidentals and transportation necessary for the proper execution of the work in accordance with the contract documents to complete the project in an acceptable manner, ready for use, occupancy or operation by the owner.

In case of conflict between the drawings and specifications, the specifications shall govern. Figured dimensions on drawings shall govern over scale dimensions, detailed drawings shall govern over General Drawings and Special Conditions shall govern over Standard Specifications. Any discrepancies between the drawings and specifications and site conditions; or any inconsistencies, errors, omissions or ambiguities in the drawings or specifications; or any errors or omissions in the layout as given by survey points and instructions shall be immediately reported to the engineer, in writing, who shall promptly verify and correct such inconsistencies or ambiguities in writing. Work performed by the contractor after such discovery, until authorized or corrected by the engineer, shall be done at the contractor's risk.

PWM Section 2.5. SHOP DRAWINGS AND MATERIAL SAMPLES

The contractor shall provide shop drawings, in triplicate, as may be necessary for the prosecution of the work (i.e. vault piping, electrical systems, reinforcing, non-detailed items, etc.) as required by the contract documents. The engineer shall promptly review all shop drawings. The engineer's approval of any shop drawing shall not release the contractor from responsibility for deviations from the contract documents. The approval of any shop drawing, which substantially deviates, from the requirement of the contract documents shall be evidenced by a Change Order.

When submitted for the engineer's review, shop drawings shall bear the contractor's certification that he has reviewed, calculated non-detailed dimensions, checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

Portions of the work requiring a shop drawing or material sample submission shall not begin until the shop drawing or submission has been approved by the engineer. A copy of each approved shop drawing and each approved material sample shall be kept in good order by the contractor at the site and shall be available to the engineer.

PWM Section 2.6. MATERIALS, SERVICES, AND FACILITIES

It is understood that, except as otherwise specifically stated in the contract documents, the contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.

Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.
Manufactured articles, materials and equipment shall be fabricated, furnished, applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer or in accordance with the latest revision to or edition

of well known technical standards (i.e. ASTM, AWWA, Colorado Department of Transportation, etc.) referred to in the Specifications or Special Conditions.

Materials, supplies and equipment shall be in accordance with samples submitted by the contractor and approved by the engineer.

Materials, supplies or equipment to be incorporated into the work shall not be purchased by the contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

PWM Section 2.7. INSPECTION AND TESTING

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards and as required by the contract documents.

The owner shall provide technical personnel, acting under the supervision of the engineer, for the inspection and testing of the work in progress to ascertain that the completed work complies in all respects with the requirements of the contract documents.

If the contract documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be inspected, tested, or approved by someone other than the contractor, the contractor will give the engineer timely notice of readiness. The contractor will then furnish the engineer the required certificates of inspection, testing or approval.

Neither observations by the engineer nor inspections, tests or approvals by any person shall relieve the contractor from his obligations to perform the work in accordance with the requirements of the contract documents.

The engineer and his representative will at all times have access to the work whenever it is in preparation or in progress. In addition, authorized representatives and agents of any participating federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The contractor will provide proper facilities for such access and observation of the work and also for any inspection thereof.

If any work is covered contrary to instructions or without approval or consent from the engineer, it must if required by the engineer, be uncovered for his examination and properly restored at the contractor's expense.

If any work has been covered which the engineer has not specifically requested to observe prior to its being covered, or if the engineer considers it necessary or advisable that covered work be inspected or tested by others, the contractor, at the engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the engineer may require, that portion of the work in question, furnishing all necessary labor, materials, tools and equipment. If it is found that such work is defective, the contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective, the contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

PWM Section 2.8. SUBSTITUTIONS

Whenever a material, article or piece of equipment is identified on the drawings or specifications by reference to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The contractor may request, in writing, the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the contract documents by reference to brand name or catalog number, and if, in the opinion of the engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the engineer may approve its substitution and use by the contractor. Any cost differential shall be deductible from the contract price and the contract documents shall be appropriately modified by Change Order. The contractor

warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the contractor without a change in the contract price or contract time.

PWM Section 2.9. PATENTS

The contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the owner harmless from loss on account thereof, except that the owner shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified by the owner; notwithstanding anything above to the contrary, if the contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information, in writing, to the engineer.

PWM Section 2.10. SURVEYS

The owner shall furnish, at no cost to the contractor, field electronic horizontal and vertical control data at only two control points at each site of the work at the owner's choice of location of control points. From the information provided by the owner, the contractor shall be required to make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

The contractor shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

The contractor shall notify the engineer, in writing, forty-eight hours in advance, of the time and place at which he will require lines and grades in order to perform the Work or obtain measurements for record and payment.

PWM Section 2.11. LICENSES, PERMITS, AND REGULATIONS

All contractors and subcontractors performing work on the project shall have a current City of Rifle Municipal or Building Contractor's License, whichever is applicable to their trade. Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the contractor. Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the owner, unless otherwise specified. The contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the engineer in writing, and any necessary changes shall be adjusted as provided in the Contract Documents for changes in the work.

PWM Section 2.12. PROTECTION OF WORK, EMPLOYEES, PUBLIC AND PROPERTY

The contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and the public who may be affected thereby, all the work and all the materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including pedestrian and vehicular traffic, trees, shrubs, lawns, fences, walks, pavements, roadways, structures and utilities, shown or not shown on the plans which are not designated for removal, relocation or replacement in the course of construction.

The contractor will comply with all applicable laws, ordinances, rules, regulations and order of any private or public body having jurisdiction. He will notify owners and users of adjacent utilities when prosecution of the work may affect them. He shall keep adjacent highways, streets and private access open to traffic and free of dirt and litter resulting from handling operations. He shall take reasonable precautions to protect private property adjacent to the project from such nuisances as dust, dirt, rock and excessive noise. The contractor shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except such as may be due to errors in the Contract Documents, or caused by agents or employees of the owner.

PWM Section 2.13. EMERGENCIES

In emergencies affecting the safety of life or the work or property at the site or adjacent thereto, the contractor, without special instruction or authorization from the engineer or owner, shall act to prevent threatened damage, injury or loss. He will give the engineer prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved, except when the emergency is attributed to acts of the contractor in performing the Work.

PWM Section 2.14. LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS

The contractor shall keep himself fully informed of, and shall comply with all applicable laws, ordinances, rules, regulations and orders of the city, county, state, federal or public bodies having jurisdiction affecting the work. He shall provide, erect and maintain all necessary, police, watchmen, flagmen, firemen, shoring, signing, traffic devices, barricades and sanitary facilities, as required by the conditions and progress of the work, and all other necessary safeguards for safety and protection, as set forth by the United States Department of Labor, Occupational Safety and Health Administration.

The contractor must conform to the rules and regulations of the Industrial Commission of Colorado. Prior to starting excavation the contractor shall obtain from the Commission and file with the engineer a copy of his "Notice of Intent to Excavate."

The contractor shall comply with the requirements of CRS 8-17-101 (1985 Supp.) by employing not less than 80 percent Colorado residents in the several classifications of skilled and common labor employed on the project.

The contractor shall be an equal opportunity employer and adhere specifically to all the City of Rifle resolutions and ordinances pertaining thereto.

The contractor shall protect and indemnify the owner and its agents against any claim or liability arising from or based on the violations of such ordinances, regulations, or laws, caused by the negligent actions of the contractor, his agents or employees.

PWM Section 2.15. SUPERVISION AND DISCIPLINE BY CONTRACTOR

The contractor will supervise and direct the work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The contractor will employ and maintain on the work a qualified supervisor or superintendent who shall have been designated in writing by the contractor as the contractor's representative at the site. The supervisor shall have full authority to act on behalf of the contractor and all communications given to the supervisor shall be as binding as if given to the contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

The contractor shall at all times enforce strict discipline and good order among his employees and shall avoid employing on the project anyone unskilled in the work assigned.

PWM Section 2.16. CHANGES IN THE WORK

At any time during the progress of the work, the owner, through its city manager, may order alterations or changes in the plans, specifications, character or quantity of work, without invalidating the contract agreement. When the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the contract price, bid unit or lump sum prices, where applicable, shall be used. Should the dollar value of the changes exceed 25 percent of the contract price, the value of the changes over 25 percent shall be based on negotiated unit or lump sum prices, where applicable.

The engineer, also, may at any time, by issuing a Field Order, make changes in the details of the work, the contractor shall proceed with the performance of any changes in the work so ordered by the engineer unless the contractor believes that such Field Order entitles him to a change in contract price or time, or both, in which event he shall give the engineer written notice thereof within fifteen days after the receipt of the ordered change, and the contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the owner.

PWM Section 2.17. CHANGES IN CONTRACT PRICE

The contract price may be changed only by a Change Order. The value of any work covered by a Change Order or of any claim for increase or decrease in the contract price shall be determined by one or more of the following methods in the order of precedence listed below.

A. Contract Unit Prices. If a change is ordered in an item of work covered by a contract unit or lump sum price, then an adjustment in the contract price will be made based upon the increase or decrease in quantity of the contract unit or lump sum price.

B. Agreed Prices. Adjustments in contract price for changes ordered that are not covered by contract unit or lump sum price or exceed the limitation in Section 2.16, will be determined by agreement between contractor and owner. If unable to reach agreement, the owner may direct the contractor to proceed on the basis of extra work in accordance with Paragraph C.

C. Extra Work. When the price for extra work cannot be agreed upon, the owner will pay for the extra work based on the accumulation of costs as provided herein below.

1. Daily Reports by Contractor. At the close of each working day, the contractor shall submit a daily report to the engineer, together with applicable delivery tickets, listing all labor, materials, and equipment for that day, and for other services and expenditures when authorized. An attempt shall be made to reconcile the report daily, and it shall be signed by the engineer and the contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the contractor.

a. Labor. The report shall show the names of workers, classifications, and hours worked.

b. Material. The report shall describe and list quantities of materials used.

c. Equipment. The report shall show type of equipment, size and hours of operation, including loading and transport, if applicable.

d. Other Services and Expenditures. Other services and expenditures shall be described in such detail as the engineer may require.

2. Basis for Establishing Costs.

a. Labor. The costs of labor will be the actual cost for wages for each craft or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra work cost will not be permitted unless the contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

b. Materials. The cost of materials, or equipment to be incorporated in the work, shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the quantities involved, plus freight and delivery.

The owner reserves the right to approve materials and sources of supply, or to supply materials to the contractor if necessary for the progress of the extra work. No markup shall be applied to any material provided by the owner.

c. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $400 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed rates approved or authorized by the Colorado Department of Transportation at the time the extra work is performed. (Dataquest-Rental Rate Blue Book)
The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals.

Necessary loading and transportation costs for equipment used in performing the extra work shall be included.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the owner than holding it at the work site, it shall be returned, unless the contractor elects to keep it at the work site at no expense to the owner.
The reported rental time for equipment already at the job site shall be the duration of its use on the extra work, commencing at the time it is first put into actual operation on the extra work.

d. Other Items. The owner may authorize other items, which may be required on the extra work. Such items include labor, services, material and equipment which are different in their nature from those required for the work and which are of a type not ordinarily available from the contractor or any of the subcontractors.

Invoices covering all such items in detail shall be submitted with the request for payment.

e. Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the engineer may establish the cost of the item involved at the lowest price which was current at the time of the report.

3. Markup.

a. Work by Contractor. The following percentage shall be added to the contractor's costs and shall constitute the markup for all overhead and profits:

Labor (1.32 x certified payroll) 15%
Materials 15%
Equipment Rental 15%
Other Items and Expenditures 15%

To the sum of the costs and markups provided for in this subsection, one percent shall be added as compensation for bond and liability insurance.

b. Work by Subcontractor. When all or any part of the extra work is performed by a subcontractor, the markup established herein shall be applied to the subcontractor's actual cost of such work, to which a markup of five percent on the subcontracted portion of the extra work may be added by the contractor.

4. Any other cause which, in the opinion of the engineer, entitles the contractor to additional time, including but not restricted to acts of the public enemy, acts of any government in either its sovereign or any applicable contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

PWM Section 2.18. CHANGES IN CONTRACT TIME

The contract time may be changed only by a Change Order. The contractor shall notify the engineer promptly and in writing of any occurrence or conditions which, in the contractor's opinion, entitle him to an extension or reduction in contract time. Such notice shall be submitted in ample time to permit full investigation and evaluation of the contractor's claim. Failure to provide such notice shall constitute a waiver by the contractor of any claim. The engineer shall acknowledge the contractor's notice within seven days of its receipt.
Changes in contract time for the completion of the work shall be stipulated by Change Order:

A. When changes in the work occur.

B. When work is suspended by the owner.

C. For unforeseeable causes beyond the control and without the fault or negligence of the contractor, his subcontractor or supplier and which were not the result of their fault or negligence.

D. When delays in the progress of the work caused by:

1. Any act or neglect of the owner, his employees or agents.
2. Other contractors employed by the owner.
3. Any delay in furnishing of drawings, information or return of shop drawings by the engineer.
4. Any other cause which, in the opinion of the engineer, entitles the contractor to additional time, including but not restricted to acts of the public enemy, acts of any government in either its sovereign or any applicable contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

PWM Section 2.19. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The date of beginning and the time for completion of the work are essential conditions of the contract documents and the work embraced shall be commenced on the date specified in the Notice to Proceed.

The contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between the contractor and the owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

A daily charge will be made against the contractor for each working day, including free time, that any work shall remain uncompleted after elapse of contract time. This daily charge, determined by the original contract amount for the project from the table herein below, will be deducted from any money due the contractor. This deduction will not be considered a penalty but as liquidated damages.

The schedule of liquidated damages set forth below is an amount, agreed to by the contractor and the City of Rifle, as reasonably representing additional construction engineering costs incurred by the City if the contractor fails to complete performance within the contract time.

The schedule of liquidated damages will be:

Original Contract Amount		Daily Charge
From	To and More than Including	
$ 0	$ 25,000	$ 270
25,000	50,000	465
50,000	100,000	540
100,000	500,000	950
500,000	1,000,000	1,250
1,000,000	2,000,000	1,400
2,000,000	4,000,000	1,750
4,000,000	8,000,000	1,970
8,000,000	10,000,000	2,050

Over $10,000,000 - daily charge will increase by $100 increments for each $2,000,000 over $10,000,000.

Permitting the contractor to continue and finish the work or any part thereof after elapse of contract time will not operate as a waiver on the part of the City of any of its rights under the contract.

Any deduction assessed as liquidated damages under this section shall not relieve the contractor from liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed contractor to complete the work according to contract times.

The contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the contractor has promptly given written notice of such delay to the owner or engineer.

A. To any preference, priority or allocation order duly issued by the owner.

B. To unforeseeable causes beyond the control and without the fault or negligence of the contractor, including but not restricted to, acts of God, or of the public enemy, acts of the owner, acts of another contractor in the performance of a contract with the owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unforeseeable severe abnormal weather.

The owner shall have the right to deduct the amount of liquidated damages from any monies due or to become due to the contractor, or to sue for and recover compensation for damages for non-performance of the work, from the contractor and his surety, as stipulated in the contract documents.

PWM Section 2.20. CORRECTION OF WORK

The contractor shall promptly remove from the premises all material and work condemned by the engineer for failing to comply with the contract documents, whether incorporated in the construction or not, and the contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the owner and shall bear the expense of making good all work and material of other contractors destroyed or damaged by such removal or replacement.

All removal and replacement Work shall be done at the contractor's expense. If the contractor does not take action to remove such condemned work and materials within ten days after receipt of written notice, the owner may remove such work and store the materials at the expense of the contractor.

PWM Section 2.21. SUBSURFACE CONDITIONS

The contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, which jeopardizes the safety of the project and/or persons thereon, notify the owner in writing of:

A. Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents.

B. Previously unknown physical or other conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract documents.

The engineer shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the work, an equitable adjustment shall be made and the contract documents shall be modified by a Change Order. Any claim of the contractor for adjustment hereunder shall not be all wed unless he has given the required written notice; provided that the engineer may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

PWM Section 2.22. SUSPENSION, DELAY OR INTERRUPTION OF WORK

The owner may, at any time and without cause, suspend the work or any portion thereof for a period of not more than ninety calendar days or such further time as agreed upon by the contractor, by written notice to the contractor and the engineer which notice shall fix the date on which work shall be resumed. The contractor

will resume that work on the date so fixed. The contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to any suspension.

If the performance of all or any portion of the work is suspended, delayed or interrupted as a result of a failure of the owner or engineer to act within the time specified in the contract documents, or if no time is specified, within a reasonable time, an adjustment in the contract price or an extension of the contract time, or both, shall be made by Change Order to compensate the contractor for the costs and delays necessarily caused by the failure of the owner or engineer.

PWM Section 2.23. OWNER'S RIGHT TO TERMINATE OR ABANDON WORK

If the contractor is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the work or if he disregards the authority of the engineer, or if he otherwise violates any provision of the contract documents, then the owner may, without prejudice to any other right or remedy and after giving the contractor and his surety a minimum of ten days from delivery of a written notice, terminate the services of the contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the contractor, and finish the work by whatever method he may deem expedient. In such case the contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to the contractor. If such costs exceed such unpaid balance, the contractor will pay the difference to the owner. Such costs incurred by the owner will be determined by the engineer and incorporated in a Change Order.

Where the contractor's services have been so terminated by the owner, said termination shall not affect any right of the owner against the contractor then existing or which may thereafter accrue. Any retention or payment of monies by the owner due the contractor will not release the contractor from compliance with the contract documents.

After ten calendar days from delivery of a written notice to the contractor, the owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the contractor shall promptly remove all of his equipment, temporary facilities and supplies from the premise, clean up the project and contiguous properties. Otherwise, the owner shall perform such housekeeping at the expense of the contractor. However, the contractor shall be paid for all work executed and any expense sustained plus reasonable profits as a result of such action by the owner.

PWM Section 2.24. CONTRACTOR'S RIGHT TO TERMINATE OR STOP WORK

If, through no act or fault of the contractor, the work is suspended for a period of more than ninety calendar days by the owner or under an order of court or other public authority, or the engineer fails to act on any request for payment within thirty calendar days after it is submitted, or the owner fails to pay the contractor substantially the sum approved by the engineer within thirty calendar days of its approval and presentation, then the contractor may, after ten calendar days from delivery of a written notice to the owner and the engineer, terminate the contract and recover from the owner payment for all work executed and all expenses sustained. In addition and in lieu of terminating the contract, if the engineer has failed to act on a request for payment or if the owner has failed to make any payment as aforesaid, the contractor may upon ten calendar days notice to the owner and the engineer stop the work until he has been paid all amounts then due, in which event and upon resumption of the work, Change Orders shall be issued for adjusting the contract price or extending the contract time, or both, to compensate for the costs and delays attributable to the stoppage of the work.

PWM Section 2.25. SUBCONTRACTING

The contractor may utilize the services of subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The contractor shall not award work to subcontractor(s), in excess of fifty percent of the total contract price, without prior written approval of the owner.

The contractor shall be fully responsible to the owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the contractor the same power as regards terminating any subcontract that the owner may exercise over the contractor under any provision of the contract documents.

Nothing contained in this contract shall create any contractual relation between any subcontractor and the owner.

PWM Section 2.26. CONTRACT SECURITY

The contractor shall, within seven calendar days after the receipt of the Notice of Award, furnish the owner with a Performance and Payment Bond in the penal sum of the total contract price, conditioned upon the performance by the contractor of all Change Orders, undertakings, covenants, terms, conditions and agreements of the contract documents, and upon the prompt payment by the contractor to all persons supplying labor, equipment and materials in the prosecution of the work provided by the contract documents. Such bond shall be executed by the contractor and a corporate bonding company licensed to transact such business in the State of Colorado and listed in the most recent revision of "Surety Companies Acceptable on Federal Bonds" as published in the U.S. Treasury Department Circular No. 570. The expense of the bond shall be borne by the contractor. If at any time a surety on any such Bond is declared a bankrupt or loses its right to do business in the State of Colorado, or is disapproved by the owner, the contractor shall, within ten calendar days after notice from the owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the owner. The premiums on such bond shall be paid by the contractor. No further partial payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the owner.

PWM Section 2.27. PARTIAL COMPLETION AND OCCUPANCY

At any time during the performance of the work that a portion of the permanent construction has been satisfactorily completed, in accordance with the contract documents, which is not required for the operation of the contractor but is needed or required by the owner, the engineer shall issue to the contractor a written notice of partial completion, and thereupon or at any time thereafter, the owner may take over, occupy, operate and use that portion of the construction therein described.

The notification of partial completion shall in no way be construed to constitute an extension in contract time for the completion of all the work or as a waiver of the right of the owner to require the fulfillment of all the terms of the contract documents. If such prior use should cause an increase in the cost of, or in the time required for, performance of the Work, as determined by the engineer, an equitable adjustment to the contractor shall be made and the contract documents modified by a Change Order.

PWM Section 2.28. MEASUREMENT OF QUANTITIES FOR PAYMENT

Measurement for pay items in the contract shall be as defined in the Measurement and Payment Section of the City of Rifle Standard Specifications for Design and Construction or as modified in the Special Conditions. The methods of measurement and computation to be used in determination of quantities; of work performed, of materials to be furnished and/or installed; will be those methods generally recognized as conforming to good engineering practice.

Sundry items, which are incident to or required in the construction of the work, but are not included as items in the Bid Schedule, shall be considered an integral part of the work to be performed. All labor, materials, etc., required for such items shall be furnished and installed, and the costs shall be included in the applicable contract unit price or lump sum amount bid.

PWM Section 2.29. SCOPE OF PAYMENT

Payment to the contractor will be made only for the actual quantities of contract items constructed and installed in accordance with the plans and specifications.

Payment made at the contract unit price or lump sum amount bid shall be full compensation for furnishing all labor, materials, equipment, appurtenances, taxes, insurance, permits and incidentals necessary to complete the work as shown on the plans and as required by the Specifications. Each item, fixture, piece of equipment, etc., shall be complete in place, operational and accepted.

No additional payment, over the amount bid, will be made for related work to any item unless specifically called for in the contract. Neither will payment be made for materials wasted, rejected or placed outside of plan limit lines.

PWM Section 2.30. PARTIAL PAYMENT AND CERTIFIED TAX REPORTS

The engineer, on or about the twenty-fifth day of the month in which work on the project is performed, shall prepare for contractor's approval, a partial payment estimate of the work performed and materials placed in accordance with the contract documents.

Not more than eighty (80) percent of the cost of materials and equipment delivered and suitably stored at or near the project site, but not incorporated in the work may be included in an estimate; provided however, the contractor furnishes invoices and supportive data establishing title in the name of the owner, to the engineer.

The amount to be retained from partial payments will be ten percent of the value of completed work, exclusive of mobilization and payment for materials on hand. When the retainment on contracts exceeding $80,000 in value has reached five percent of the amount of the contract, no further retainment will be made. Amount of retainment will be held until such time as final payment is made with the following provision: When ninety-seven and one-half percent of the work has been completed, the engineer may, at his discretion and The amount to be retained from partial payments will be ten percent of the value of completed work, exclusive of mobilization and payment for materials on hand. When fifty percent of the work required by contracts exceeding $150,000. has been performed, no further retainment will be made if in the opinion of the City, satisfactory progress is being made on the work. Amount of retainment will be held until such time as final payment is made with the following provision: When ninety-seven and one-half percent of the work has been completed, the engineer may, at his discretion and with the consent of the Surety, reduce the retained amount to twice the value of the work remaining to be done. Any amount retained under this provision shall be subject to the requirements of Colorado Revised Statute § 24-91-103.

Earnings so retained on contracts exceeding $150,000. in value may be withdrawn by the contractor provided the contractor provides the City with an irrevocable letter of credit in a form and from a financial institution acceptable to the owner. Any amounts so retained by the owner under this provision shall be subject to Colorado Revised Statute. § 24-91-105.

The contractor upon receipt of each partial payment estimate shall either indicate his approval by signing and returning a copy to the engineer, or return the estimate unsigned and indicate in writing his reason for refusing payment.
The owner, within fifteen- (15) days of presentation to the engineer of an approved partial payment estimate, shall pay the contractor the amount due thereon.

Upon receipt from the contractor of an approved designated semifinal estimate, as prepared by the engineer:

A. The contractor shall, in writing, request the engineer to make a semifinal inspection in preparation for final acceptance of the work by the owner.

B. The contractor shall prepare and furnish the engineer certified city and county sales and use tax reports covering the equipment and materials incorporated in the work.

The engineer, upon receipt of written request for semifinal inspection, shall promptly make said inspection of the work and issue to the contractor a written notice advising him of any deficiencies, corrective measures or clean up that he must complete prior to preparation of the final payment request.

All work covered by partial payment made shall thereupon become the sole property of the owner, but this provision shall not be construed as relieving the contractor of the sole responsibility for the care and protection of the work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the owner to require the fulfillment of all terms of the contract documents.

PWM Section 2.31. FINAL PAYMENT REQUEST, ACCEPTANCE AND RELEASE

Upon completion of the work, cleanup of the project site, the engineer's receipt from the contractor in triplicate of certified tax receipts, the engineer, within ten calendar days thereafter shall:

A. Prepare a final payment request, for contractor's approval, showing the total value of the work completed in accordance with the contract documents and as modified by any Change Orders, less the value of:

1. Partial payments previously made by the owner to the contractor.
2. Retention of any claims, on file with the owner, against the contractor
3. Estimated costs of completing any incomplete or unsatisfactory items of the work.
4. Payments advanced by the owner, to subcontractors, material and equipment suppliers or others which are known by the contractor to have been made but not previously accounted for.
5. Liquidated damages not previously paid to the owner by the contractor.

B. Advise the owner and contractor by written notice that:

1. The work has been inspected and accepted by him under the conditions of the contract documents.
2. The work, effective the date of the notice, is placed under warranty, at the contractor's expense, for a period of one year.

3. The entire balance shown on the final payment request, as prepared by the engineer, is due and payable within thirty calendar days from date of approval thereof by the contractor.

Upon approving the final payment request, as prepared by the engineer, the contractor by such act, indemnifies and saves the owner and his agents harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men and furnishers of machinery and parts thereof, equipment, tools, and all supplies incurred in the furtherance of the performance of the work. The contractor shall, at the owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the contractor fails to do so, the owner may, after having notified the contractor, either pay unpaid bills or withhold from the contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, in accordance with the terms of the contract documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the owner to either the contractor, his surety, or any third party. In paying any unpaid bills of the contractor, any payment so made by the owner shall be considered as a payment made under the contract documents by the owner to the contractor and the owner shall not be liable to the contractor for any such payments made in good faith.

The acceptance by the contractor of final payment shall be and shall operate as a release to the owner of all claims and all liability to the contractor other than claims in stated amounts as may be specifically excepted by the contractor for all things done or furnished in connection with this work and for every act and neglect of the owner and others relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the contractor or his sureties from the warranty period or any other obligations under the contract documents or the Performance and Payment Bond.

In the event the owner fails to make final payment as herein provided, there shall be added daily interest at the rate of six percent per annum, commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor.

PWM Section 2.32. INSURANCE

The contractor shall at its own expense keep in full force and effect during the term of this contract insurance as follows:

The contractor shall secure and maintain statutory workmen's compensation.

The contractor agrees to secure, at his own cost, a policy or policies of insurance sufficient to insure against the liability assumed by the contractor pursuant to the provisions of paragraph 2.36 of these General Conditions. The contractor's insurer must be rated "B+" or better, according to Best's Key Rating Guide and must be admitted to do business in the State of Colorado. The contractor shall provide the owner with a certificate of insurance from a properly qualified representative of the insurer, that any policy purchased pursuant to this contract complies with the conditions required by this contract. The certificate of insurance must show current name and address of the insured(s) named in the policy. The contractor shall not commence any work under this contract, and shall not allow any subcontractor or any officer, employee, or agent of the contractor or any subcontractor to commence any work under this contract, until any such certification has been received and approved by the owner.

The contractor shall not be relieved of any liability assumed pursuant to the foregoing paragraph by reason if its failure to secure insurance as required by this contract or by reason of its failure to secure insurance in sufficient amounts, of sufficient durations, or of sufficient types to cover such liability. The required policy shall meet the following conditions:
A. The policy limits shall be as follows:
1. The limit for an injury to one person in any single occurrence shall be no less than $1,000,000, and the limit for an injury to two or more persons in any single occurrence shall be no less than $2,000,000. Costs of defense shall not be included within such limits or, if they are so included, the minimum limits shall be $1,000,000 combined single limits.
2. The general aggregate limit shall be unlimited or at least $2,000,000.
B. The policy shall include the owner as an additional insured. The parties hereto understand and agree that the owner is relying on and does not waive or intend to waive by this contract, any provision hereof, including the provisions of this paragraph, the monetary limitations (presently $1,000,000 per person and $2,000,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, C.R.S. 24-10-101, et seq., as from time to time amended, or otherwise available to the owner.
C. The insurer shall give the owner notification of any cancellation or termination by refusal to renew the policy or any change in coverage of the policy in the manner provided by law. If no such notification is provided by law, the insurer shall give the owner at least thirty (30) days prior written notification of any cancellation or termination by refusal to renew the policy or of any change in coverage of the policy, unless cancellation or termination is for non-payment of premium, in which case, the industry standard of ten (10) days prior written notification shall apply.
D. The contractor shall be solely responsible for any deductible losses under the policy.
E. If the policy is a claims made policy, the policy shall provide the contractor the right to purchase, upon cancellation or termination by refusal to renew the policy, an extended reporting period of not less than two years. The contractor agrees to purchase such an extended reporting period should the policy be cancelled or terminated.
F. If the policy is a claims made policy, the policy shall give the owner the right to purchase the extended reporting period described in paragraph E above if the contractor fails to purchase such an extended reporting period as required by this contract. The owner's exercise of such right shall not relieve the contractor of any liability for its failure to purchase such an extended reporting period as required by this contract.
G. If the policy is a claims made policy, the retroactive date of any renewal of such policy shall be no later than the date this contract is signed by the parties hereto.
H. If the contractor purchases a subsequent claims made policy in place of any prior policy, the retroactive date of such subsequent policy shall be no later than the date the contract is signed by the parties hereto.

The contractor shall secure and maintain, at his own expense, if applicable or called for in the Special Conditions, the following insurance coverage:

Fire, extended coverage and vandalism insurance on the project to the full insurable value thereof for the benefit of the owner, the contractor and subcontractors.

"All Risk" type builder's risk insurance for work to be performed. Unless otherwise authorized by the owner, the amount shall not be less than the contract price totaled in the Bid Proposal. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft and smoke during the contract time and until the work is accepted by the owner. The policy shall name as the insured the contractor, the owner and their designated agents.

Special Comprehensive General Bodily Injury and Property Damage for the period of time that work being performed is encroaching on property owned or controlled by individuals, partnerships or corporations such as irrigation companies and railroads, state or federal agencies, and to limits set forth in their permit. The policy shall be issued to the permittee and name as the insured the contractor, the owner and their designated agents.
The contractor must comply with the owner's requirements for filing certificates of insurance, as determined by the Risk Management Division. A certificate of insurance acceptable to the Risk Management Division must be provided at the time the contract is executed by the parties hereto unless both parties arrange otherwise.

The contractor is responsible for submitting certificate(s) of insurance, subject to the insurance requirements described above, for all subcontractors. All certificates of insurance are subject to periodic verification and approval by the owner.

PWM Section 2.33. SEPARATE CONTRACTS

The owner reserves the right to let other contracts in connection with this project, or contiguous thereto. The contractor shall afford other contractors, utility companies or owner's forces reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. If the proper execution or results of any part of the contractor's work depends upon the work of any other contractor, the contractor shall inspect and promptly report to the engineer any defects in such work that render it unsuitable for such proper execution and results.

If the performance of additional work by other contractors, utility companies or the owner is not noted in the contract documents prior to the execution of the contract, written notice thereof shall be given to the contractor by the engineer, prior to starting any such additional work. If the contractor believes that the performance of such additional work by the owner or others entitles him to a change in contract price or time, or both, he may, by written notice to the engineer, request a Change Order as provided under Changes in the Work.

PWM Section 2.34. HOUSEKEEPING AND CLEANUP

At all times during the progress of the work the contractor, at his expense, shall maintain the site, storage yard, adjacent properties, both public and private, policed and free of litter or trash. All material and equipment to be incorporated in the work shall be stored in a neat appearing manner and protected from damage or the elements until accepted in accordance with the contract documents.

Prior to final payment, the contractor, at his expense, shall remove from the project site and from contiguous private and public property, all temporary structures, equipment, rubbish and waste materials resulting from his operations. He shall clean up, police around and over all facilities that the owner will acquire maintenance thereof.
Disposal areas for waste material, from the contractor's operation, shall be those areas that comply in every way with local ordinances and are approved by the engineer.

PWM Section 2.35. ASSIGNMENT

Neither the contractor nor the owner shall sell, transfer, sublet as a whole, or otherwise dispose of the contract or any portion thereof without the written consent of the other and its surety; nor shall the contractor assign any monies due or to become due to him thereunder, except to a bank or financial institution acceptable to the owner.

PWM Section 2.36. INDEMNIFICATION

The contractor agrees to indemnify and hold harmless the owner, its officers, employees, insurers, and self-insurance pool, from and against all liability, claims and demands on account of personal injuries, including without limitation worker compensation claims and death claims, or property loss or damage, or any other loss of any kind whatsoever, which arises out of or are in any manner connected with this contract, whether or not such injury, loss, or damage is caused by, or is claimed to be caused by, the act, omission, negligence or other fault of the contractor, any employees of the contractor, or any other person or entity; or by accident; or by any other cause. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless the owner from any liability or damages directly caused by or attributable to the owner's own negligence. The contractor agrees to investigate, handle, respond to, provide defense for, and defend against, any liability, claims, or demands arising from, connected with, or related to the contract at the sole expense of the contractor regardless of whether the liability, claim, or demand is related to the owner's own negligence and the contractor further agrees to bear all other costs and expenses, related thereto, including court costs and attorney fees, whether or not the claim or claims alleged are groundless, false, or fraudulent. Nothing herein is intended to be, or may be construed as, a waiver or the immunities, protections, or limitations on damages provided to The City of Rifle by the Colorado Governmental Immunity Act, C.R.S. 24-10-101 through 24-10-120, as it may from time to time be amended.

PWM Section 2.37. ENGINEER'S STATUS AND DECISIONS

The engineer shall act as the owner's representative during the construction period. He shall decide questions which arise in the execution of the work. He shall perform technical inspections in the field, in laboratories, at factories, at sources of supply and wherever he feels the necessity to determine the quality and acceptability of material and equipment furnished and work performed. He shall reject all material, equipment and work which fails to conform to the specifications. He shall stop the performance of the work whenever such stoppage may be necessary to insure the proper execution of the contract documents. He shall determine the quantity of work to be paid for and prepare all partial payments, estimates and the final payment request for submittal to the owner after obtaining the contractor's approval thereof.

The engineer will not be responsible for the construction means, controls, techniques, sequences, procedures or construction safety.

The engineer shall, within a reasonable time after presentation, make decisions by written notice on all claims of the owner or the contractor on all matters relating to the execution and progress of the work or the interpretation of the contract documents.

PWM Section 2.38. LAND, RIGHTS-OF-WAY, EASEMENTS AND ENCROACHMENTS

Prior to issuance of Notice to Proceed, the owner shall obtain all land and rights-of-way necessary for carrying out and for the completion of the work to be performed pursuant to the contract documents, unless otherwise stated in the Special Conditions or mutually agreed to.

The owner shall indicate on the drawings or provide to the contractor information which delineates and describes the lands owned, rights-of-way and easements acquired, and encroachments over lands upon which the work is to be performed.

Delays in furnishing land for the work by the owner may be deemed proper cause for a change in the contract price, contract time, or both.

The contractor shall provide, at his own expense and without liability to the owner, any additional land and access thereto that the contractor may desire for temporary construction facilities, or for storage of materials and equipment.

PWM Section 2.39. GUARANTY AND WARRANTY

The contractor shall guarantee all material and equipment incorporated in, and warrant all workmanship on, the project for a period of one year from the date of written notice of acceptance of the project or portions thereof. The contractor shall within forty-eight hours after notification from the owner, subsequently verified by written notice, make all needed repairs and corrections which develop or result from defective workmanship, materials or equipment.

In the event the contractor should fail to make such repairs, adjustments, or performs other necessary work required to correct any deficiencies, the owner may do so and charge the contractor the cost thereby incurred. The Performance and Payment Bond shall remain in full force and effect through the guarantee and warranty period.

PWM Section 2.40. TAXES

The contractor will pay all applicable sales, use and other similar taxes required by the laws of the State of Colorado. When taxes are due, the developers, other responsible parties, and/or their subcontractors, prior to requesting final warranty on their project shall furnish the engineer, in triplicate on the City form, certified receipts of sales, use and other similar taxes, required by law, paid on all materials and equipment incorporated in or used in the performance of the work.

Notwithstanding the above, the contractor shall obtain from the Colorado Department of Revenue a Certification of Exemption indicating, where applicable, that the contractor's purchase of construction or building materials is for use in the building, erection, alteration or repair of public works owned and used by the City of Rifle, in its governmental capacity. The contractor shall file with the engineer a certified copy of the Certification of Exemption, prior to commencing Work.

Where a project is exempt from such tax, the amount of such tax shall not be included in any bid proposal submitted to the City.

PWM Section 2.41. DESIGNING AND PERFORMING WORK WITHOUT A CONTRACT AGREEMENT

All property owners, individuals, partnerships or corporations which engage in the subdividing or improving of land, or in the design or construction of the Work, ultimately to be maintained, operated, occupied or owned by the City of Rifle, other than those directly contracting with the City, shall adhere to this Public Works Manual, Design and Construction of Public Improvements to which these General Conditions are a part.

No portion of the work shall be performed until the engineer has approved the drawings pertaining there to, and then only by a contractor that is licensed and bonded to the City of Rifle.

Those who are responsible for, or cause the work to be performed, and those who actually perform the work, will be considered, for purposes of these General Conditions and Standard Specifications, as having executed a contract agreement, as contractor, with the City of Rifle as owner, even though no agreement exists. As such, they shall comply with all the technical and performance provisions of these Specifications, be subject to inspection and the directives of the engineer.

PWM Section 2.42. CLOSEOUT

To close out a project or development, several items need to be taken into account by the Contractor, Engineer and by the Owner. Several of these items may have been initiated prior to or during the work.

The Contractor of the work shall notify the Engineer and the Owner in writing that he has reached “Substantial Completion” and include a list of work yet to be completed or corrected. If requested by the Engineer, closeout of areas or portions of work may be allowed by the Owner.

The Engineer, along with the Owner’s representative, shall inspect the work to determine if it is substantially complete. If it is substantially complete, a “Certificate of Substantial Completion” will be issued by the Engineer along with a “Punch List” of items to be completed or corrected, to the Contractor and the Owner.

The Contractor shall complete and/or correct the items listed on the punch list, or any other item that becomes known, and again notifies the Engineer and Owner in writing that the work is ready for final inspection. At this time, the Contractor may submit his application for final payment to the Engineer.

The Engineer along with the Owner's representative will make a final inspection. If the work is found acceptable and complete to the satisfaction of the Owner, a meeting will be scheduled to finalize all other items due. Should the Contractor fail to complete and/or correct all punch list items required by the Owner, the Contractor shall pay for additional "Final Inspections" by the Engineer at the Engineer's current rates. If the Contractor has any question with regard to any items found on the punch list, he shall request clarification from the Engineer prior to final inspection.
Prior to release of final payment, a meeting (referred to in the previous paragraph) shall be held to collect from the Contractor and/or the Engineer, for the Owner, the following items:

1. Outside Inspection Certificates, as applicable,
2. Materials Certificates of Compliance,
3. Equipment and Material guarantees,
4. Contractors one-year (or longer, if required) guarantee or warranty using Owner forms,
5. Operation & Maintenance Manuals and Parts list, as applicable,
6. Receipts for Materials delivered to the Owner,
7. Miscellaneous Keys, Tools, etc.
8. Final Application for Payment,
9. Consent of Surety to Final Payment,
10. Contractor's Affidavit of Release of Liens,
11. Project Record Drawings (As-Builts),
12. Quitclaim deed from developer conveying any interest it has in the public improvements to the Owner using Owner format,
13. Bill of Sale conveying all public improvements to the Owner free and clear of liens and encumbrances using Owner format,

1. Final Payment Amount,
2. Contractor acknowledgement of Date of Warranty, and
3. All other documentation.

And the Owner will provide to the Engineer:
1. Public Works Director Certification that the work has been constructed in conformance with the plans and specifications.
2. A letter informing the financier to release the Letter of Credit.

Inspection certificates shall be submitted (Number 1, in the list above) from any State or Other governing body having jurisdiction, such as State electrical certification that the work is in strict conformance with applicable codes. The Contractor shall remedy any defects due to faulty materials or workmanship and pay for damage to other work resulting there from, for a period of one year (or longer, if required) in accordance with Section 2.39 herein. A written warranty based on the provisions of Section 2.39 shall be provided to the Owner, dated as agreed with the Owner, properly signed and notarized and addressed to the Owner.

All keys to doors, panels or switches, special tools required for equipment and spare parts or supplies, as applicable, shall be accounted for and turned over to the Owner.

The Owner, will initiate action to advertise in the local newspaper regarding final payment to the Contractor and determining the date for payment.

Project Record Drawings (As-Builts) shall consist of one blackline copy of the completed project work with changes clearly marked and clouded and a CD-ROM. The CD-ROM disk shall include the marked up sheets in individual PDF format files and the electronic line work in the latest AutoCad drawing format. The electronic line work should be supplied such that all improvements are located on the Rifle grid i.e. UTM Z13 in metric (meter) scale. All drawings (electronic and hardcopy) should be clearly and neatly marked "RECORD DRAWING" in ½" block letters in the lower right quadrant of the sheet.

Item 14, above, shall be broken down into 1) cost of water system per individual street (including pipe, fittings, valves, services, hydrants, etc.), 2) sewer system (including pipe, services, manholes, etc.) per individual street, 3) storm drain and culvert system per individual street (including pipe, inlets, boxes, flared ends, manholes, etc.) and 4) individual street costs (including signals, signs, striping, asphalt, road base, curb, gutter sidewalk, grading, etc.).

PWM Section 2.43. RIGHTS AND REMEDIES

The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not as a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law, including but not limited to tort remedies. The Contractor agrees that the economic loss rule as set forth in the Town of Alma v. Azco Construction, Inc., 10 p.3d 1256 (Colo. 2000) shall not serve as a limitation on the Owner's right to pursue tort remedies in addition to other remedies it may have against the Contractor. Such rights and remedies shall survive the acceptance of the Work or any termination of the Contract Documents. Contractor further specifically waives all provisions of Chapter 8 of Article 20 of Title 13, Colorado Revised Statues, regarding defects in the Work under the Contract. In the event any portion of this provision is deemed un-enforceable by a court of competent jurisdiction, the remaining portions of this provision shall survive.

Supplementary General Conditions

1.00 GENERAL

These Supplementary General Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

2.00 INSURANCE

The Contractor shall provide and maintain adequate Workmen's Compensation Insurance for all labor on the Work under this Contract. Protection under said policies shall extend to the Owner and Contractor. Certifications of such insurance shall be filed with the Owner prior to commencement of operations. Proof of carriage of insurance by subcontractors shall also be furnished.

2.01 Unless otherwise provided in these Supplementary General Conditions, Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these Supplementary General Conditions or required by Law). This insurance shall include the interests of Owner, Contractor and Subcontractor in the Work, shall insure against the perils of fire and extended coverage, shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these Supplementary General Conditions, and shall include damages, losses and expenses arising out of, or resulting from, insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance, or otherwise provided in these Supplementary Conditions, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on or off the site or in transit when such portions of the Work are to be included in an *Application for Payment*. Such coverage shall be provided until the issuance of a certificate of substantial completion. The policies of insurance required to be purchased and maintained by Contractor in accordance with section 2.32 of the Rifle Public Works Manual shall contain a provision that the coverage afforded will not be canceled or materially changed until at least thirty (30) days prior written notice has been given to Owner.

2.02 All equipment shall be covered under the insurance requirements of the Contractor as stated under 2.01 above.

2.03 Coverage Required (minimum):

A. General Liability

1. Limits

a. Bodily Injury - $1,000,000 each person
$2,000,000 each occurrence

b. Property Damage - $1,000,000 each occurrence
$2,000,000 aggregate

2. Coverages

x Comprehensive Form
_ Premises-Operations Explosion
_ Collapse Hazard
_ Underground Hazard
x Products/Completed Operations Hazard
x Contractual Insurance
x Broad Form Property Damage
x Independent Contractors
x Personal Injury

B. Automobile Liability

1. Limits

a. Bodily Injury - $250,000 each person
b. Property Damage - $500,000 each occurrence
c. Combined - $600,000 each occurrence

2. Coverages

x Comprehensive Form
x Owned
x Hired
x Non-Owned

2.05 Certificates of Insurance from the contractor and subcontractor's insurance carriers shall name both the City of Rifle and CDOT as additional insured parties. Submission of Certificates of Insurance shall be provided prior to commencing any work.

3.00 TAX EXEMPTION.

Owner's tax-exempt number, when applicable, to be used as part of this project, will be provided to the successful bidder. The successful bidder shall then apply for sales tax exemption before working on a City Project. See www.revenue.state.co.us/PDF/dr0172.pdf. Subcontractors shall be provided copies of the contractor's sales tax exemption certificate to avoid paying taxes when purchasing materials to be incorporated in the City project. Therefore, these taxes should not be included in the cost for performing the work.

4.00 FINAL PAYMENT.

Lien waivers from all prime Contractors and Subcontractors to be provided prior to issuance of final payment.

5.00 COMPLETION TIME.

Crack Seal 2022	Begin	Finish	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
RFB	6-May-20	1-Jun-20							
NOA	01-Jun-20	18-Jun-20							
Construction	24-Aug-20	2-Oct-20							

6.00 OWNER'S REPRESENTATIVE.

Unless provided for otherwise in writing by the Owner, any on-site Inspector or Representative of the Owner shall not have the authority to render any binding decisions nor make any binding judgments to the Contractor pertaining to any work which may change the Contract price or time of completion, or to the quality of Work, or to the manner in which the Work is being performed. The Representative of the Owner shall serve as a means of communication between the Owner and the Contractor and shall monitor the Work for the Owner. Any communication given to the Representative of the Owner by the Contractor shall be considered as being given to the Owner.

7.00 SAFETY REQUIREMENTS.

Nothing in the Contract Documents shall be construed as relieving the Contractor from protecting all property and persons or from strictly adhering to all applicable local, state and federal safety requirements. Where there is a conflict

between the Contract Documents and any applicable safety requirement, the safety requirement shall take precedence.

8.00 LAWS AND ORDINANCES.

The Contractor shall at all times observe and comply with all federal, state and local laws, ordinances and regulations which in any manner affect the contract or Work, and shall indemnify and save harmless the Owner and the Owner's agent against any claim arising from the violations of any such laws, ordinances and regulations, whether by the Contractor or his employees.

If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules or regulations, and without notice to the Engineer, he shall bear all costs arising there from.

9.00 WAIVER.

It is expressly understood and agreed that any waiver granted by the Engineer or Owner of any term, provision or covenant of this Contract shall not constitute a precedent nor breach of the same or any other terms, provisions or covenants of this Contract. Neither the acceptance of the Work by the Owner nor the payment of all or part of the sum due the Contractor hereunder, shall constitute a waiver by the Owner of any claim which the Owner may have against the Contractor or otherwise.

10.00 PROTECTION OF PUBLIC UTILITIES AND OTHER ADJOINING PROPERTY.

The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to other property at the site or adjacent thereto, and he shall be liable for any and all claims for such damage on account of his failure to fully provide such protection.

The Contractor shall notify all public utility companies at least forty-eight (48) hours prior to commencement of any Work in the vicinity of the utilities. No Work shall commence until the utilities have been located and staked by the utility company or written consent to proceed has been given by the Owner. If utility service must be interrupted, the Contractor shall notify the head of local administrative services (i.e., City Manager, Mayor, and City Clerk), as applicable, and utility users affected by the interruption of service at least twenty-four (24) hours prior to interruption. Notice shall consist of publication in a local newspaper and/or announcement on local radio or television stations as determined by the Owner.

11.00 PROJECT PHOTOGRAPHS/VIDEOS

It is the Contractor's responsibility to take a sufficient number of pre-construction photographs/videos to resolve any disputes, which may arise regarding the conditions prior to and subsequent to construction. The Contractor shall provide copies of the pre-construction photographs/videos to the Owner prior to the start of work. Any potential problems should be identified at that time.

Progress and record photographs/videos shall be provided by the Contractor as appropriate to resolve any disputes and to completely document the work performed as a supplement to the Record Drawings. In general, the photographs/videos should be sufficient to show that all work was properly completed in accordance with the plans and specifications.

12.00 DAMAGE TO CONSTRUCTION.

The Contractor shall safeguard, until all work embraced by this Contract is formally accepted, all construction, both complete and incomplete, against damage and destruction, and should damage result, he will be required to reconstruct or repair it at his expense in a manner conforming to the Plans and Specifications, reconstruction shall be in a manner suitable to the Engineer.

13.00 PRE-CONSTRUCTION CONFERENCE.

A pre-construction conference shall be held within fifteen (15) days after the *Notice To Proceed*, at the Owner's place of business. The purpose of such meeting shall be to explain as required to the Contractor, the requirements of the Contract Documents, the procedures to be used in the administration of the Contract, the requirements of any funding Agencies, and to discuss any item of concern to the Work. The Contractor, Owner and Engineer, or authorized representative of each, shall be required to attend such meeting as a condition of the Contract.

14.00 BIDDER EXPERIENCE.

Upon request, bidder to provide documentation of relevant experience with reference to a minimum of three (3) projects of similar scope and size. Statement shall include equipment and manpower available for utilization on project. Supervisory personnel for project shall be provided. Qualification information shall be submitted as stated in section 3.0 of the "Instructions to Bidders".

16.00 PERFORMANCE AND PAYMENT BONDS.

Payment and Performance Bonds are required (section 2.26 of the general conditions and Agreement Documents section of the Project Manual).

17.00 WARRANTY INSPECTION.

At the Owner's discretion, a warranty inspection will be held during the sixty (60) calendar days prior to the expiration of the two-year warranty period. Contractor agrees to provide an authorized representative at such inspection to represent Contractor's interests. All defects identified during the inspection shall be corrected at Contractor's expense at direction of Owner in a timely manner. Corrective work shall be commenced within ten (10) calendar days after written notice to Contractor.

19.00 JOB SITE RESTRICTIONS.

19.01 Salvage. All materials to be removed from the project site or demolished on site shall be disposed of by the Contractor off the project site within five days.

19.02 Staging Area. Staging may utilize right of way if the contractor provides adequate warning cones, reflectors, etc. Contractor takes sole responsibility for leaving any equipment or materials in the City right of way.
19.03.Disposal Area. Owner's property is not available for a Contractor disposal area.

19.04 Working Hours. Work will normally be permitted after 7:00 a.m. and before 7:00 p.m. Monday through

Friday. Other work hours must be approved by Engineer in writing. Work may be permitted on Saturday with 48 hours prior notification given to the Owner's representative.

20.00 ARBITRATION.

Anything in the General Conditions of the Contract Documents not withstanding the choice to submit any dispute to binding arbitration shall be solely that of the Owner and no other party to this Contract shall have the right to submit any controversy to binding arbitration.

21.00 PAYMENT RETAINAGE.

Retainage on Pay Estimates shall be five (5) percent.

22.00 REFERENCE TO OWNER.

The City of Rifle will be the Owner of this project and will be referred to as Owner in the Agreement.

23.00 NOTIFICATION TO ADJACENT PROPERTY OWNERS.

Contractor shall provide constant communication with adjacent property owners to schedule and discuss impacts the contractor's work will have on their access and utility service.

Access to property owners adjacent to the work site shall be open at all times unless other arrangements are made a minimum of twenty-four (24) hours in advance.

24.00 DRAWING ACCURACY AND EXISTING UTILITIES.

Contractor shall provide constant communication with adjacent property owners to schedule and discuss impacts the contractor's work will have on their access and utility service.

As such, information relating to locations, sizes, or elevation of existing facilities should be considered only approximate. It shall be the responsibility of the Contractor to contact the appropriate representatives of utility companies, or utility locate companies, a minimum of 48 hours prior to the commencement of Work which might affect utility installations and to secure form such representatives information as to accurate location, size and type of such installations. The Contractor shall assume all responsibility for protection, repair and relocation of all such items encountered. Should repair or replacement be required, work shall be performed according to the requirements of the respective utility company.

25.00 ABBREVIATIONS.

Whenever the following abbreviations are used in these Specifications or on the Drawings, they shall be construed the same as the respective expressions represented:

AASHO or AASHTO	American Association of State Highway Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute, Inc.
AWWA	American Water Works Association
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health & Environment
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard, U.S. Department of Commerce
FED. SPEC.	Federal Specifications
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
OSHA	Occupations Safety and Health Act (Federal and/or State)
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.

25.01 Standard Specifications Reference. Where reference is made in these Specifications to other Standard Specifications, it is the intent that the latest available revisions of the CDOT Standard Specifications referenced be used. All portions of the CDOT Standard Specifications referenced shall be considered a part of these Specifications unless specifically superseded herein.

In case of conflict between the drawings and specifications, the specifications shall govern. Figured dimensions on drawings shall govern over scale dimensions, detailed drawings shall govern over General Drawings and Special Conditions shall govern over Standard Specifications.

Any discrepancies between the drawings and specifications and site conditions; or any inconsistencies, errors, omissions or ambiguities in the drawings or specifications; or any errors or omissions in the layout as given by survey points and instructions shall be immediately reported to the engineer, in writing, who shall promptly verify and correct such inconsistencies or ambiguities in writing. Work performed by the contractor after such discovery, until authorized or corrected by the engineer, shall be done at the contractor's risk.

26.00 PERMITS AND EASEMENTS.

The Contractor shall be responsible for securing any and all access rights he may require for construction convenience with private individuals and landowners. The Contractor shall provide the Engineer evidence of agreements for such access rights. All other permits required should be secured prior to commencement of Work at the Contractor’s own expense.

The successful Contractor will be required to obtain a City of Rifle Contractor’s license for construction operation. Proof of insurance shall be required.

27.00 SUBSTITUTION OF MATERIALS.

At no time shall materials be substituted for those shown on the Drawings or called for in the Specifications unless written approval is obtained from the Engineer in writing prior to construction. Any deviation from the Drawings

and Specifications shall be accompanied by a written directive of the Engineer or his representatives. (See Article 6, General Conditions).

28.00 CONTROLLED AREA OF WORK.

The Contractor shall confine all the construction work and all related activities to the public roadways, utility easements, or construction areas designated by the Engineer. Access and egress to the work area shall be minimized to specific points.

29.00 INTERPRETATION OF ESTIMATED QUANTITIES.

Bidders are cautioned that the estimated quantities in the Bid Schedule are approximate only and are prepared for the comparison of bids. The basic of payment will be actual quantities of work performed and accepted or as stated in the Measurement and Payment section of each specification section. Prior to mobilization the contractor shall present their verification of quantities and final work plan for all aspects of work.

30.00 TEMPORARY FACILITIES.

The Contractor, at his expense, shall provide all necessary temporary facilities for his own convenience or to meet local, state, or federal requirements, including, but not limited to, potable water, sanitary waste facilities, power, telephone, etc. (See Article 6, General Conditions).

31.00 CLEAN-UP.

The Contractor will be responsible for immediately cleaning the job site during and after construction. A continuing effort shall be made through the duration of the contract to keep all areas clean and free of all rubbish, removed vegetation, construction waste, employee waste, debris and other objectionable materials generated from the project. All materials as part of this work shall be disposed off site in an acceptable manner. Final clean-up must be approved and accepted by the Owner before the contract may be considered complete.

32.00 MEASUREMENTS AND PAYMENT.

Payment for work done shall be as defined in *Bid Schedule*. Payment shall be complete compensation for the work unit completed and shall consist of furnishing and installing all materials, plant, equipment, labor and other items related to the work unless otherwise specified. All incidentals not specifically mentioned, but required to complete the Work, shall be paid for as part of the Work unit they are related to. All bid items shall be measured and paid in accordance with the appropriate section of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction unless revised by the Standard or Project Special Provisions.

33.00 SUBMITTALS.

The Contractor shall submit submittal data, as defined in the General Requirements. Submittals shall be required on all items of the submittal schedule contained in the Technical Specifications.

34.00 COMMUNICATION.

Project will demand the need for communication with properties impacted by work performed. The Contractor shall notify, twenty-four (24) hours in advance of work, all property owners that may be affected by his work. This notification shall include times and duration of access or traffic interruptions. Anticipated interruptions shall be discussed with the City representatives daily.

The purpose of public notification is to reasonably inform the public of the work and to allow the public to schedule activities that may be impacted by the work. Owner, through its Representative, may stop work not consistent with the schedules prepared by the Contractor, which in the opinion of the Owner causes unreasonable hardship to the public.

Contractor shall designate an Information Coordinator who shall be on site during all work hours an shall be responsible for:

1. Preparing a weekly work schedule that includes planned type of work and areas of affected by work. Once schedule is confirmed, the City shall prepare door hangars for the Contractor to distribute the week prior.

2. Communication with adjacent properties of any change to traffic control that may affect their access via written notice for residents. The Contractor is responsible for any follow-up communications with residents after the initial door hangars are provided.

3. Communication with the media or by other means as appropriate, planned/scheduled changes in traffic control and other items that will affect the public traveling through the site. Also communicate with emergency services as to location of work and impacts.

4. Coordinate performed work to be consistent with weekly work schedule.

End of Section

Technical Specifications

These Technical Specifications supplement the specifications provided in the City Of Rifle Public Works Manual. All provisions, which are not so amended or supplemented, remain in full force and effect.

Submittal Schedule

Submittals on the items below must be accepted by the City Of Rifle prior to commencement of work.

_____Crack Sealing Product Data
_____Crack Sealing Installation Instructions
_____Mastic Product Data
_____Mastic Installation Instructions

Crack Sealing

I General

Submittal Requirements

- Product Data
- Installation Instructions

1. Joint seal material found to cause application problems or found to result in unsafe conditions prior to or during use will be just cause to cancel the existing contract immediately and the supplier will be responsible for the removal of any remaining sealant stored on Agency property.
2. Sealant boxes shall be manufactured from double wall board producing a minimum bursting test certification of 350 PSI (241N/cm2) and water resistant adhesives.
3. Palletized units shall be protected from weather by using a three (3) mil plastic bag weather and moisture resistant white in color (not transparent) cap sheet and a minimum of two (2) layers of six (6) month U.V. protected stretch wrap.
4. Each pallet shall contain a copy of the sealant Installation Instructions enclosed in a weather resistant enclosure.
5. Each sealant box container shall be labeled for easy visual identification (application & safe heating temperature, lot/batch/ID information, safety information)
6. Manufacturer shall supply a detailed safety instruction manual.

II Products

Deery Super Stretch

III Execution

Each sealant box container shall be labeled for easy visual identification (application & safe heating temperature, lot/batch/ID information, safety information). All installations must be per the manufacturer's recommendation.

Mastics

I General

Submittal Requirements

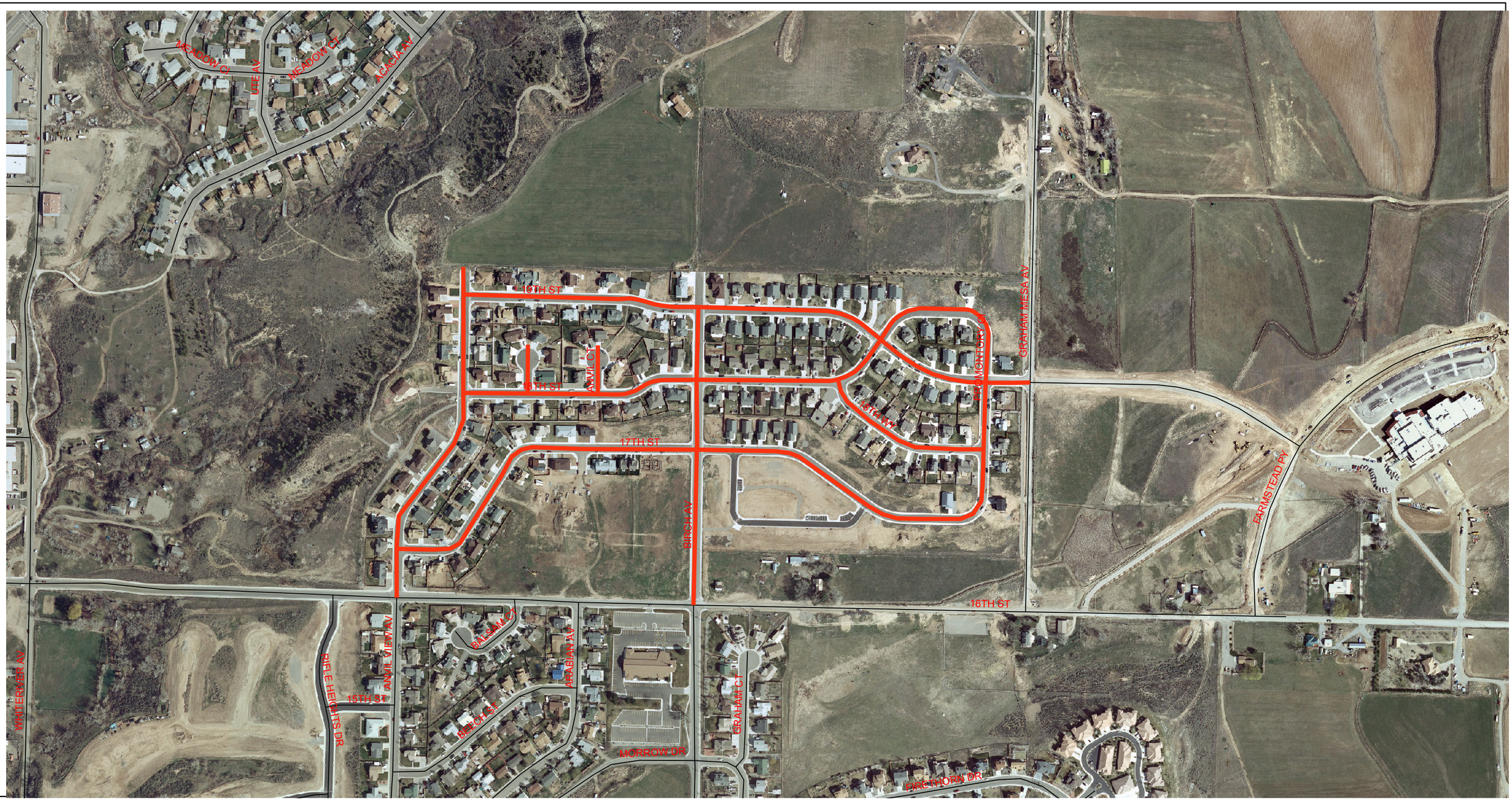
- Product Data
- Installation Instructions

II Products

- Crafco Mastic One
- Maxwell Gap Mastic
- Deery Level and Go

III Execution

Each sealant box container shall be labeled for easy visual identification (application & safe heating temperature, lot/batch/ID information, safety information). All installations must be per the manufacturer's recommendation.



Legend

Legend

Crack Seal

City of Rifle
2022 Crack Seal

N

Coordinate System: NAD 1983 UTM Zone 13N
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -105.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

CITY OF RIFLE
PURCHASE REQUEST

1.	**Vendor Name** NEW: W-9 attached ☐
	Armor Proseal, Inc.

2.	**Vendor Address**
	563 6530 Road
	Montrose, CO 81401

3.	**For the Purchase of (description)**
	Construction of 2022 Crack Sealing

4.	**Amount Requested**	**Amount Budgeted**	**Finance Director Verified Funds Avail.**
	$37,976.41	$50,000	

5.	**Dept. Name**	**General Ledger Acct #**
	Public Works	201-4312-400-641

6.		**Type of Purchase**
	x	Capital Construction
		Capital Construction – Change Order
		Capital Equipment
		Plant Equipment
		Materials, supplies, non-profession/technical services (includes computer/software maint.)
		Professional Services
		Utilities (includes equipment installation)
		Land, easements, ROW

7.		**Purchasing Process Required**
		Cooperative Purchasing
		Open Market
		Comparative Pricing
		Request for Proposal (attach bid tab)
	x	Formal Bid (attach bid tab and advertisement)
		Single Source (attach an explanation)

8.		**Authorization Required**
		City Manager
	x	City Council

9.	**Signatures**		
	Position	**Signature**	**Date**
	Department Director		
	City Manager		
	City Council Approval (meeting date)		
10.	**Purchase Order # assigned by Finance**		

General summary of purchasing ordinance (Section 4, Art. III)

TYPE OF CONTRACT	ESTIMATED AMOUNT	PROCESS	Purchase Order? Purchase Request?	**CITY COUNCIL APPROVAL** REQUIRED?
Capital Construction	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3) vendors/suppliers)	Purchase Request	
	$20,001-$100,000	Competitive Bid (see Code Sec 4-3-40)		
	> $100,000	Bonded Competitive Bid		
Capital Construction Change orders	< = 10% of approved contract	When total change orders to date are < 10% - Dept Head or City Manager Approval	Purchase Request	Yes if total change orders to date are greater than 10%
	> 10% of approved contract			
Capital Equipment	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	> $20,000	Competitive Bid (see Code Sec 4-3-40)		
Plant Equipment Replacement (purchases necessary for replacement of existing equipment that is component part of any water, wastewater, or physical plant)	< $7,500	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $75,000
	$7,500-$75,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	>$75,000	Competitive Bid (see Code Sec 4-3-40)		
Materials, Supplies, Non-Professional Services and Technical Services (including software/hardware maintenance technical services)	< $10,000	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $20,000
	>$10,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
Professional Services (note- process for appointed positions such as auditor, attorney, engineer, or municipal judge to be determined by Council)	< $25,000	Open Market (informal evaluation by purchasing agent)	All - Purchase Request	Yes if anticipated to exceed $25,000 per year to a single vendor
	> = $25,000	Written requests for written proposals must be sent to at least 3 firms or individuals		
Utilities including installation of equipment (purchases to secure utility services such as natural gas, electricity, local telephone, water, or sewer)	any amount	Single Source (negotiations, where appropriate, after good faith determination that only one viable source exists in relevant supply area - keep records for one year)	> $5,000 - PO >= $5,000 - Purchase Request	No
Real Property Interest (including easements and rights of way)	any amount	Single Source (see above)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $5,000.

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #7.d.

Agenda Item Name:
Consider Awarding Contract to Velocity Constructors Inc., for Construction Services on the Rifle Airport 0.5MG Water Tank

Presenter:
Craig Spaulding, Civil Engineer

Item Description:
This project will install a new 500,000 gallon water tank adjacent to an existing tank and also coat the existing tank after putting the new tank into service. To complete this work the scope shall include but is not limited to all scheduling, coordination, submittals, quality control, acquisition, installation, closeout, and warranty for the following tasks: Site Preparation, Underground Utilities, Foundations, Steel Tank (design, fabrication, erection…), Controls, Tank Coatings, and Site Restoration.

Recommended Action:
Move to approve the contract for construction services in the amount of $3,016,830 for the Rifle Airport .5MG Water Tank Project to Velocity Constructors Inc.

Fiscal Impact:
See Budget Supplemental Agenda Item

Operational Impact:
N/A

Prior Board Motions:
N/A

Background Information:
The new water tank is needed to re-coat the existing tank which is part of this project. Reasons the tank is needed and why pumps cannot be used are below:

For just Domestic:
Without any fire flows and in the current configuration, the graham mesa tanks may possibly supply water to CMC and the airport at low pressures (less than 50psi). Pressures at the other buildings would be even lower and no water would get to the county shop. To serve the domestic water in the airport area without a tank, you would need booster pumps. To avoid the pumps operating at varying demands every time water is used, a tank would still be beneficial with just booster pumps. The tank would not need to be very large but would still be needed to ease the demand on the pumps and provide emergency volume for planned and/or

unplanned shutoffs.

For Fire Flows:

With fire flows, the need for high flow rates comes into play. High flow rates increase pressure drop and require more pressure at the pumps. To supply the 2500gpm to the airport that was said to be needed would require a pump pressure of around 90psi which would put the waterline pressure at around 190psi. This pressure is near the pressure rating of the system, which is a high risk if demand for a fire is needed. The other downside to this is putting high flows between the pump and the Graham Mesa tank, which may cause water discoloration and potential failure at the elbows and tees. The water tank can supply the same flow rates as the pump at normal operating pressures isolated from the rest of the system. This increases the reliability of the fire suppression requirements without risking the remaining system (which includes the hospital).

Summary:

A tank of some form is needed for domestic water and fire flows. The necessity to supply reliable fire flow at reliable pressures without compromising the remainder of the system is why we need the tank we have now. The additional tank is needed for maintaining the existing tank. CDPHE recommends draining and touching up coatings every 3-4 years, which means that the need for the additional tank is not a one-time thing.

Executive Summary:
N/A

Notification Requirements:
N/A

Prepared By:
Craig Spaulding, Civil Engineer

Attachments:
1. .5MG Water Tank-Project Manual
2. Velocity Constructors Bid Submittal
3. Airport tank-1MG sog report (2020)
4. Basis of Design Report-BDR
5. Airport Water Tank Addendum 2 4-26-22
6. PURCHASE REQUEST-AP Water Tank_Velocity 5-26-22

PROJECT MANUAL

RIFLE AIRPORT 0.5 MG WATER TANK

Rifle, Colorado

For Bidding and Construction of

Site Improvements and Tank Fabrication, Erection, Cathodic Protection, Painting and a Reservoir Hydrodynamic Mixing System

City of Rifle
202 Railroad Avenue
Rifle, CO 81650

Boundaries Unlimited Inc.
923 Cooper Avenue, Suite 201
Glenwood Springs, CO 81601
970.945.5252

March 31, 2022

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www.rifleco.org/821/Public-Works-Manual

DIVISION 03 – CONCRETE

City Public Works Manual
Section 10 – Concrete
www.rifleco.org/821/Public-Works-Manual

DIVISION 04 – MASONRY *(NOT USED)*

DIVISION 05 – METALS *(NOT USED)*

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Section 45 – Plant Landscaping
www.rifleco.org/821/Public-Works-Manual

DIVISION 32 – EXTERIOR IMPROVEMENTS

City Public Works Manual
Section 36 – Chain Line Fences and Gates
www.rifleco.org/821/Public-Works-Manual

DIVISION 33 – UTILITIES

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SECTION 00 41 13 – GMP PROPOSAL

This GMP Proposal is for the construction of the Rifle Airport 0.5 MG Water Tank. As indicated in the Contract Documents, the GMP may relate to the entire scope of the Project or to a portion of the Project, if the Project is being completed in multiple construction packages

1.01 GMP RECIPIENT

A. This GMP Proposal is submitted to:

City of Rifle
202 Railroad Avenue
Rifle, CO 81650
Attention: Robert Burns, Utility Director

B. The undersigned Contractor (CM/GC) proposes and agrees, if the GMP Proposal is accepted, to execute the Agreement in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the GMP and within the Contract Times indicated in the GMP Proposal and in accordance with the other terms and conditions of the Contract Documents and acknowledges the following.

1.02 CONTRACTOR'S ACKNOWLEDGEMENTS

Contractor accepts all of the terms and conditions of the Contract Documents. The GMP Proposal will remain subject to acceptance for 14 calendar days after it is received by the Owner, or for such longer period of time that Contractor may agree to in writing upon request of Owner. Contractor will sign and deliver the required number of counterparts of the Construction Services Agreement with the bonds and other documents required by the Construction Services Agreement within the time periods set forth in the Contract Documents.

1.03 CONTRACTOR'S REPRESENTATIONS

A. In submitting this proposal, Contractor represents, as more fully set forth in the Construction Services Agreement, that:

1. Contractor has examined and carefully studied the Contract Documents, other related data identified in the Contract Documents, if any, and the following Addenda, receipt of all of which is hereby acknowledged:

   (List Addenda by Addendum Number and date received).

ADDENDA	DATE

2. Contractor has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance of the Work.

3. Contractor is familiar with and is satisfied as to all Laws and Regulations

that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied all:

   a. Reports of explorations and tests of subsurface conditions at or contiguous to the Site and drawings of physical conditions relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities), if any, that have been identified in the Supplementary Conditions in SC-4.02 as containing reliable “technical data.”

   b. Permits to construct the work and applicability of any other permits necessary to complete the Work.

   c. Grant funding accounting requirements associated with the welded steel tank.

B. Contractor has considered the information known to Contractor, information commonly known to contractors doing business in the locality of the Site, information and observations obtained from visits to the Site, the Contract Documents, and the Site- related reports and drawings identified in the Contract Documents with respect to the effect of such information, observations, and documents on:

   a. The cost, progress and performance of the Work.

   b. The means, methods, techniques, sequences and procedures of construction to be employed by Contractor, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents to be employed by Contractor; and

   c. Contractor’s safety precautions and programs.

2. Based on the information and observations referred to herein, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this GMP for performance of the Work within the times required and in accordance with the other terms and conditions of the Contract Documents.

3. Contractor is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which the GMP Proposal is submitted as indicated in the Contract Documents.

4. Contractor has given Resident Engineer, or Construction Inspector, written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Resident Engineer, Construction Inspector, or Engineer as the case may be, is acceptable to Contractor, and those documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which the GMP Proposal is submitted.

5. The Contract Documents are sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this GMP Proposal is submitted.

6. Contractor has reviewed and shall meet all Grant Funding Agency

requirements for this Work.

7. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

1.04 CONTRACTOR'S CERTIFICATION

A. Contractor certifies that:

1. This proposal is genuine and is not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;

2. Contractor has not directly or indirectly induced or solicited any other Contractor to submit a false or sham Proposal;

3. Contractor has not solicited or induced any individual or entity to refrain from proposing; and

4. Contractor has not engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract. For the purposes of the Paragraph 1.04.A.4;

a. "Corrupt practice" means the offering, giving, or soliciting of anything of value likely to influence the action of a public official in the procurement process.

b. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the Contractor proposal process to the detriment of Owner, (b) to establish GMP at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. "Collusive practice" means to scheme or arrangement between two or more Proposers, with or without the knowledge of Owner, a purpose of which is to establish GMP at artificial, non-competitive levels.

d. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the proposal process or affect the execution of the Contract.

1.05 GMP PROPOSAL FORM

A. Contractor (CM/GC) will complete the Work in accordance with the Contract Documents and accept in full payment for the Work items listed in the attached detailed estimate. The blanks indicated in the GMP Proposal form below must be fully and properly filled out by the CM/GC. The CM/GC shall obtain any clarifications regarding the use of the proposal from the City's Resident Engineer, or Construction Inspector, prior to submitting the GMP.

GMP Proposal Form			AMOUNT
A.	Cost of the Work – Self Performed		$
INDIRECT COSTS		RATE	
B.	Construction Fee	6.5%	$
C.	Subtotal (Self-Performed)		$

D.	Cost of the Work – Subcontracted				$
INDIRECT COSTS				RATE	
E.	Construction Fee			5.0%	$
F.			Subtotal (Subcontracted)		$
G.			Sum of Items (C & F)		$
H.	General Conditions Fee (applied to items A and D)			7.57%	$
	H1	Payment and Performance Bonds	$		
	H2	Insurance	$		

I.	Applicable Taxes		$
J.	CM/GC Contractor's Contingency		$
K.	Proposal Request PR-1		$
K1.	(Future Proposal Request)		$
K2.	(Future Proposal Request)		$
		L. GMP (Sum of Items G-J and approved Proposal Requests)	$
OTHER COSTS			
M.	Owner Contingency (Optional)		$
		N. CONTRACT PRICE	**$**

1.06 TIME OF COMPLETION

A. Contractor will achieve Substantial Completion, as defined in the Contract Documents, within (150) calendar days from the Notice to Proceed, as stated in the Construction Services Agreement.

B. Contractor agrees to apply for Final Payment, as defined by the Contract Documents, within (60) calendar days from achieving Substantial Completion, as stated in the Construction Services Agreement.

C. Contractor accepts the provisions of the Construction Services Agreement as to liquidated and additional delay damages in the event of failure to achieve milestones or to substantially complete the Work within the Contract Times.

D. In addition, Contractor agrees to meet the specified interim Milestones as defined in the Contract Documents.

1.07 ATTACHMENTS TO THIS GMP PROPOSAL

A. The following documents are attached to and made a condition of this GMP Proposal:

1. When requested, Contractor shall submit evidence of authority and qualification to do business within the State of Colorado, or agreement, in writing to obtain such authority and qualification prior to the Notice to Proceed, when requested by the Owner.
2. Contractor shall submit a forecasted cash flow for the duration of construction displaying by month the total amounts of anticipated pay application amount for evaluation by Owner.
3. Contractor shall submit brief qualification statements and resumes of staff to be committed by specialty subcontractors, or design-build contractors to the project when requested. For example, welded steel tank erector.

B. The following documents shall be submitted to the Owner with the submittal of the GMP Proposal.

1. Cover
2. Table of Contents
3. Name of Project and Description of the Construction Package if applicable, and its components.
4. GMP Proposal and the following attachments:
   a. Detailed Estimate upon which GMP is based
   b. Schedule of Work to be Self-Performed, if any, as stipulated by Owner.
   c. Schedule of Subcontractors and Suppliers (part of construction services agreement)
   d. Statement of MBE/WBE and Female participation in each Trade and letter(s) of Intent, if applicable.
5. Schedule of Values (SOV)
6. GMP Proposal clarifications and assumptions

7. Project Schedule
8. GMP Documents (1 set with face marked as the basis of the GMP Proposal)

1.08 DEFINED TERMS

A. The terms used in the GMP Proposal with initial capital letters have the meanings stated in the General Conditions and Supplementary Conditions.

1.09 GMP PROPOSAL

This GMP Proposal is submitted on:_____

Complete the appropriate section regarding the CONTRACTOR'S business affiliation:

A. An Individual

Name (Typed or Printed):_____

By _____

(Individual's Signature)

Doing business as _____

License or Registration Number:_____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

B. A Partnership

Partnership Name:_____

By:_____

(Signature of General Partner - Attach evidence of authority to sign)

(Name (Typed or Printed):_____

License or Registration Number: _____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

C. A Corporation

Corporation Name:_____

_____

(State of Incorporation)

By_____

(Signature - Attach evidence of authority to sign)

Name and Title (Typed or Printed):_____

(CORPORATE SEAL)

Attest:_____

(Secretary)

License or Registration Number:_____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

D. Limited Liability Company

Firm Name:_____

_____

(State of Formation)

By:_____

(Signature of Member/Authorized to Sign)

_____

(Printed or Typed Name and Title of Member Authorized to Sign)

(Attach evidence of authority to sign.)

License or Registration Number:_____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

E. A Joint Venture

Name of Joint Venture:_____

First Joint Venturer Name:_____

By:_____

(Signature of First Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed):_____

Title:_____

Second Joint Venturer Name:_____

By_____

(Signature of Second Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed):_____

Title:_____

(Each Joint Venturer must sign. The manner of signing for each individual, partnership, corporation or limited liability company that is a party to the joint venture shall be in the manner indicated above).

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

1.10 LIST OF SCHEDULES

1. SCHEDULE OF WORK TO BE SELF PERFORMED AS STIPULATED BY THE PARTIES
2. SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

SCHEDULE OF WORK TO BE SELF PERFORMED AS STIPULATED BY THE PARTIES

To enable the City to evaluate the Contractor's GMP Proposal, the Contractor shall identify by list all portions or aspects of the work that will be self-performed by the Parties that may include earthwork, process mechanical, aspects of concrete work, and yard piping. Payment for self-performed work will be paid on the basis agreed to in the GMP Proposal. The following information shall be provided:

A. Description of Work

B. Value

SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

To enable City to evaluate the Contractor's GMP Proposal, the Contractor shall nominate all Subcontractors, persons, firms and corporations (including those who are to furnish items of material and equipment) to whom the Contractor may award a Subagreement valued at greater than $10,000. If Contractor has not determined the Subcontractors to whom contracts will be awarded, all Subcontractors who have been, or will be, contacted to submit a proposal should be listed. Payment for subcontracted work will be paid on the basis agreed to in the GMP Proposal. For each nominated Subcontractor, person, firm, or corporation, the following information shall be provided:

A. Subcontractor's or Supplier's Name

B. Description of Work or Materials

C. Value

D. Contact Person's Name

E. Contact Person's E-mail

F. Contact Person's Phone Number

G. Disadvantage Business Status (i.e., MBE, WBE, Status, when applicable)

H. Female Participation (in each trade, when applicable)

- END OF SECTION -

SECTION 00 51 01 – NOTICE OF AWARD

Date:_____

Project: Rifle Airport 0.5 MG Water Tank	
Owner: City of Rifle	Owner's Contract No.:
Contact: Craig Spaulding	Engineer's Project No.: 20034.01
Contractor:	
Contractor's Address:	

You are notified that your GMP Proposal dated_____for the above Contract has been considered. You are awarded the above Contract for the Rifle Airport 0.5 MG Walter Tank.

The Contract Price of your Contract is:

_____Dollars

and_____Cents. ($_____).

One (1) electronic (PDF) copy and two (2) printed copies of the proposed Contract Documents, including 11-inchx17-inch Drawings accompany this Notice of Award.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner one (1) fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders and General Conditions (Paragraph 5.01).
3. Deliver Insurance Certificates

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

City of Rifle_____
Owner

By:_____
Authorized Signature

_____
Title

Copy to Resident Engineer

Copy to Engineer

SECTION 00 52 13 – CONSTRUCTION SERVICES AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year _____, by and between the City of Rifle, 202 Railroad Avenue, Rifle, Colorado 81650 (hereinafter called Owner) and

_____,

(hereinafter called Contractor). The Owner and Contractor may be referred to in this agreement, individually, as a "Party" and together as the "Parties."

WITNESSETH: The Parties, in consideration of the mutual covenants hereinafter set forth in this Agreement and other Contract Documents (defined below, which include additional terms, conditions, and promises, obligations, and considerations between or among the Parties, agree as follows:

1.01 WORK

A. Contractor shall at its own cost and expense furnish all labor, services, tools, materials, equipment and incidentals necessary to complete all Work as specified or indicated in the Contract Documents to construct the Rifle Airport 0.5 MG Water Tank. The Work is generally described in Section 1.02 below.

1.02 PROJECT

A. The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

1. Sediment and Erosion Control measures
2. Earthwork, Over-excavation, Structural Fill, Hauling, Grading, Drainage, Fencing, Paving, Restoration
3. Concrete Ring-wall Foundation
4. Welded-Steel Tank and Accessories - Procurement and Erection.
5. Associated Piping and Instrumentation.
6. Reservoir Hydrodynamic Mixing System
7. Painting of Exterior and Interior of Tank
8. Solar Powered Cathodic Protection

B. As indicated in the Contract Documents, the Work associated with the GMP may be all Work for the entire Project or may be for a portion of the Project, if the Project is being completed in multiple construction packages.

1.03 ENGINEER

A. Resident Engineer and Engineer

1. The Owner retained Boundaries Unlimited Inc. (BU), 923 Cooper Avenue, Suite 201, Glenwood Springs, Colorado 81601, to design the Project and to perform certain services during construction. Together, Boundaries Unlimited Inc., and their sub-consultants and representatives are referred to in this agreement and the Contract Documents as the "Engineer".
2. The Owner has designated an employee of Owner to serve as the

"Resident Engineer", who is named in this Construction Services Agreement below.

B. Authority of Resident Engineer, Engineer, and limitations on Authority of Engineer.

1. The Contractor shall rely on the Resident Engineer to be Contractor's point of contact with the Engineer and Owner with respect to all matters concerning the Project, notwithstanding any provision in the Contract Documents to the contrary.

2. If and to the extent that the Contract Documents extend authority to the Engineer to render any decision, directive, instruction, order, notice, interpretation, or other such act or communication, only the Resident Engineer has such authority. However, the Resident Engineer may delegate this authority, in whole or in part, to the Engineer, as necessary and in a manner consistent with the procedures set forth in the Contract Documents.

3. The Contractor is responsible for any delay, cost, expense, breach, or damage caused by any unauthorized reliance on the act, decision, directive, instruction, order, notice, interpretation, or other such act or communication of the Engineer that has not been delegated to the Engineer by the Resident Engineer.

4. Regardless of any delegation of authority to the Engineer, the Resident Engineer shall be informed, and his written consent obtained, with respect to any exercise of authority by the Engineer that will cause a change to the Contract, an increase in Contract Price or Contract Times, or a change in the Work to be performed and delivered by the Contractor under the Contract Documents. Contractor is responsible for any failure by Contractor to notify and obtain this written consent of the Resident Engineer as required under this Section.

C. Other Project Representatives

1. A "Project Advisor" has been assigned to perform certain technical analysis and other services, on behalf of the Owner. The scope of authority of the Project Advisor is defined within the Contract Documents. The Project Advisor has no decision-making authority or authority to act or speak on behalf of, render any binding interpretations or decisions, or otherwise bind the Owner under this Construction Services Agreement or the Contract Documents, provided however, that the Project Advisor will serve as the administrator of claims as further provided in the General and Supplementary Conditions.

D. Identity of Project Representatives

1. The following are the Resident Engineer and the Project Advisor. They serve at the discretion of the Owner and may be removed or replaced by Owner at any time.

2. The Resident Engineer is _____, in his capacity as staff engineer for the City of Rifle. The Owner may designate a temporary or interim Resident Engineer to act on behalf of _____

during his absences from the project, if any. The Resident Engineer (or as the case may be, any temporary or interim Resident Engineer) shall have the authorities addressed in these Sections and the Contract Documents. The Owner will retain all rights, authorities, responsibilities, and duties that it possesses, exclusively or in conjunction with others, under the Contract Documents.

3. The Project Advisor is a City of Rifle employee, Robert Burns, whom holds the position of Utility Director.

1.04 CONTRACT TIMES

A. Time of the Essence

1. Time is of the essence with respect to all Milestones, Substantial Completion, Final Completion, readiness for final payment, and any other deadline or time limit imposed on Contractor under the Contract Documents.

2. The work associated with the Milestones indicated in paragraph Section 1.04.C shall be completed in the Contract Times indicated in paragraph 1.04.C. Otherwise, the provisions addressing Contractor's failure to timely achieve these Milestones, as set forth in paragraphs 1.04.C and 1.04.D, will apply. By liquidating or otherwise defining Owner's rights upon certain delays caused by Contractor, the Parties agree that no waiver has occurred with respect to other rights or claims that are not specifically addressed in paragraphs 1.04.C or 1.04.D.

B. Dates for Substantial Completion and Final Payment

1. The Contractor shall achieve Substantial Completion within the number of calendar days as shown in Section 1.06 of the GMP proposal after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions. The Work shall be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within (210) calendar days from the date when the Contract Times commence to run. These durations and Contract Times may be modified upon the mutual agreement of the Parties, in writing, and otherwise as provided in the Contract Documents.

C. Liquidated Delay Damages

1. Owner and Contractor agree that time is of the essence of this Construction Services Agreement and that Owner will suffer financial loss and other damages if the Contractor fails to achieve certain Milestones, in the Contract Times specified in this Construction Services Agreement, as they may be amended from time to time. Unless otherwise stated herein, liquidated damages may not be deducted from the Contractor's (CM/GC) Contingency.

2. Owner and Contractor agree that the Owner is engaged in the delivery of municipal services using an aging water storage reservoir which is currently in use, that the Project is intended to allow the existing storage reservoir to be taken out of service for rehabilitation, that the Owner will be implementing a phased transfer of services from the existing facilities to the Project facilities, that with respect to the Project, Owner will be

subject to procurement, regulatory, tax, third party contract, and other deadlines and that Owner will be taking certain actions in reliance on Contractor's timely achieving the Milestones referenced, and in sequence, set forth below.

3. Owner and Contractor further agree that the actual damages resulting from the failure of Contractor to timely achieve these Milestones will be uncertain, difficult, or impossible to ascertain and that the costs and difficulties involved in proving such damages will be significant.

4. Accordingly, to prevent legal proceedings with respect to certain delays, or to minimize the cost of such proceedings should they become necessary for any reason, Owner and Contractor agree that Contractor will be liable to Owner in the liquidated damages amounts described below with respect to any failure by Contractor to timely achieve the Milestones set forth below.

5. Owner and Contractor agree that these liquidated damages are a reasonable estimate of the damages of the time-value of such delays. Contractor further agrees that if Substantial Completion is not timely accomplished, Owner may incur, and that Contractor may be liable for, other damages, in addition to the below detailed liquidated damages, as further provided in Section 1.04.D below.

6. If and to the extent that Owner determines that it is responsible, in whole or in part, for any inability of Contractor to timely achieve the below-referenced Milestones, Owner may extend the Contract Times to account for Owner's contribution to any delay. Otherwise, the Milestone or other deadlines will be deemed extended in proportion to the Owner's contribution for the delay. The liquidated damages provision will then apply to that portion of the delay caused by Contractor.

7. The delay damages liquidated under this Section pertain only to (i) the detriments experienced by Owner in reliance upon the Contractor's promise to accomplish the Milestones in the time and in the sequences provided below (and the Contractor's failure to accomplish such times and sequences) and (ii) the direct marginal costs experienced by the Owner resulting from the prolonged normal operations of Owner's existing facilities, which facilities are antiquated and inefficient, No other direct or consequential damages to the Owner, including the damages set forth in Section 1.04.D, are addressed, liquidated, or otherwise limited by this Section 1.04.C.

LIQUIDATED DELAY DAMAGES

Milestone No.	Milestone* Description	Completion Required By	Liquidated Damages
1	Substantial Completion (including interior painting, testing, and disinfection.	150 calendar days from NTP	$1500/day
2	Submittal of red-lined as-built drawings and all other closeout submittals, complete demobilization, and readiness for Application for Final Payment	210 calendar days (or other mutually agreeable duration) from NTP	$100/day

*For the purposes of this Article, the term Milestone includes Substantial Completion and completion of the Work so that it is ready for final payment.

D. Additional Delay Damages for Failure to Timely Achieve Substantial Completion.

1. In addition to the liquidated damages set forth in Section 1.04.C, Contractor shall be liable to Owner to the extent of the actual costs reasonably incurred by Owner for engineering, construction administration, inspection and any forces employed by Owner on account of Contractor's failure to achieve Substantial Completion in the Contract Times set forth in section 1.04.B.1, including extensions, if any.

2. After Substantial Completion, if Contractor neglects, refuses or fails to complete the remaining Work within the applicable Contract Time or any proper extension thereof, Contractor shall be liable to Owner in the amount of the actual costs reasonably incurred by Owner in aid of the completion of the remaining Work.

E. Owner may deduct any damages as determined under this Section 1.04 from retainage or may set-off any other amount due Contractor under this Construction Services Agreement.

F. The delay damages set forth in this Section shall not be construed as a waiver of any other right or claim, not otherwise addressed in this Section, to which Owner may be entitled under the Contract Documents or applicable law.

1.05 CONTRACT PRICE

A. Owner shall pay Contractor, in current funds, for completion of the Work associated with the Contract Documents an amount equal to the Contract Price on the Owner accepted GMP Proposal less any Contractor's (CM/GC) Contingency not expended due Owner and less any Owner's Contingency due Owner.

$_____

(Figures)

_____

(Written Words)

B. All specific cash and contingency allowances are included in the above Contract Price and have been computed in accordance with Paragraph 11.02 of the General Conditions.

1.06 PAYMENT PROCEDURES

A. Submittal and Processing of Payments

1. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed as provided in the General Conditions.

B. Progress Payments; Retainage

1. Owner shall make monthly progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by the Resident Engineer, or Construction Inspector. Contractor's Applications for Payment will be due on the 20th day of the month. All progress payments will be on the basis of the progress of the Work measured by the Schedule of Values to be provided in accordance with Paragraph 2.07.A of the General Conditions (or, in the case of Unit Price Work, based on the number of units completed, or other specified basis).

a. Prior to Substantial Completion

1) Contractor may apply for progress payments in accordance with Paragraph 14.02 of the General Conditions. Progress payments will be permitted in the amount of 95 percent of the amount set forth on the Schedule of Values relating to the Work completed (with the balance being retainage), less the aggregate of any progress payments previously made and less such amounts as Resident Engineer, or Construction Inspector, determines, or Owner may withhold, in accordance with Paragraph 14.02 of the General Conditions.

C. Final Payment:

1. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Resident Engineer, or Construction Inspector as provided in said Paragraph 14.07, subject to any set-offs to which Owner may be otherwise entitled.

1.07 INTEREST

A. All moneys not paid when due hereunder shall bear interest at one percent per annum.

1.08 CONTRACTOR'S REPRESENTATIONS

A. As part of the inducement for Owner to enter into this Construction Services Agreement Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents.
2. Contractor has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
4. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable “technical data,” and (2) All permits authorizing construction.
5. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site- related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on:
   a. The cost, progress, and performance of the Work;
   b. The means, methods, techniques, sequences and procedures of construction to be employed by Contractor, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents, and;
   c. Contractor’s safety precautions and programs.
6. Based on the information and observations referred to in Section 1.08.A.5 above, Contractor does not consider that further examinations, investigations, explorations, tests, studies or data are necessary for the performance of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.
7. Contractor is aware of the general nature of work to be performed by

Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

8. Contractor has given Resident Engineer, or Construction Inspector, written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Resident Engineer, or Construction Inspector is acceptable to Contractor.

9. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

1.09 CONTRACT DOCUMENTS

A. The Contract Documents consist of the following:

1. GMP Proposal Form.
2. Notice of Award.
3. This Construction Services Agreement.
4. Performance Bond.
5. Payment Bond.
6. General Conditions.
7. Supplementary Conditions.
8. GMP Specifications as listed in the table of contents of the Project Manual
9. GMP Drawings comprising a set entitled “Rifle Airport 0.5 MG Water Tank” dated _____.
10. Addenda consisting of Numbers____ through_____, inclusive.
11. Permits and information as listed in the table of contents of the Project Manual.
12. The following, which may be delivered or issued on or after the Effective Date of the Agreement, and are not attached hereto:
    a. Notice to Proceed
    b. Field Orders
    c. Work Change Directives
    d. Change Order(s)

B. The Contract Documents listed in Section 1.09.A 1 through 12 above are attached to this Construction Services Agreement (except as expressly noted otherwise above). Documents not attached are incorporated by reference. There are no Contract Documents other than those listed in Section 1.09.A 1 through 12.

C. The Contract Documents may only be amended or supplemented as provided in Paragraph 3.04 of the General Conditions.

D. The Contract Documents will comprise the entire agreement among the Parties. They are complementary and intended to provide that what is called for by one

document is binding as if called for by all. For the purposes of interpreting the Contract Documents, the definitions of words and phrases specifically defined in the General Conditions will control, unless otherwise provided in the Supplemental Conditions or the Construction Services Agreement. Otherwise, when words or phrases that have a well-known technical, construction industry or trade meaning are used to describe the Work, materials or equipment, these words and phrases will be interpreted accordingly.

To the extent that the foregoing provisions do not resolve a question of interpretation, conflict, or inconsistency between and among the Contract Documents, the question, conflict, or inconsistency will be resolved by giving the documents precedence in the following order:

1. Contract Modifications, including Change Orders, Work Change Directives and Field Orders.
2. This Construction Services Agreement and Addenda
3. Supplementary Conditions
4. General Conditions
5. Permits from Agencies
6. Division 01 Specifications – General Requirements
7. Drawings
8. Division 02 through 48 – Technical Specifications
9. Reference Standards and Specifications

Any conflict or inconsistency in the Contract Documents that cannot be resolved solely by reference to the foregoing provisions, including the foregoing order of precedence, will be submitted first to the Resident Engineer for interpretation, then, if necessary, to the Project Advisor, for interpretation according and subject to the claims procedures set out in the General and Supplementary Conditions. The Resident Engineer and Project Advisor may consider the foregoing order of precedence in rendering their interpretation, but they will in any event retain unqualified discretion to render an independent judgment.

1.10 MISCELLANEOUS

A. Terms

1. Terms used in this Construction Services Agreement will have the meanings indicated in the General Conditions and the Supplementary Conditions.

B. Funding Agency Language Requirement (Not Used)

C. Successors and Assigns

1. Owner and Contractor each binds itself, its partners, successors, assigns, agents, and representatives to the other party hereto, its partners, successors, assigns, agents, and representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

D. Severability

1. Any provision or part of the Contract Documents, held to be void or unenforceable for any reason shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the Parties, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

E. Waiver

1. The waiver by the Owner of any breach or violation of any term, covenant, or condition of this Construction Services Agreement or of any Law or Regulation shall not be deemed to be a waiver of any other term, covenant, condition, or Law or Regulation or of any subsequent breach or violation of the same or of any other term, covenant, condition, or Law or Regulation. The subsequent payment of any monies or fee by the Owner which may become due hereunder shall not be deemed to be a waiver of any preceding breach or violation by Contractor of any term, covenant, and condition of this Construction Services Agreement or of any applicable Law or Regulation.

F. Prevailing Party

1. In the event of any litigation, arbitration, proceeding, or other action arising from breach or enforcement of any of the Contract Documents, the prevailing party will be entitled to recover from the non-prevailing party all reasonable expenses, costs, and disbursements incurred, including but not limited to staff time, court costs, attorney's fees, expert fees, and costs, fees and costs related to any third party neutral, and all other related expenses.

G. Necessary Acts, Further Assurances

1. The Parties shall at their own cost and expense execute and deliver such further documents and instruments and shall take such other actions as may be reasonably required or appropriate to evidence or carry out the intent and purposes of this Construction Services Agreement or to show the ability to carry out the intent and purposes of this Construction Services Agreement.

H. Headings of Articles, sections, Subsections

1. The headings of Articles, Sections, and subsections used within the Contract Documents are included solely for convenience and reference of the reader. They have no significance in the interpretation or construction of the Contract Documents.

I. Waiver of Non-Drafting Party Presumption

1. The Parties acknowledge and agree that they are both sophisticated and accustomed to dealing in matters of this nature and that the Parties are represented by legal counsel, who have had an adequate opportunity to review and otherwise contribute to the preparation of this Construction Services Agreement. Accordingly, if and to the extent that there is ambiguity in any of the Contract Documents, no Party will be entitled to any presumption in favor of the non-drafting party.

IN WITNESS WHEREOF, Owner and Contractor have signed this Construction Services Agreement on the day and year first written above.

This Agreement will be effective on_____, 20_____(which is the Effective Date of the Agreement).

Owner: CITY OF RIFLE

By:_____

Title:_____

[CORPORATE SEAL]

Attest_____

Title:_____

Address for giving notices

_____

_____

(If Owner is a corporation, partnership, or limited liability company, attach evidence of authority to sign) (If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of the Construction Services Agreement.)

Contractor: _____

By:_____

Title: _____

[CORPORATE SEAL]

Attest _____

Title: _____

Address for giving notices

_____

_____

License No._____
(where applicable)

Agent for service of process: _____

_____

(If Contractor is a corporation, partnership, or limited liability company, attach evidence of authority to sign.)

OWNER Designated Representative:

Name:_____

Title:_____

Address:_____

Phone No.:_____

Fax No.:_____

Email:_____

Contractor Designated Representative:

Name:_____

Title:_____

Address:_____

Phone No.:_____

Fax No.:_____

Email:_____

- END OF SECTION -

SECTION 00 55 00 – NOTICE TO PROCEED

Date:_____

Project: Rifle Airport 0.5 MG Water Tank	
Owner: City of Rifle	Owner's Contract No.:
Contact: Robert Burns	Engineer's Project No.: 20034.01
Contractor:	
Contractor's Address:	

You are notified that the Contract Times under the above Contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Section 1.04 of the AGREEMENT, the date of Substantial Completion is_____, and the date of readiness for Application for Final Payment is_____.

Before you may start any Work, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work, you must:_____

_____

_____

City of Rifle_____
Owner

By:_____
Authorized Signature

_____
Title

_____
Date

Copy to Resident Engineer

Copy to Engineer

SECTION 00 61 14 – PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR *(Name and Address):*

_____
_____
_____
_____

SURETY *(Name an Address of Principal Place of Business):*

OWNER *(Name and Address):*
City of Rifle
202 Railroad Avenue
Rifle, CO 81650

CONTRACT
Effective Date of Construction:
Services Agreement:
Amount:
Description *(Name and Location):* Rifle Airport 0.5 MG Water Tank

BOND
Bond Number:
Date: *(Not earlier than Effective Date of Construction Services Agreement):*
Amount:
Modifications to the Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative

CONTRACTOR AS PRINCIPAL

_____(Seal)
Contractor's Name and Corporate Seal

By:_____
Signature

_____
Print Name

Title:_____

Attest_____
Signature

Title:_____

SURETY

_____(Seal)
Surety's Name and Corporate Seal

By:_____
Signature (Attach Power of Attorney)

_____
Print Name

Title: _____

Attest_____
Signature

Title: _____

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

   2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

   2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

   4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

   4.2. Claimants who do not have a direct contract with Contractor.

      1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and

      2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and

      3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. (Reserved.)

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

    15.1. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

    15.2. Contract: The agreement between Owner and Contractor identified on the

signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

EJCDC C-610 Performance Bond, 2007 edition Prepared by the Engineers Joint Contract Documents Committee

- END OF SECTION -

SECTION 00 61 13 – PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR *(Name and Address):*

_____
_____
_____
_____

SURETY *(Name an Address of Principal Place of Business):*

OWNER *(Name and Address):*
City of Rifle
202 Railroad Avenue
Rifle, CO 81650

CONTRACT
Effective Date of Construction:
Services Agreement:
Amount:
Description *(Name and Location):* Rifle Airport 0.5 MG Water Tank

BOND
Bond Number:
Date: *(Not earlier than Effective Date of Construction Services Agreement):*
Amount:
Modifications to the Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative

CONTRACTOR AS PRINCIPAL

_____(Seal)
Contractor's Name and Corporate Seal

By:_____
Signature

_____
Print Name

Title:_____

Attest_____
Signature

Title:_____

SURETY

_____(Seal)
Surety's Name and Corporate Seal

By:_____
Signature (Attach Power of Attorney)

_____
Print Name

Title: _____

Attest _____
Signature

Title: _____

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.

2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
   2.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
   2.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
   2.3. Owner has agreed to pay the Balance of the Contract Price to:
      1. Surety in accordance with the terms of the Contract; or
      2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.

3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
   3.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
   3.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
   3.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
   3.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
      1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
      2. Deny liability in whole or in part and notify Owner citing reasons therefor.

4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied

liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:
   5.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;
   5.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
   5.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

11. Definitions.

11.1. Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

11.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

11.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

11.4. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

EJCDC C-610 Performance Bond, 2007 edition Prepared by the Engineers Joint Contract Documents Committee

- END OF SECTION -

SECTION 00 72 13 – GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Adapted from EJCDC C-700,

Standard General Conditions of the Construction Contract

(2007 Edition)

GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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GENERAL CONDITIONS

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda* – Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement* – The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment* – The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos* – Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid* – The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder* – The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents* – The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements* – The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order* – A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim* – A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a

third party is not a Claim.

11. *Contract* – The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents* – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price* – The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times* – The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor* or *CONTRACTOR* – The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work* – See Paragraph 11.01.A for definition.

17. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement* – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer* or *ENGINEER* – The individual or entity named as such in the Agreement.

20. *Field Order* – A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements* – Sections of Division 01 of the Specifications.

22. *Hazardous Environmental Condition* – The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste* – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens* – Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone* – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award* – The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed* – A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner* or *OWNER* – The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs* – Polychlorinated biphenyls.

31. *Petroleum* – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule* – A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual* – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material* – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.)

as amended from time to time.

36. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples* – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals* – A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values* – A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings* – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *Site* – Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications* – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor* – An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion* – The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier* – A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities* – All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work* – Work to be paid for on the basis of unit prices.

50. *Work* – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive* – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words and terms referenced in this Paragraph 1.02 are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms “as allowed”, “as approved”, “as ordered”, “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement

indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

   a. does not conform to the Contract Documents, or

   b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

   c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and

profit applicable to each item of Work.

2.06 Preconstruction Conference; Designation of Authorized Representative

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract and otherwise act on behalf of each respective party.

2.07 Initial Acceptance of Schedules

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract

Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers or has actual knowledge of and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and

a. any applicable Law or Regulation,

b. any standard, specification, manual or code, or,

c. any instruction of any Supplier

then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. a Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 Reuse of Documents

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings,

Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor or by Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in

Paragraph 10.05.

B. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site; that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely on the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

   then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

   b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

   a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

   b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

   c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the

amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

   a. reviewing and checking all such information and data,

   b. locating all Underground Facilities shown or indicated in the Contract Documents,

   c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

   d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 Reference Points

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 Hazardous Environmental Condition at Site

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 Certificates of Insurance

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 Contractor's Liability Insurance

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

   b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or

property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations insurance;

   a. such insurance shall remain in effect for at least two years after final payment, and

   b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 Owner's Liability Insurance

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may

arise from operations under the Contract Documents.

5.06 (Not Used)

5.07 (Not Used)

5.08 (Not Used)

5.09 (Not Used)

5.10 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. Unless the Owner shall otherwise agree in writing, the superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 Labor; Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "*Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

   a. in the exercise of reasonable judgment Engineer determines that:

      1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics; and

      2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

      3) it has a proven record of performance and availability of responsive service; and

   b. Contractor certifies that, if approved and incorporated into the Work:

      1) there will be no increase in cost to the Owner or increase in Contract Times; and

      2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items*

   a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

   b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment

proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services; and

4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in

the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor

or Supplier, Contractor will obtain the same.

6.07 Patent Fees and Royalties

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 Laws and Regulations

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications

and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work, Contractor shall clean the

Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons and property in the performance of their work nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety

programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety programs with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by

Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings*

   a. Submit number of copies specified in the General Requirements.

   b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*

   a. Submit number of Samples specified in the Specifications.

   b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

   a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.;

   b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

   c. determined and verified the suitability of all materials offered with respect to indicated use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

   d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract

Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of real or personal property (other than the Work itself), including the loss of use resulting therefrom; and

2. is caused by any act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws or Regulations.

B. In any and all claims against Owner or Engineer or any of their , officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not be limited in any way by the amount or types of insurance provided by Contractor under Article 5 of the General Conditions.

D. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the sole negligence or willful misconduct of Owner or Engineer or to the officers, directors, members, partners, employees, agents, and consultants and subcontractors of each and any of them.

6.21 Delegation of Professional Design Services

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, Contractor may cut or alter the work of others with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other

work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Legal Relationships

A. Paragraph 7.01.A is not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 Furnish Data

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.03 Pay When Due

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.04 Lands and Easements; Reports and Tests

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at or contiguous to the Site.

8.05 Insurance

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.06 Change Orders

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.07 Inspections, Tests, and Approvals

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.08 Limitations on Owner's Responsibilities

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.09 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.10 Evidence of Financial Arrangements

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

8.11 Compliance With Safety Programs

A. While on the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.B.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 Visits to Site

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an

experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, or have control over Contractor's Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's Work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.

9.03 Project Representative

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 Authorized Variations in Work

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 Rejecting Defective Work

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the

Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 Shop Drawings, Change Orders and Payments

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, if any,

1. as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21;

2. as to Change Orders, see Articles 10, 11, and 12; and

3. as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer

will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Engineer's Authority and Responsibilities

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 Compliance with Safety Programs

A. While on the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of the Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.C.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such

document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 Unauthorized Changes in the Work

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 Execution of Change Orders

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are:

   a. ordered by Owner pursuant to Paragraph 10.01.A,

   b. required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or

   c. agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 Notification to Surety

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each

applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers,

architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls,

telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance for Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances

so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs

materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

C. If Owner, Engineer, or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

D. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of other contractors or utility owners, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.D.

E. Owner and Engineer and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory

to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration

or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so, provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so

accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any

subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 Partial Utilization

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in

the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make

application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

   d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that:

   a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and

   b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's repeated violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 Owner May Terminate For Convenience

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to

Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of Paragraph 10.05, Owner and Contractor may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 Headings

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

- END OF SECTION -

SECTION 00 73 01 – SUPPLEMENTARY CONDITIONS

PART 1 -- **SCOPE**

These Supplementary Conditions amend or supplement the General Conditions. All provisions of the General Conditions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to the singular and plural thereof.

SC-1.01.A.1 Replace the words “opening of Bids” with “submittal of the GMP Proposal” and replace the words Bidding Requirements” with “GMP Proposal requirements.”

SC-1.01.A.2 Add the following words to the end of the sentence “or portion of the Work to be performed during the construction associated with a specific GMP Proposal.

SC-1.01.A.3 Replace the term *Engineer* with the term *Resident Engineer.*

SC-1.01.A.5 Delete in its entirety and insert the following:

5. Bonds – Performance and Payment Bonds and other instruments of security.

SC-1.01.A.6 Delete in its entirety, and insert the following new definition:

Construction Fee – Expressed as a percentage of the *Cost of the Work*, the percentage defined in the applicable Design Phase Services Agreement that represents the CM/GC's administrative costs, home office overhead, and profit, whether at the CM/GC's principal or branch offices. This fee excludes items covered in the *Cost of the Work* and *General Conditions Fee*, and any cost not allocated or paid by the City and other limitations or exclusions set forth in the General Conditions and Supplementary Conditions for the construction phase.

SC-1.01.A.7 Delete in its entirety: and insert the following new definition:

Contingency, CM/GC (Contractor’s) – A fund to cover cost growth during the Project used at the discretion of the Contractor (CM/GC) usually for costs that result from Project circumstances. The amount of the *CM/GC Contractor’s Contingency* will be negotiated as a separate line item in each GMP package. Use and management of the *CM/GC Contractor’s Contingency* is described in SC- 11.02.C.

SC-1.01.A.8 Delete in its entirety: and insert the following new definition:

Contingency, Owner's - A fund to cover cost growth during the project used at the discretion of the Owner usually for costs that result from Owner directed changes or site conditions. The amount of the Owner's Contingency will set solely by the Owner and will be in addition to the Project costs included in the CM/GC's GMP packages. Use and management of the *Owner's Contingency* is described in SC- 11.02.C.

SC-1.01.A.9 Replace the term *Engineer* with the term *Resident Engineer.*

SC-1.01.A.14 Replace the term *Engineer's* with the term *Resident Engineer's.*

SC-1.01.A.15 Replace the words "individual or entity" with the words "the construction manager/general contractor (CM/GC) as defined in the applicable Design Phase Services (RRWPF) Agreement".

SC-1.01 A.19 Append the existing text to include the following phrase:

Depending on the context, the use of the term, *Engineer*, may also refer to or otherwise implicate a function reserved to the *Resident Engineer*, as that term is defined in the Agreement, Supplementary Conditions, and other Contract Documents. In particular, reference is made to Article 3 of the Agreement and Article 9 of the General Conditions (as those General Conditions may be amended by these Supplementary Conditions), with respects to the rights, duties, authorities, and responsibilities of the Engineer, and the resident Engineer and the duties and responsibilities of the Contractor with respect to the Engineer and Resident Engineer.

SC-1.01.A.20 Replace the term *Engineer* with the term *Resident Engineer*.

SC-1.01.A.20.5 Add the following new definition after Definition No. 20:

General Conditions Cost - Includes, but is not limited to the following types of costs for the Contractor (CM/GC) during the construction phase: payroll costs for Project Manager or construction manager but not both for Work conducted at the site, payroll costs for the superintendent and full-time general foremen, payroll costs for management personnel resident and working on the site, workers not included as direct labor costs engaged in support (e.g. loading/unloading, clean-up, etc.), costs of liability insurance premiums not included in labor burdens for direct labor costs, costs of bond premiums, cost of insurance premiums, costs of consultants not in the direct employ of the Contractor (CM/GC) or subcontractors, fees for business related permits and licenses. General Conditions Costs do not include items covered in the *Cost of the Work* or the *Construction Fee* or applicable taxes and any cost not allocated or paid by the City or other limitations and exclusions set forth in the General Conditions and Supplementary Conditions for the construction phase.

SC-1.01.A.20.7 Add the following new definition after Definition No. 20.5:

General Conditions Fee - Expressed as a percentage of the *Cost of the Work*, the percentage defined in the applicable Design Phase Services (RRWPF) Agreement that represents the *General Conditions Costs*.

SC-1.01.A.21.5 Insert the following new definition after Definition No. 21:

Guaranteed Maximum Price (GMP) Proposal - The offer or proposal from the Contractor (CM/GC) submitted on the prescribed form(s) setting forth the GMP for the entire Work or portions of the Work to be performed during the construction phase. The GMP Proposal is to be developed pursuant to Article 2 of the Design Phase Services (RRWPF) Agreement. The final submitted and Owner accepted GMP amount plus the Contractor's Contingency amount, and Owner's Contingency amount is the Contract Price for the Agreement.

SC-1.01.A.27 Replace the word "Successful Bidder" with the word "Contractor" in two places in the sentence.

SC-1.01.A.29 Add a sentence at the end of the paragraph 1.01.A.29 that reads:

The term *Owner* also includes the following agents of the City of Rifle: The Resident Engineer (including any temporary or substitute Resident Engineer appointed by Owner), Construction Inspector, Building Inspector, Utilities Director, and Water Supervisor.

SC-1.01A.34 Delete the words "bidding and". SC-1.01.A.36 Revise 1.01A.36 to read:

Parties acknowledge that the term *Resident Project Representative* is not used in this Agreement. Any instance of that term in the Contract Documents shall refer to the Resident Engineer.

SC-1.01.A.39 After the words "*Schedule of Values*" add "(SOV)."

SC-1.01A.44 Revise paragraph 1.01A.44 to add:

The Project shall be considered substantially complete when, in the opinion of the Owner, by and through the Resident Engineer, or Construction Inspector, the 2MG water tank has achieved the following two conditions: 1) has been constructed in accordance with the Contract Documents with no significant punch list items remaining; and 2) the interior of the tank has been properly coated and cured; and 3) the tank has been successfully placed into service. Exterior coating of the tank is required before Final Completion. The Parties agree that the Owner has the sole discretion to determine whether a test is successful or whether an item, consideration, measurement, deviation, or other factor is "significant," as provided in this Section.

SC-1.01.A.45 Delete in its entirety.

SC-1.01.A.51 Replace the term *Engineer* with the term *Resident Engineer.*

SC 1.02.B.1 Delete first sentence and replace with:

The Contract Documents include the terms “as allowed”, “as approved”, “as ordered”, “as directed”, “or equal” or terms of like effect or import to authorize an exercise of professional judgment by Resident Engineer, or at the discretion of the Resident Engineer, the Engineer.

Also, replace the subsequent instances of Engineer in this subsection with the phrase “Resident Engineer, or as the case may be, Engineer”.

SC 2.02.A Delete paragraph and replace with:

Owner shall furnish to Contractor with two sets of full-size drawings and two sets of 11-inch x 17-inch drawings, two sets of the Project Manual, and one electronic copy of the Project Manual files and Drawing files in portable document format (PDF).

SC-2.03.A Delete the third sentence:

SC-2.04.A Add the following text to the end of the last sentence “unless authorized by the Owner in which a limited notice to proceed will be issued.”.

SC-3.01.C Replace the term *Engineer* with the term *Resident Engineer.*

SC-3.02.A.1. Replace the words “opening of Bids (or on the Effective Date of the Agreement if there were no Bids)” and replace with “submission of GMP Proposal.”

SC-3.03.A Replace all instances of the term *Engineer* with the term *Resident Engineer.*

SC-3.04.B Replace all instances of the term *Engineer* with the phrase “Resident Engineer, or at the direction of the Resident Engineer, the Engineer,”

SC-4.02 Add a new Paragraph immediately after Paragraph 4.02.B that is to read as follows:

SC-4.02.C *Geotechnical Report*: In the preparation of the Drawings and Specifications, Engineer has relied upon:

1. The following report of explorations and tests of subsurface conditions at the Site and design letter.
   a. “Sub-soil Study for Foundation Design Proposed Water Storage Tank West of Graham Mesa Road, North of Promontory Subdivision, Rifle, Colorado”, prepared by HP Geotech, dated March 31, 2015.

      1. The technical data contained in such report upon which Contractor may rely are: the boring method, the locations and logs of the borings, the levels of subsurface water (if any), laboratory test methods and results, and similar factual

data. Bore hole information represents subsurface characteristics to the extent indicated, only for the point location of the bore hole and, with regard to the level of subsurface water (if any), only at the time the boring was made. Contractor shall make its own interpretations of the subsurface characteristics to be encountered between bore holes and its own interpretations of the fluctuation of the level of subsurface water (if any) at and between bore holes.

b. A copy of the above report and design letter are included in the Project Manual.

SC-4.03.A.4 Replace the term "Owner and Engineer" with the phrase "Owner, Resident Engineer, and Engineer".

SC-4.03.B Replace entire subsection with the following:

Engineer's Review: After receipt of written notice as required by Paragraph 4.03.A, Resident Engineer (or Engineer upon any delegation, request, or assignment of the Resident Engineer) will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of such Engineer's findings and conclusions.

SC-4.03.C.2.a Replace the word "Bid" with the words "GMP Proposal.

SC-4.03.C.2.b Replace the words "Bidding Requirements" with the words "GMP Proposal requirements.

SC-4.04.B.1 Replace the phrase "Owner and Engineer" with the phrase "Owner, Resident Engineer, and Engineer."

Replace the phrase "Engineer will promptly review…" with "Resident Engineer, or the Engineer at the delegation, request, or assignment of the Resident Engineer, will promptly review…"

SC-4.04.B.2 Replace the term *Engineer* with the phrase "Resident Engineer, or, as the case may be Engineer".

SC-4.05.A Replace the terms *Engineer's* and *Engineer* with the term *Resident Engineer's and Resident Engineer.*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

SC-4.06.A In the preparation of the Drawings and Specifications, Engineer has not utilized any report or drawing related to a Hazardous Environmental Condition identified at the Site.

SC-5.01.C Replace the term “Owner and Engineer” with the phrase “Owner, Resident Engineer, and Engineer”.

SC-5.04 Add a new paragraph immediately after Paragraph 5.04.B that is to be read as follows:

SC-5.04.C The limits of liability for the insurance required by Paragraph 5.04 shall provide coverage for not less than the following amounts, or greater where required by law:

1. For workers’ compensation, and related coverage under Paragraphs 5.04.A.1. and 5.04.A.2.:
   a. Applicable Federal or State: Statutory
   b. Maritime Not Required
   c. Railroad Not Required
   d. Employer's Liability
      Each Accident $1,000,000
      Disease:
      Each Employee $1,000,000
      Policy Limit $1,000,000
2. For CM/GC’s general liability insurance under Paragraphs 5.04.A.3 through 5.04.A.5 and Paragraph 5.04.B (including Premises-Operations, Independent Contractor’s Protection, Products and Completed Operations, Broad Form Property Damage, Contractual Liability):
   a. Bodily Injury:
      $1,000,000 Each Person
      $2,000,000 Annual Aggregate
   b. Property Damage:
      $1,000,000 Each Occurrence
      $2,000,000 Annual Aggregate
   c. Property Damage liability insurance shall provide Explosion, Fire, Collapse and Underground coverages.
   d. Products and Completed Operations:
      $1,000,000 Annual Aggregate
3. For CM/GC’s Automobile Liability under Paragraph 5.04.A.6:
   a. Bodily Injury:
      $250,000 Each Person
   b. Property Damage:
      $500,000 Each Occurrence
      Or Combined Single Limit of $1,000,000
4. *CM/GC’s Professional Liability Insurance:* If Contractor or any Subcontractor or Supplier will provide or furnish professional services under this Contract, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance, or for causing such Subcontractor or Supplier to do so. Professional liability insurance shall be for not less than the following amounts:
   a. Each claim: $1,000,000
   b. Annual aggregate: $3,000,000
5. In addition to the individuals or entities specified in Paragraph

5.04.B.1, include as additional insureds for general liability and Auto Liability insurance, the following:

a. Kumar & Associates, Inc., 5020 CR 154, Glenwood Springs, CO 81601

b. Boundaries Unlimited, Inc., 923 Cooper Avenue, Suite 201, Glenwood Springs, CO, 81601.

SC-5.06 through SC-5.09, inclusive.

Add new paragraphs immediately after Paragraph 5.05 that are to read as follows:

5.06. Property Insurance

A. The City will maintain property insurance for all existing structures throughout the Project. The City will provide a waiver of subrogation in favor of the Contractor and subcontractors in relation to property insurance. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost of the Work subject to a maximum deductible of $5,000.

B. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph SC-5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph SC-5.07.

C. The risk of loss within any deductible amount applicable to the policies of insurance purchased in accordance with this Paragraph SC-5.06 will be borne by Contractor, Subcontractors, or others suffering such loss.

5.07. Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph SC-5.06 will protect Owner, Contractor, Subcontractors, Engineer, and all other individuals or entities identified in Paragraph SC-5.06 to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of loss or damage the insurers will have no rights of recovery against any of the

insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Engineer, and all other individuals or entities identified in Paragraph SC-5.06 to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued, and none of these waivers will apply to the extent any peril or cause of loss is uninsured as a consequence of the act or omission of the Contractor or anyone for whom Contractor is responsible.

B. Owner waives all rights against Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04 or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage, or consequential loss referred to in Paragraph SC-5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them.

5.08. Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required by Paragraph SC-5.06 will be adjusted with Contractor and made payable to Contractor as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph SC-

5.08.B Contractor shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order.

B. Contractor as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Contractor's exercise of this power. If such objection be made, Contractor as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Contractor as fiduciary shall give bond for the proper performance of such duties.

5.09. Partial Utilization, Acknowledgment of Property Insurer

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph SC-5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

SC-6.01.B Revise to Read:

At all times during progress of the work, Contractor shall assign competent project manager, resident superintendent, and safety representative who shall not be replaced without written notice to Owner, Resident Engineer, and Engineer and approved by Owner. Unless the Owner shall otherwise agree in writing, the superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

SC-6.02.B Replace the term *Engineer* with the term *Resident Engineer*.

SC-6.02.B Add new paragraphs immediately after Paragraph 6.02.B that are to read as follows:

SC-6.02.B.1 Except where otherwise prohibited by Laws or Regulations, regular working hours are defined as up to ten and one-half hours per day, beginning no earlier than 7 a.m. and ending no later than 7 p.m.

SC-6.02.B.2 Maintenance and cleanup activities may be performed during hours other than regular working hours provided that such activities occur with proper lighting and do not require the startup or operation of construction equipment.

SC-6.02.B.3 If it shall become absolutely necessary to perform Work at night or on Saturdays, Sundays, or legal holidays, written notice shall be submitted to the Resident Engineer at least seven days in advance of the need for such Work. Resident Engineer will only consider the performance of such Work as can be performed satisfactorily under the conditions. Good lighting and all other necessary facilities for carrying out and observing the Work shall be provided and maintained where such Work is being performed at night.

SC-6.03.B Replace the term *Engineer* with the term *Resident Engineer*.

SC-6.04.A Replace the words “established in accordance with Paragraph 2.07” with the words “developed and maintained by Contractor in accordance with the Contract Documents.”

SC-6.04.A.1 Delete in its entirety.

SC-6.04.A.2 Revise paragraph number to 6.04.A.1.

SC-6.05.A-F Replace the term *Engineer(‘s)* with the term *Resident Engineer(‘s)* or *Engineer(‘s)* as the case may be.

SC-6.06.E Replace the term *Engineer* with the term *Resident Engineer*.

SC-6.08.A Replace the word “opening of Bids, or, if there were no Bids)” and replace with “submission of GMP Proposal(s)” and insert the following new paragraph:

B. Blasting permit, if required, shall be obtained from Colorado River Fire and Rescue Authority. Notify School District, Police and Dispatch and adjacent neighbors a minimum of 24 hours prior to any proposed blasting.

SC-6.09.C Replace the words “opening of Bids (or on the Effective Date of the Agreement if there were no Bids)” and replace with “submission of GMP Proposal(s)” and add a new paragraph immediately after Paragraph 6.09.C that is to read as follows:

D. Refer to Article SC-18 for Laws and Regulations that, by terms of said Laws and Regulations, are to be included in the Contract Documents. The failure to include in Article SC-18 any Law or Regulation applicable to the performance of the Work does not diminish Contractor's responsibility to comply with all Laws and Regulations applicable to the performance of the Work.

SC-6.10 Add a new paragraph immediately after Paragraph 6.10.A, that is to read as follows:

B Owner is exempt from payment of sales, compensating use tax, and other consumer taxes of the State Colorado and of cities and counties within the State of Colorado on materials and equipment to be incorporated into the Work as well as electricity and fuel procured and consumed with respect to the Work (for the purposes of these provisions, the "materials"). Owner may be exempt from payment of sales, use, value added, and consumer taxes under the laws of other states, municipalities, and other governments or political subdivisions. The Parties agree that no cost associated with taxes paid with respect to procurements, from which Owner (a tax-exempt governmental subdivision) would otherwise be exempt, will be expensed to Owner, or otherwise serve as a basis for a unit price, mark-up, margin, cost-plus or other charge allocable to Owner. To that effect, the following provisions will apply:

1. The Contractor shall apply for and obtain tax exemption from the State of Colorado, any other municipality, county, state, or other taxing authority that exempts political subdivisions or governmental agencies from sales, use, value added, or other governmental agencies from sales, use, value added, or other taxes in which Contractor will procure materials. Contractor will obtain from Owner any evidences of tax exemption required with respect to any application for tax exemption or as necessary in the purchase of materials.

2. With respect to exemptions of sales tax collected by the State of Colorado, see Colorado Department of Revenue Form DR 0172 (www.revenue.state.co.us/PDF/dr0172.pdf).

3. With respect to home rule municipalities in the State of Colorado that may require separate application for sales tax exemption, see Colorado Department of Revenue Form DR 1002 (www.colorado.gov/cms/forms/dor-tax/dr1002.pdf).

4. Contractor shall omit any sales, value added, or other tax from which Owner is exempt from the cost of materials or as a basis for compensation, in whole or in part, for Work.

5. Contractor shall provide a copy of all evidences of sales tax

exemptions to Owner.

6. Contractor shall source materials and equipment of equal or lesser price from jurisdictions that honor Owner's tax-exempt status.

   It is acknowledged that Owner's tax exemption does not apply to certain tools, machinery, equipment, or property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-6.12 Replace the term *Engineer* with the term *Resident Engineer*.

SC-6.13.D Replace the terms *Owner and Engineer* and *Owner's and Engineer's* with the terms Owner*, Resident Engineer, and Engineer* and *Owner's, Resident Engineer's, and Owner's* respectively.

SC-6.13.F Replace the term *Engineer* with the term *Resident Engineer*.

SC-6.15A Replace paragraph with:

Contractor shall be responsible for coordinating exchange of material safety data sheets (MSDS) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with all Laws and regulations. Contractor shall provide a centralized location for the maintenance of the material safety data sheets or other hazard communication information required to be made available by any employer on the Site. Location of the material safety data sheets or other hazard communication information shall be readily accessible to the employees of employers on the Site. A copy of all MSDS shall be provided to the Resident Engineer.

SC-6.16.A Replace the term *Engineer* with the term "*Resident Engineer*."

SC-6.17.A Delete first two sentences and replace with:

Contractor shall submit Shop Drawings (Submittals) and Samples in accordance with the accepted Schedule of Submittals to Resident Engineer utilizing the electronic procedures described in the General Requirements. Each submittal will be identified and distributed by Resident Engineer as Owner may require. Review may be performed by Owner, Owner and Engineer, or by Engineer alone, but acceptance of submittals will be communicated to Contractor by the Resident Engineer.

SC-6.17.E.1 Add at end of 6.17E.1:

Costs for submittals requiring more than two reviews (as defined in Section 01 33 00, Submittal Procedures) will be paid to the Engineer (Boundaries Unlimited) by the Owner and recovered from the Contractor at cost.

SC-6.19.A&C Replace the term *Engineer* with the terms *Resident Engineer* or *Engineer*.

SC-6.21 Replace all instances of the term *Owner and Engineer* with the phrase "*Owner and Resident Engineer*, or, as the case may be *Engineer*".

Replace all instances of the term *Engineer's* (when used alone) with the phrase "*Resident Engineer's*, or, as the case may be *Engineer's*".

Replace all instances of the term *Engineer* (when used alone) with the phrase "*Resident Engineer*, or, as the case may be *Engineer*".

SC-7.01 Replace all instances of the term *Engineer* with the phrase "*Resident Engineer*, or, as the case may be *Engineer*".

SC-8.01.A Delete and replace with:

Except as otherwise provided in these General Conditions, Owner and Engineer will issue all communications to Contractor through the Resident Engineer and Contractor will issue all communications to Owner or Engineer through the Resident Engineer.

SC-9.01.A Delete paragraph and replace with:

The Resident Engineer will be the Owner's representative with respect to the Work. The duties and responsibilities and the limitations of authority of the Resident Engineer as Owner's representative during construction are set forth in the Contract Documents.

SC-9.03.A Delete paragraph and replace with:

Owner and Engineer agree that Owner will provide representatives to observe, inspect, and to assist in the administration of the Work. The responsibilities and authority and limitations of the Resident Engineer, Project Advisor, Construction Inspector, and Building Inspector are provided at SC-9.03 B through SC-9.03 D

SC-9.03.B Add:

Resident Engineer will be Contractor's contact and interface with Engineer. Resident Engineer will observe, inspect, coordinate Owner's material testing, and receive all Contractor submittals, requests for interpretation (RFIs), correspondence and similar activities. Resident Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work. Resident Engineer may review and determine the disposition of submittals and RFIs, or delegate these activities to Engineer. The Resident Engineer will be the primary and final reviewer of pay applications and coordinate the preparation and issuance of contract modifications. Resident Engineer will lead construction progress meetings and coordinate activities and participation of Owner, Owner's Representatives, and Engineer. Resident Engineer, or individuals temporarily acting as Resident Engineer, may issue duly processed contract modifications in accordance with the Contract Documents.

Engineer may not authorize minor variations in the Work or issue contract modifications.

SC-9.03.C Add:

Project Advisor, will inspect and observe work to a lesser degree and may participate in regular construction progress meetings. Project Advisor will advise Owner and Owner's representatives on matters related to construction and administration of the contract including review of pay applications, change order proposals, progress schedules, and claims. Project Advisor may act as Resident Engineer when designated.

SC-9.03.D Add:

Building Inspector when called upon and scheduled by Contractor will examine work for conformance to applicable building codes. Building Inspector may not authorize minor changes in the Work or issue modifications to the Contract. Building Inspector may be called upon by Owner to supplement Resident Engineer with regard to inspections and observation.

SC- 9.03.E Add:

Construction Inspector when called upon by Resident Engineer, or his designee, will examine work for the conformance of the Contract Documents and applicable industry codes. Construction Inspector may not authorize minor changes in the Work or issue modifications to the Contract. Construction Inspector may be called upon by Owner to supplement Resident Engineer with regard to inspections and observation.

SC-9.04 A Replace the term *Engineer* with the term *Resident Engineer.*

SC-9.05.A Replace the term *Engineer* with the term *Resident Engineer.*

SC-9.07.A Delete paragraph and replace in its entirety as follows:

The Resident Engineer (or the Engineer at the request of the Resident Engineer) will determine the actual quantities and classifications of Unit Price Work performed by the Contractor. The Resident Engineer will review with Contractor the Resident Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

SC-9.08.A Replace the phrase "Engineer will be the initial interpreter" with the phrase "Resident Engineer, or upon the request by Owner, Engineer (who may assist with interpretations and judgments) will be the initial interpreter.

SC-9.08.B&C Replace all instances of the terms *Engineer* and *Engineer's* in this subsection with the terms *Resident Engineer* and *Resident Engineer's*.

SC-9.08.D Delete paragraph and replace with:

Upon the request of the Resident Engineer, when functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

SC-9.09.A Delete paragraph and replace with:

Neither the Resident Engineer's, Engineer's, nor as the case may be, Project Advisor's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Resident Engineer, Engineer, or as the case may be, Project Advisor in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Resident Engineer, Engineer, or as the case may be, Project Advisor shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer or Owner to Contractor, any Subcontractor, and Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

SC-9.09.B&C Replace all instances of the term *Engineer* in this subsection with the term *Resident Engineer, Engineer,* or as the case may be *Project Advisor.*

SC-9.09.D Replace all instances of the term *Engineer* in this subsection with the term *Resident Engineer*.

SC-9.09 E Delete Paragraph 9.09 E. in its entirety.

SC-10.03.A Replace all instances of the term *Engineer* in this subsection with the term *Resident Engineer*.

SC10.05.A-F Replace the term *Engineer* with the term *Project Advisor*.

SC11.01.A Replace subsection 5.d. with the following:

Sales, consumer, use, value-added, and other similar taxes related to the Work, and for which Contractor is liable under applicable Laws and Regulations, but for which no exemption would apply had Owner (an otherwise tax-exempt governmental subdivision) performed the procurement.

SC11.01.B Insert the following subsection:

6. Sales, consumer, use, value-added, or other taxes on materials or equipment incorporated into the Work, fuel, electricity, or other procurements for which Owner, as a tax-exempt governmental subdivision, is not otherwise liable.

SC-11.02.C Delete in its entirety and insert the following:

C. Contingency Allowances

1. Owner and Contractor will meet to allocate contingency funds between the Owner's Contingency allowance and the Contractor's Contingency allowance. If the Owner elects, in the Owner's sole discretion, to maintain contingency allowances within the final submitted GMP Proposal amount (i.e., Contract Price) for the Work, administration of such amounts will be in accordance with the following rules:

   a. Contractor's Contingency allowance: (i) the Contractor shall have exclusive use of the amount established by this allowance to cover certain costs as described in this Paragraph, however, it shall inform the Owner of its intent to use any such amounts in advance of doing so, and in a format acceptable to the Owner, (ii) the amount established is the maximum sum available to the Contractor, (iii) the Contractor shall be permitted to use up to one hundred percent (100%) of this allowance for changes initiated by the Contractor for items including but not limited to: refinement of design details within the scope of Work and standards of quality and quantity on which the final submitted GMP Proposal was based, costs due to labor disputes, costs due to overruns in the performance of work, increase in bid or negotiated Subcontracts or purchase order agreements, labor disputes within manufacturing or transportation industries causing delays in receipt of materials or equipment not the fault of the Contractor, unusually severe weather conditions, lost time due to acts beyond the control of the Contractor and fixed jobsite costs due to these delays, (iv) the Contractor's Contingency allowance is not available for the Owner's use, (v) to the extent there is remaining Contractor Contingency allowance when the Work is ready for final payment, the Owner shall be entitled to one hundred percent (100%) of the balance, (vi) remaining contingency allowance cannot be included in or added to other GMP's by Contractor for this or any other contract and (vii) final payment will reconcile amounts used and remaining within the Contractor's Contingency allowance.

   b. Owner's Contingency allowance: (i) the Owner shall have exclusive use of this allowance, (ii) the Owner's Contingency allowance is not available for the Contractor's use, (iii) the Owner shall be permitted to use up to one hundred percent (100%) of this allowance for changes initiated by the Owner, and (iv) if included in the Contract Price, final payment will reconcile amounts used and remaining within the Owner's

Contingency allowance.

SC-11.02.D Replace the term *Engineer* with the term *Resident Engineer.*

SC-12.01.A Replace the term *Engineer* with the term *Resident Engineer.*

SC-12.01.C.2.a Replace the words “15 percent” with “10 percent”.

SC-12.01.C.2.c Replace the words “15 percent” with “10 percent”.

SC-12.02.A Replace the term *Engineer* with the term *Resident Engineer.*

SC-13.01.A Replace the term *Engineer* with the term *Resident Engineer.*

SC-13.03.A.-F Replace all instances of the term *Engineer* in this subsection with the term *Resident Engineer*.

SC-13.03.D Delete this Paragraph and replace:

Contractor’s responsibility for costs of material testing and quality assurance and control testing is described in Section 01 45 29, Testing Laboratory Services Furnished by Contractor. In addition to tests conducted and paid for by Contractor, Owner will conduct its own quality assurance and control tests in accordance with Section 01 45 30, Testing Laboratory Services Furnished by Owner.

SC-13.04.A-B Replace all instances of the term *Engineer* in this subsection with the term *Resident Engineer*.

SC-13.06.A Replace the phrase “if the Work has been rejected by the Engineer” with the phrase “if the Work has been rejected by the Resident Engineer”.

SC-13.08.A Replace the parenthetical “(and, prior to Engineer’s recommendation of final payment, Engineer)” with “(and, prior to Resident Engineer’s recommendation of final payment, Resident Engineer)”; replace the parenthetical “(such costs to be approved by Engineer as to reasonableness)” with “(such costs to be approved by Resident Engineer as to reasonableness)”; and replace the phrase “If any such acceptance occurs prior to Engineer’s recommendation of final payment” with “If any such acceptance occurs prior to Resident Engineer’s recommendation of final payment”.

SC-13.09.A Replace the term *Engineer* with the term *Resident Engineer.*

SC-13.09.B Replace the phrase “Contractor shall allow Owner, Owner’s representatives, agents, and employees, Owner’s other contractors, and Engineer, and Engineer’s consultants…” with “Contractor shall allow Owner, Owner’s representatives, agents, employees, Owner’s other contractors, Resident Engineer, or Engineer or either of their consultants…”

SC-14.01.A Replace the words “in Paragraph 2.07A” with the words “with the GMP Proposal” and replace all instances of the term *Engineer* with the term *Resident Engineer*.

SC-14.02 Replace the term *Engineer* with the term *Resident Engineer.*

SC-14.02.C.1 Delete paragraph and replace:

Payment to Contractor will be made within 30 days of an accepted application for payment.

SC-14.04 Replace all instances of the term *Engineer* with the term *Resident Engineer*.

SC-14.04.A Replace the term *Engineer* with the term *Resident Engineer.* Also, modify the first sentence as follows: When Contractor considers the Work to be ready for its intended use completed in accordance with SC-1.01.A.44.

SC-14.04.C Replace this paragraph with:

Owner, with advice of the Resident Engineer, will notify Contractor in writing of all particulars in which this inspection reveals the Work is incomplete or defective, and deliver a tentative certificate of substantial completion. The tentative certificate of substantial completion will become definitive upon resolution of incomplete or defective work.

SC14.04.D Replace this paragraph with:

At the time of delivery of the tentative certificate of Substantial Completion, Owner and Contractor will prepare a written description as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees, which will be binding on Owner and Contractor until final Payment.

SC-14.05 Replace all instances of the term *Engineer* with the term *Resident Engineer*.

SC-14.06 Replace the term *Engineer* with the term *Resident Engineer.*

SC-14.07 Replace all instances of the term *Engineer* with the term *Resident Engineer*.

SC-14.07.C.1 Replace this paragraph with:

Thirty days after the acceptance of the final Application for Payment and accompanying documentation, the amount less any sum Owner is entitled to set off against the requested amount including liquidated damages, will become due and will be paid by Owner to Contractor.

SC-14.08 Replace all instances of the term Engineer with the term Resident Engineer.

SC-15.01 Remove the term “and Engineer”.

SC-15.02.A.3 Replace the term Engineer with the term Resident Engineer or Engineer.

SC-15.02.C Replace the term Engineer with the term Resident Engineer.

SC-15.03.A Remove the term “and Engineer”.

SC-15.04 Replace all instances of the term *Engineer* with the term *Resident Engineer*.

SC-16.01 Add new paragraphs immediately after Paragraph 16.01.A that are to read as follows:

SC-16.01.B Owner or Contractor may request nonbinding mediation of any Claim submitted to the Project Advisor for a decision under Paragraph 10.05

before such decision becomes final and binding. The mediation will be governed by the American Arbitration Association under the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

SC-16.01.C Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

SC-16.01.D If the Claim is not resolved by mediation, Project Advisor’s action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor,

1. agrees with the other party to submit the Claim to another dispute resolution process, or

2. gives written notice to the District Court of Colorado, as provided in Section 16.01.F.

SC-16.01.E Notwithstanding any applicable statute of limitations, a party giving notice under Paragraph SC-16.01.D shall commence an action on the Claim within one year of giving such notice. Failure to do so shall result in the Claim being time-barred and Project Advisor’s action or denial shall become final and binding.

SC-16.01.F Any dispute arising from this agreement or with respect to the contractual relationships of the parties shall be governed by Colorado law.

Any such dispute shall be tried by the Court - no party has a right to a trial by jury with respect to any dispute arising from this Agreement or with respect to the contractual relationships of the Parties or any other dispute between the Parties.

Any such dispute shall be decided solely and exclusively by the District Court of Garfield County, Colorado.

If the Contractor unsuccessfully challenges the enforceability of this forum selection clause, it shall reimburse the Owner for Owner's attorney's fees and costs, and the Owner in any such dispute shall be awarded its attorney's fees and costs.

ARTICLE SC-18 – STATUTORY REQUIREMENTS

SC-18.01 This Article contains portions of certain Laws or Regulations which, by provision of Law or Regulations, are required to be included in the Contract Documents. The material included in this Article may not be complete or current. Contractor's obligation to comply with all Laws and Regulations applicable to the Work is set forth in Paragraph 6.09 of the General Conditions.

SC-18.02 Work by Illegal Aliens Prohibited. Pursuant to Section 8-17.50131, C.R.S., et Seq., Contractor warrants, represents, acknowledges, and agrees that:

A. Contractor does not knowingly employ or contract with an illegal alien.

B. Contractor shall not knowingly employ or contract with an illegal alien to perform works or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

C. Contractor has participated in or attempted to participate in the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended administered by the Department of Homeland Security (hereinafter, "Basic Pilot Program") in order to verity that Contractor does not employ illegal aliens. If Contractor is not accepted into the Basic Pilot Program prior to entering into this Agreement, Contractor shall forthwith apply to participate in the Basic Pilot Program and shall submit to the City written verification of such application within five (5) days of the date of this Agreement. Contractor shall continue to apply to participate in the Basic Pilot Program, and shall verify such application to the City in writing, every three (3) months until Contractor is accepted or this Agreement is completed, whichever occurs first. This Paragraph 3

shall be null and void if the Basic Pilot Program is discontinued.

D. Contractor shall not use the Basic Pilot Program procedures to undertake pre- employment screening of job applicants while this Agreement is being performed.

E. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:

a. Notify the subcontractor and the City within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

b. Terminate the subcontract with the subcontractor if within three (3) days of receiving notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

F. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment ("Department") made in the course of an investigation that the Department is undertaking pursuant to the authority established in subsection 8-17.5-102(5), C.R.S.

G. The City may terminate this Agreement for breach of contract upon violation. If this Agreement is so terminated, Contractor shall be liable for actual and consequential damages to the City arising out of said violation.

- END OF SECTION -

SECTION 01 11 13 – SUMMARY OF WORK

PART 2 -- GENERAL

2.01 LOCATION AND DESCRIPTION OF WORK

A. The Work associated with the construction of a 0.5 MG (0.5 MG) potable welded-steel water storage tank will occur primarily adjacent to the existing Rifle Airport 1.0 MG water storage tank accessed from County Road #333 (aka Hunter Mesa Road).

B. The Work to be performed under this Contract generally includes, but is not limited to, constructing the Work described below and all related appurtenances. The Work shall be as follows:

1. Erosion and sediment control.
2. Earthwork, drainage, grading, fencing, and paving.
3. Over-excavation and soil replacement.
4. Concrete ring foundation.
5. Erection of welded-steel storage tank and accessories.
6. Installation of associated piping and valves.
7. Installation of instrumentation and SCADA system modifications.
8. Cathodic protection.
9. Painting and Coatings.

2.02 WORK BY OWNER

A. OWNER will perform the following in connection with the Work:

1. Operate all existing valves, gates, pumps, equipment, and appurtenances that will affect OWNER's operation, unless otherwise specified or indicated.CONTRACTOR shall drain/fill all lines with approval of OWNER.

2.03 CONTRACTOR'S USE OF SITE

A. The CONTRACTOR shall coordinate staging areas with the Resident Engineer, or Construction Inspector, prior to mobilization to the Project Site. Generally, staging and parking areas are available in the vicinity of the 1.0 MG tank site as long as access is maintained to the 1.0 MG tank and its associated valves and controls.

B. The CONTRACTOR shall be responsible for securing all staging areas, equipment, and materials and returning the areas to pre-construction conditions upon completion of the Work.

C. The OWNER's property is not available for disposal of construction waste materials. The CONTRACTOR shall haul all construction waste off site to appropriate disposal sites.

D. Excess earthen material to be placed east of the tank site shall be compacted via

typical yet thorough equipment operations without compaction testing to a 90% Standard Proctor Density. Coordinate placement of materials (rock, soil, and temporary stockpiles) with the Resident Engineer, or Construction Inspector.

E. Move stored products that interfere with operations of OWNER, other CONTRACTORs, and others performing work for OWNER, as directed.

F. Limits on CONTRACTOR's use of the Site are:

1. CONTRACTOR shall in no way interfere with ongoing water distribution and storage operations of the OWNER. Maintain access for OWNER into OWNER's facilities. Fences and gates to/around the existing 1.0 MG tank site and at other locations at the Site shall be re-installed and closed each evening upon leaving the site.

2. OWNER shall be granted access to the existing 1.0 MG tank site at all times for operations.

3. Maintain all fences and gates. Upon leaving site, lock gate at entrance. At conclusion of work permanently reinstall fence as required.

2.04 EASEMENTS AND RIGHTS-OF-WAY

A. Easements and rights-of-way will be provided by OWNER in accordance with the General Conditions. Confine construction operations within OWNER's property, public rights-of-way, and easements within the limits shown. Use care in placing construction tools, equipment, excavated materials, and materials and equipment to be incorporated into the Work to avoid damaging property and interfering with traffic. Do not enter private property outside the construction limits without permission from the OWNER of the property.

B. On Private Property:

1. General limits of easements are shown on the Drawings.

2.05 NOTICES TO OWNERS OF PROPERTY ADJACENT TO THE WORK

A. Public Notice of Starting Work

1. Forty-eight (48) hours prior to commencing Work at the various sites that will impact adjacent property, the CONTRACTOR shall hand deliver notices (See Attachment A at the end of this Section), notifying adjacent property owners and utility owners when execution of the Work may affect their property, facilities, or use of property. Coordinate notices with the Resident Engineer.

2. Within 30 days of the commencement of construction activities, place the project sign at a location approved by the Resident Engineer, or Construction Inspector.

B. When it is necessary to temporarily obstruct access to property, or when water, power, or communications service connections will be interrupted, provide notices sufficiently in advance to enable affected persons to provide for their needs. Conform notices to Laws and Regulations and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

C. Notify utility OWNERs and other concerned entities at least 48 hours prior to

cutting into or closing streets or other traffic areas or excavating near Underground Facilities or exposed utilities.

D. Notify Dispatch, Police, Fire, School District Bus operations, nearby schools and trash collection companies.

2.06 OWNER-FURNISHED PERMITS

A. (NONE)

2.07 CONTRACTOR FURNISHED PERMITS

A. Contractor is responsible for obtaining permits necessary for the completion of the Work, which may include:

1. Grading Permit
2. Construction Stormwater
3. Hydrostatic Testing Permits, from CDPHE, if applicable.
4. Blasting permits, if required.

2.08 1.9 PARTNERING

A. The CONTRACTOR, Resident Engineer, Construction Inspector, ENGINEER and OWNER shall agree to a partnering process during the construction of the water storage tank project to:

1. Improve the working environment;
2. Reduce and rapidly resolve disputes;
3. Produce a high-quality product; and
4. Eliminate or reduce delays.

These goals can be obtained by mutually agreeing to a cooperative strategy of commitment and honest communication. By creating trust and working as a team, all parties will benefit in producing high quality which will result in successful completion of the work without relaxing or waiving the requirements of the Contract Documents.

Problem solving will be created by a working relationship where understanding, trust and mutual cooperation are prime concerns.

If there is an error or oversight, or a change is suggested by the CONTRACTOR that will produce a product equal to or better than that specified or shown, the parties will work together to determine the best approach while maintaining quality in the construction.

All parties shall be committed to maintaining a proactive and positive attitude towards partnering and timely decision making.

PART 3 -- PRODUCTS (NOT USED)

PART 4 -- EXECUTION (NOT USED)

- END OF SECTION -

ATTACHMENT A

NOTICE

TO THE RESIDENTS AND PROPERTY OWNERS IN THE AREA OF CONSTRUCTION WORK FOR A NEW 0.5 MG WATER STORAGE TANK, WEST OF CR 333 AT A SITE ADJACENT TO THE EXISTING RIFLE AIRPORT 1.0 MG WATER TANK

WITHIN THE NEXT FEW DAYS, WORK WILL BE STARTED ON CONSTRUCTION OF THE WATER STORAGE TANK AND RELATED FACILITIES.

THIS WORK MAY CAUSE SOME TEMPORARY INCONVENIENCE BUT WILL BE PERMANENT BENEFIT TO THE CITIZENS OF RIFLE.

WE WILL APPRECIATE YOUR COOPERATION IN THE FOLLOWING:

1. PLEASE BE ALERT WHEN DRIVING OR WALKING NEAR THE AREAS AS CONSTRUCTION VEHICLES MAY BE ENTERING OR LEAVING THE WORK SITE.
2. TOOLS, MATERIALS AND EQUIPMENT ARE ATTRACTIVE TO CHILDREN. FOR THEIR SAFETY, PLEASE KEEP THEM AWAY FROM THE CONSTRUCTION AREA.
3. PLEASE REPORT ALL INCONVENIENCE TO THE FOREMAN ON THE JOB, OR CALL THE OFFICE AT THE NUMBER BELOW;

THIS WORK IS BEING PERFORMED FOR THE CITY OF RIFLE:

(INSERT CONTRACTOR'S NAME, ADDRESS, EMAIL AND TELEPHONE NUMBER)

_____
COMPANY

_____
ADDRESS

_____
PROJECT MANAGER

_____
EMAIL

_____
TELEPHONE

SECTION 01 11 15 – RESIDENT ENGINEER, CONSTRUCTION INSPECTOR, AND ENGINEER

PART 1 -- GENERAL

1.01 DESCRIPTION

A. This Section describes the respective roles of the Resident Engineer, Construction Inspector, and ENGINEER during the construction phase of the Project and will be the standard procedure with respect to the engagement of CONTRACTOR's interaction with each of them.

1.02 INTRODUCTION

A. Resident Engineer is an employee of the OWNER, assigned to the Site and Project who reports to the Utilities Director.

B. Construction Inspector is an employee of the Owner, assigned to the Site and Project and other projects who reports to the Utilities Director, and as the case may be also assigned to the Resident Engineer, if a Resident Engineer and Construction Inspector are both assigned to the Project.

C. ENGINEER is one or more principal consultant(s) (or as the case may be, their sub-consultant(s)) engaged directly or indirectly by the OWNER as design professional(s) for the Site and Project. During construction, the ENGINEER may have certain construction administration responsibilities. These construction administration responsibilities will be initiated by the Resident Engineer, or Construction Inspector.

1.03 DESIGNATED REPRESENTATIVE

A. The Resident Engineer and Construction Inspector will reside remote from the0.5 MG Tank Site (typically at City Hall or the Rifle regional Water Purification facility). One of these individuals will be designated as the CONTRACTOR's primary contact on all matters.

B. When the Resident Engineer is designated as the CONTRACTOR's primary contact, the Utilities Director may delegate the authority of the Resident Engineer to the Construction Inspector or to himself, or others during illness or scheduled absences.

C. When the Construction Inspector is designated as the CONTRACTOR's primary contact, the Utilities Director may delegate the authority of the Construction Inspector to himself, or others during illness or scheduled absences.

D. When the Resident Engineer and Construction Inspector are both assigned to the Project, the Resident Engineer will be designated as the CONTRACTOR's primary contact and the Construction Inspector, the secondary contact.

1.04 ROLE OF THE RESIDENT ENGINEER

A. The role and duties of the Resident Engineer include coordination between the CONTRACTOR and:

1. OWNER
2. ENGINEER

B. The role and duties of the Resident Engineer also include:

1. Interpretation of the Contract Documents.
2. Preparation and administration of contract modifications.
3. Inspection and observation.
4. Engagement of the ENGINEER.
5. Coordinating OWNER's role and duties in commissioning.
6. Coordinating OWNER's role and duties in start-up.
7. Primary Reviewer of applications for payment.
8. Primary Reviewer of Progress Schedules.
9. Primary Reviewer of Schedule of Values.
10. Primary Reviewer of Schedule of Submittals.
11. Secondary Reviewer of Substitution Requests.
12. Review and approval of simple and straightforward action submittals.
13. Forwarding of complex or discipline-oriented action submittals from CONTRACTOR to ENGINEER.
14. Primary reviewer of information submittals, maintenance submittals, and closeout submittals.
15. Return of submittals from ENGINEER to CONTRACTOR.
16. Management of Progress Meetings, including preparation and distribution of minutes.
17. Attendance at City Council Meetings, when requested by OWNER.
18. Administrator of Owner InSite™ management software.
19. Determination of Substantial Completion and other Milestones.
20. Other items as defined in the Contract Documents.

1.05 ROLE OF THE CONSTRUCTION INSPECTOR

A. The Construction Inspector will attend Progress meetings on a regular basis and make periodic visits to the Site. The Construction Inspector may be designated by the Utilities Director to function as the Resident Engineer for brief periods of time.

B. The role and duties of the Construction Inspector include:

1. Inspections
2. Secondary Reviewer of Applications for Payment.
3. Secondary Reviewer of Progress Schedules.
4. Secondary Reviewer of Schedule of Values.
5. Secondary Reviewer of Schedule of Submittals.
6. Issue and conflict management and resolution.

C. When only a Construction Inspector is assigned as the primary contact, the Construction Inspector also performs the roles and duties of the Resident Engineer listed under paragraph 1.4 above.

1.06 ROLE OF THE ENGINEER DURING CONSTRUCTION

A. The ENGINEER will have the following responsibilities during Construction:

1. Periodic site visits, review and inspection of construction, and participation (in person or remotely) in Progress Meetings.
2. Preparation and certification of construction completion to CDPHE.

B. The ENGINEER may also have the following responsibilities during construction, but ONLY at the direction of the Resident Engineer:

1. Consultation and advisement to Resident Engineer and OWNER.
2. Adjudging the acceptability, technical correctness, and/or the quality of the construction.
3. Review of substitution requests submitted by CONTRACTOR.
4. Responses to RFIs (ECs).
5. Review, commenting, and the determination of the disposition of submittals.
6. Review and comment on pay applications, progress schedules, and other transmittals from CONTRACTOR.
7. Assistance to the Resident Engineer and OWNER in coordinating with permitting agencies.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 COMMUNICATION

A. The OWNER has adopted the use of Owner InSiteTM management software, which is an internet accessible cloud-based platform, to communicate and store information in an accessible form for project participants that are dispersed throughout the country.

B. OWNER, CONTRACTOR, and ENGINEER are required to use Owner InSiteTM for correspondence, transmittals, and submittals and in other manners described in the Contract Documents. OWNER, and only OWNER, may grant permission to key suppliers, funding agencies, or other parties for use of limited features of Owner InSite™.

3.02 COORDINATION

A. The Resident Engineer will review and coordinate activities of the ENGINEER and OWNER at regularly scheduled Progress Meetings.

B. CONTRACTOR is required to forecast coordination activities involving OWNER and ENGINEER on the 4-week look-ahead schedule.

3.03 IMPLEMENTATION

A. As a matter of routine, the Resident Engineer, or Construction Inspector, will receive documents from the CONTRACTOR via Owner InSite™.

B. The Resident Engineer, or Construction Inspector, will make the determination as to whether the action of the ENGINEER, OWNER, or others is required as defined by the Contract Documents.

C. Whenever possible, the Resident Engineer, or Construction Inspector will act directly on the documents.

D. When the Resident Engineer determines that the ENGINEER, OWNER, or others are to be involved, the matter will be referred to the appropriate parties for action consistent with Contract Documents.

E. ENGINEER, OWNER and Others will return the documents to the Resident Engineer, or Construction Inspector with comments, a response, and or a disposition as described in the Contract Documents.

F. The Resident Engineer, Construction Inspector, will review the comments, responses, and dispositions affixed to the documents, coordinate any issues or conflicts that may arise, and provide directions to the CONTRACTOR accordingly.

G. The Owner InSite™ management software has archival capabilities and will be used to store correspondence, submittals, responses, drawings, and contract modifications.

- END OF SECTION -

SECTION 01 14 16 – COORDINATION WITH OWNER'S OPERATIONS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. This Section includes requirements for coordinating with OWNER's operations during the Work, and includes requirements for connections to existing facilities (tie-ins), shutdowns, and reconfigurations necessary to complete the Work without impact on OWNER's operations except as allowed in this Section.
2. The CONTRACTOR shall connect to OWNER's existing facilities and provide operable systems as shown and specified.
3. CONTRACTOR shall provide labor, materials, tools, equipment and incidentals shown, specified and required to coordinate with OWNER's operations during the Work.

B. Coordination:

1. Review installation procedures under other Specification sections and coordinate Work that must be performed with or before the Work specified in this Section.

C. Related Sections:

1. Section 01 11 13, Summary of Work.
2. Section 01 73 29, Cutting and Patching.
3. Section 01 73 24, Connections to Existing Water System Facilities.

D. Except for shutdowns and reconfigurations specified in this Section and connections to existing facilities specified in Section 01 73 24, perform the Work such that OWNER's Rifle Regional Water Purification Plant (RRWPP), 1.0 MG Tank, and SCADA facilities remain in continuous satisfactory operation during the Project. Schedule and conduct the Work such that the Work does not impede OWNER's production or processes, create potential hazards to operating equipment and personnel, reduce the quality of the facility's products or affect drainage, discharge facilities, or cause nuisances.

E. Work not specifically covered in this Section or in referenced Sections may, in general, be completed at any time during regular working hours in accordance with the General Conditions and Supplementary Conditions, subject to the requirements in this Section.

F. CONTRACTOR has the option of providing additional temporary facilities or alternative solutions that can eliminate or mitigate a constraint without additional cost to OWNER, provided such additional temporary facilities: do not present hazards to the public, personnel, structures, and equipment; that such additional temporary facilities do not adversely affect OWNER's ability to comply with Laws and Regulations, permits, and operating requirements; that such temporary facilities do not generate or foster the generation of unpleasant tastes, odors, and other nuisances; and that requirements of the Contract Documents are fulfilled.

G. Coordinate shutdowns or changes to normal operations with OWNER and Resident Engineer, or Construction Engineer. When possible, combine multiple tie-ins into a single shutdown to minimize impacts on OWNER's operations and processes.

H. Do not shut off or disconnect existing operating systems, unless accepted by Resident Engineer, or Construction Inspector, in writing. Operation of existing equipment and valves will be by OWNER unless otherwise specified or indicated. Where necessary for the Work, CONTRACTOR shall seal or bulkhead OWNER-operated gates and valves to prevent leakage that may affect the Work, OWNER's operations, or both. Provide temporary watertight plugs, thrust restraints and bulkheads as required. After completing the Work, remove seals, plugs, thrust restraints and bulkheads to satisfaction of Resident Engineer, or Construction Inspector.

1.02 SUBMITTALS

A. Action Submittals: Submit the following:

1. Alternative or Revised Sequence Submittal: When deviation from specified schedule is proposed, provide submittal explaining in detail the proposed sequence change and its effects, including evidence that OWNER's operations will not be adversely affected by proposed change. List benefits of proposed change, including costs and benefits to Progress Schedule.

2. Planning Submittal:

a. For each shutdown, tie-in, reconfiguration, or change to operations, submit an inventory of labor and materials required to perform each task associated with the shutdown, tie-in, reconfiguration, or change to operations. Provide an estimate of time required to accomplish the work activities including time for OWNER to take down, drain, and start up existing equipment, systems, or pipelines, and written description of steps required to complete the Work associated with the shutdown, or re-configuration.

b. Furnish planning submittal to Resident Engineer, or Construction Inspector, at least four (4) weeks prior to the proposed shutdown start date. Do not start shutdown, or re-configuration, until obtaining Resident Engineer's, or Construction Inspector's written acceptance of the planning submittal.

B. Informational Submittals: Submit the following:

1. Notification: After acceptance of shutdown or reconfiguration planning submittal and prior to starting the activities, update the four (4) week look ahead schedule with activities pertaining to shutdown, tie-in, reconfiguration, or change in operations. Provide written notification to Resident Engineer of the precise date and time each shutdown or reconfiguration sequence is to start. Provide notification at least 72 hours in advance of each shutdown or reconfiguration. If notification of public is required, place notice in newspaper and or radio/TV in advance at

CONTRACTOR's expense.

1.03 GENERAL CONSTRAINTS

A. Table 01 14 16-A summarizes the shutdowns, reconfigurations, maximum permissible durations, where applicable, for OWNER's equipment, systems, and pipelines that are to be taken out of service temporarily for the Work. New equipment, materials, and systems may be used by OWNER after the specified field quality controls and testing are successfully completed and with the approval of the Resident Engineer, or Construction Inspector.

B. The following constraints apply to coordination with OWNER's operations:

1. Operational Access: OWNER's personnel shall have access to equipment and areas that remain in operation.

2. Temporary Partitions and Enclosures: Provide if necessary. Comply with Section 01 51 05, Temporary Utilities.

3. Schedule and perform equipment and system start-ups for Tuesday through Thursday. Equipment and systems shall not be placed into operation on Monday, Friday, Saturday, and Sunday without prior approval of OWNER.

4. Dead End Valves or Pipe: Provide blind flanges, watertight bulkheads, thrust restraints, or valve at temporary and permanent terminuses of pipes and conduits. Blind flanges and bulkheads shall be suitable for the service and braced and blocked, as required, or otherwise restrained as directed by Resident Engineer. Temporary valves shall be suitable for their associated service. Where valve is provided at permanent terminus of pipe or conduit, also provide on unconnected side of valve a blind flange with drain/flushing connection. Provide for air release as appropriate.

5. OWNER will assist CONTRACTOR in dewatering existing tanks, basins, pipes, and other work areas to be dewatered for shutdowns. Maintain clean and dry work area by pumping and properly disposing of fluid that accumulates.

6. Draining and Cleaning of Pipes and Tanks:

a. Unless otherwise specified, CONTRACTOR shall dewater existing affected pipelines at the beginning of each shutdown. Flush, wash down, and clean pipelines, and other work areas. Coordinate OWNER's assistance on the four (4) week look ahead schedule.

b. CONTRACTOR shall remove liquids and solids and dispose of them at appropriate location at the Site or off-site as directed by OWNER. Unless otherwise specified or indicated, contents of pipes and tanks, containing a disinfectant residual shall first be dechlorinated before transferring using hoses, piping, pumps, or other means provided by CONTRACTOR and as approved by the Resident Engineer, and Construction Inspector and applicable authorities.

c. Spillage shall be brought to Resident Engineer's, or Construction Inspector's attention immediately, both verbally and in writing, and

reported in accordance with Laws and Regulations. If spillage is not suitable for discharge to the drainage system, such as chlorinated water, or chemical spills, as determined by Resident Engineer, or Construction inspector, CONTRACTOR shall remove spillage by other method, such as vactor truck, acceptable to Resident Engineer, or Construction Inspector.

All valves and gates, and existing equipment are to be operated only by OWNER's personnel.

1.04 SEQUENCE OF WORK

A. Perform the Work in the specified sequence unless otherwise approved. Certain phases or stages of the Work may require work during hours outside of regular working hours. Work may be accelerated from a later stage to an earlier stage if OWNER's operations are not adversely affected by proposed sequence change, with Resident Engineer's, or Construction Inspector's, acceptance.

1.05 TIE-INS

A. Table 01 14 16-A in this Section summarizes required shutdowns and reconfigurations and includes a cross reference to connections (tie-ins) to be made by CONTRACTOR to existing facilities and the maximum permissible duration of the associated shutdown, or reconfiguration. Table 01 14 16-A may not include all shutdowns and reconfigurations required for the Work; CONTRACTOR shall perform shutdowns, tie-ins, and reconfigurations required to complete the Work. For tie-ins not included in Table 01 14 16-A, obtain requirements for tie-ins from Resident Engineer, or Construction Inspector.

B. Table 01 73 24-A describes the tie-ins in greater detail.

1.06 SHUTDOWNS

A. General:

1. Terminology: A "shutdown" is when a portion of the normal operation of OWNER's facility, whether equipment, systems, piping, or conduit, has to be temporarily suspended or taken out of service to perform the Work.

2. Terminology: A "reconfiguration" is when piping or a system must be rearranged, or re-programed, or changed from one use to another and is often accompanied by a brief interruption of the pipeline's or system's functionality.

3. Work that may interrupt normal operations shall be accomplished at times convenient to OWNER.

4. Furnish at the Site, in close proximity to the shutdown and tie-in work areas, tools, equipment, chemicals, spare parts and materials, both temporary and permanent, necessary to successfully complete the shutdown. Complete to the extent possible, prefabrication of piping and other assemblies prior to the associated shutdown. Demonstrate to Resident Engineer's, or Construction Inspector's satisfaction that CONTRACTOR has complied with these requirements before commencing the shutdown.

5. If CONTRACTOR's operations cause an unscheduled interruption of

OWNER's operations, immediately re-establish satisfactory operation for OWNER.

6. Unscheduled shutdowns or interruptions of continued safe and satisfactory operation of OWNER's facilities that result in fines or penalties by authorities having jurisdiction shall be paid solely by CONTRACTOR if, in OWNER's opinion, CONTRACTOR did not conform to the requirements of the Contract Documents, or was negligent in the Work, or did not exercise proper precautions in conducting the Work.

7. Work requiring service interruptions for tie-ins shall be performed during scheduled shutdowns.

8. Temporary, short-term shutdowns or interruptions of smaller piping, equipment, and systems may not be included in Table 01 14 16-A and 01 73 24-A. Coordinate requirements for such shutdowns and interruptions with Resident Engineer, or Construction Inspector, and OWNER.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 GENERAL

A. In addition to requirements of this Section, conform to requirements of Section 01 73 29-Cutting and Patching, and Section 01 73 24-Connections to Existing Facilities.

3.02 DETAILED SHUTDOWN REQUIREMENTS

A. Shutdown A (Temporary (Potable) Water for Construction):

1. General:

a. *Affected Equipment Operating Prior to Shutdown*: The regional water distribution system and fire hydrant near County Road #333 (aka Hunter Mesa Road).

b. *Equipment Operating During Shutdown*: Water pump station, distribution main and fire hydrant. This shutdown assumes that CONTRACTOR will be utilizing potable water for construction activities requiring temporary ground pipe or hose. Pump pressure could be in excess of 150 psi.

c. Equipment Out of Service during Shutdown: Fire hydrant.

d. *Impact on Other Equipment and Processes*: None, if connected to hydrant. Shutdown not required for connection. Shutdown for cold weather may be necessary to prevent freezing and damage from freezing.

e. *Procedure*: Coordinate with Resident Engineer, or Construction Inspector. Install temporary meter provided by OWNER (refundable deposit). Backflow device and temporary connection facilities shall be provided by CONTRACTOR.

f. *Best time for shutdown*: No constraints regarding connection to hydrant.

2. Prior to Shutdown:

   a. Obtain Resident Engineer's, or Construction Inspector's acceptance of proposed temporary facilities and shutdown planning submittal and shutdown notification submittal.

3. During Shutdown:

   a. Remove and drain connection after each use. Cover hydrant and meter with an insulated concrete blanket.

   Following Shutdown:

   b. Remove, store, and secure temporary facilities at secure location away from hydrant.

B. Shutdown B (Connection to existing 12-inch supply/distribution line to the existing 1.0 MG tank):

1. General:

   a. *Affected Equipment Operating Prior to Shutdown*: Pumping System from RRWPP, and the regional water distribution system (including all fire hydrants and customers).

   b. *Equipment Operating During Shutdown*: RRWPP, Pumping System and the regional water distribution (including all fire hydrants and customers). This shutdown assumes that the CONTRACTOR will install a 12-inch tee and gate valve as indicated in the Drawings.

   c. *Equipment Out of Service during Shutdown*: 12-inch pipeline to the existing 1.0 MG tank.

   d. *Impact on Other* Equipment and Processes: BOOSTER PUMPS WILL NEED SHUT OFF

   e. *Procedure*: Coordinate with Resident Engineer, or Construction Inspector

   f. *Best time for shutdown*: WORK SHOULD BE DONE AFTER 5PM FOR CONNECTION TO EXISTING SYSTEM

   Prior to Shutdown:

   g. Obtain Resident Engineer's, or Construction Inspector's acceptance of proposed temporary facilities, shutdown planning submittal, length of time for connection and shutdown notification submittal.

2. During Shutdown:

   a. Remove section of 12-inch pipeline and install tee and valve.

3. Following Shutdown:

   a. Restore pipeline to service.

3.03 SCHEDULES

The schedules listed below are part of this Specification section:

A. Table 01 14 16-A, Schedule of Shutdowns and Reconfigurations

TABLE 01 14 16-A SCHEDULE OF SHUTDOWNS AND RECONFIGURATIONS				
Identifier No.[1,3]	Location	Maximum Permissible Duration of any Component Activity	Tie-in Nos.[2,3]	Remarks
A	Hydrant Near CR#333	NA	1	Temporary water for construction. Shutdown not required.
B	12-inch Supply/Distribution Pipeline near 1.0 MG tank	6 hours	1	Coordinate shutdown with Owner

1) Identifier label does not necessarily imply sequence. Sequence may be modified by CONTRACTOR in accordance with procedures outlined in this Section.

2) Section 01 73 24, Connections to Existing Water System Facilities describes the tie-ins in greater detail

3) Multiple tie-ins may be performed during a common shutdown when approved by the ENGINEER.

4) NA = Not Applicable.

- END OF SECTION -

SECTION 01 22 13 – MEASUREMENT AND PAYMENT

PART 1 -- GENERAL

1.01 DESCRIPTION

A. The agreed Contract Price and the scope for the Work associated with Guaranteed Maximum Price (GMP) have been established in accordance with rates for Construction Fee and General Conditions defined in the Construction Services Agreement and documented in the executed GMP Proposal.

B. The Contract Price includes amounts for CONTRACTOR's and OWNER's Contingency that the parties have agreed to establish with amounts identified on the GMP Proposal.

C. CONTRACTOR's Contingency and OWNER's Contingency will be applied in manner consistent with the GMP proposal and as defined by the Construction Services Agreement.

1.02 RELATED PROVISIONS

A. Payments to CONTRACTOR: Refer to the GMP Proposal, Construction Services Agreement, General Conditions, Supplementary Conditions.

B. Changes in Contract Price: Refer to General Conditions and Supplementary Conditions.

C. Schedule of Values: Refer to General Conditions, Supplementary Conditions, and Section 01 29 73, Schedule of Values.

1.03 GENERAL CONSTRUCTION

A. Contract Price

1. Measurement: Assessment of work completed in comparison to amounts listed on Schedule of Values plus adjustments due CONTRACTOR related to unit cost work, if applicable.

2. Payment: Payment made in accordance with the Construction Services Agreement, General Conditions, Supplementary minus amounts due OWNER.

1.04 UNIT RATES (NOT USED)

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope: Section includes:

1. Administrative and procedural requirements for selecting products for the Project.
2. Procedural requirements for product substitutions.
3. Procedural requirements for substitute construction methods or procedures, when construction methods or procedures are specified.

1.02 TERMINOLOGY

A. The following terms are not defined to apply globally to the Contract Documents but, when used in this Section, they have the following meaning:

1. “Products” includes materials, equipment, machinery, components, fixtures, systems, and other goods incorporated in the Work. Products do not include machinery and equipment used for preparing, fabricating, conveying, erecting, or installing the Work.

1.03 PRODUCT SUBSTITUTIONS

A. Requests for approval of substitute products or items will be considered for a period of 15 days after the Effective Date of the Construction Services Agreement. After end of specified period, requests will be considered only in case of unavailability of a specified product or other conditions beyond CONTRACTOR’s control.

B. Procedure:

1. Submit number of copies of request for substitution as specified for Shop Drawings and other submittals in Section 01 33 00, Submittal Procedures.
2. Submit separate request for each substitution.
3. Submit substitution request using forms attached to this Section by completing all information requested on the forms, and enclose with the forms supplementary information as required. In addition to requirements of the General Conditions and information required on substitution request forms, include with request the following:
    a. Product identification, including manufacturer’s name and address.
    b. Manufacturer’s literature with product description, performance specifications, and test data, and reference standards with which product complies.
    c. Samples, if appropriate.
    d. Name and address of similar projects on which product was used, owner’s contact information, and date of installation.

1.04 SUBSTITUTE CONSTRUCTION METHODS OR PROCEDURES

A. Procedure:

1. Submit number of copies of request for substitution as specified for Shop Drawings and other submittals in Section 01 33 00, Submittal Procedures.
2. Submit separate request for each substitution.
3. Submit substitution request using forms attached to this Section by completing all applicable information requested on the forms, and enclose with the forms supplementary information as required. In addition to requirements of the General Conditions and information required on substitution request forms, include with request the following:
   a. Detailed description of proposed method or procedure.
   b. Itemized comparison of the proposed substitution with the specified method or procedure.
   c. Drawings signed and sealed by a licensed engineer, illustrating method or procedure.
   d. Other data required by Resident Engineer, Construction Inspector, or ENGINEER to establish that proposed substitution is equivalent to specified method or procedure.

1.05 CONTRACTOR'S REPRESENTATION AND ACCEPTANCE

A. In submitting request for substitution, CONTRACTOR represents that:

1. CONTRACTOR has investigated proposed substitution and determined that it is equivalent to item, product, method, or procedure specified, as applicable.
2. CONTRACTOR will provide the same or better guarantees or warranties for proposed substitution as for the specified product, manufacturer, method, or procedure, as applicable.
3. CONTRACTOR waives all Claims for additional costs or extension of time related to proposed substitution that subsequently may become apparent.

B. A proposed substitution will not be accepted for review if:

1. Approval would require changes in design concept or a substantial revision of the Contract Documents.
2. Approval would delay completion of the Work or the work of other contractors.
3. Substitution request is indicated or implied on a Shop Drawing or other submittal, or on a request for interpretation or clarification, and is not accompanied by CONTRACTOR's formal request for substitution.
4. Cost is excessive, as determined by the Resident Engineer, Construction Inspector, or ENGINEER.

C. If Resident Engineer, Construction Inspector, or ENGINEER does not approve the proposed substitute, CONTRACTOR shall provide the specified product, manufacturer, method, or procedure, as applicable.

D. Approval of a substitution request will not relieve CONTRACTOR from requirement for submitting Shop Drawings as set forth in the Contract Documents.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 SUPPLEMENTS

A. The forms listed below, following the “End of Section” designation, are part of this Specification Section:

1. Substitution Request Form (two pages).
2. Product Substitution Checklist (one page).

- END OF SECTION -

SUBSTITUTION REQUEST

Project: Rifle Airport 500,000-gallon Water Tank

Substitution Request Number: _____

From: _____

To: _____

Date: _____

Engineer Proj. No. _____

Re: _____

Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 1-4 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

☐ Point-by-point comparative data attached — REQUIRED BY THE CONTRACT DOCUMENTS

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Engineer: _____

Address: _____ Owner: _____

Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitution: ($)
(attach detailed, itemized estimate)

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.
(clarify whether change is to Substantial Completion, Milestone, or time for readiness for final payment)

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST
(Continued)

☐ Substitute product, method, or procedure is subject to payment of licensing fee or royalty (check if "yes" and attach information)

☐ Substitute product, method, or procedure is patented or copyrighted (check if "yes" and attach information)

The undersigned certifies:

- Representations in the General Conditions and in Section 01 25 00, Substitution Procedures, regarding substitutions are valid.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay Progress Schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for Engineer's review and changes, if any, to the design and Contract Documents, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

Attachments: ☐

REVIEW AND ACTION (FOR OWNER AND ENGINEER'S USE ONLY)

☐ Substitution approved.
☐ Substitution approved as noted.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ Engineer
☐ Other:

Adapted from CSI Form No. 13.0B, 2004 edition

PRODUCT SUBSTITUTION CHECKLIST

Date: _____ Re: _____

Engineer Proj No.: _____ Manufacturer's Project No.: _____

Filing No.: _____ Contract For: _____

Product Equivalence:

☐ Is the submitted product equivalent to the specified item? _____

☐ Does it serve the same function? _____

☐ Does it have the same dimensions? _____

☐ Does it have the same appearance? _____

☐ Will it last as long? _____

☐ Does it comply with the same codes, and standards and performance requirements? _____

☐ Has the product been used locally, and where are the projects? _____

_____

☐ Has a problem occurred with the product, and what was the remedy? _____

_____

Effect on the Project:

☐ Will the substitution affect other aspects of the construction? _____

☐ Are any details affected and are changes required? _____

☐ What is the cost of the changes? _____

☐ Who pays for the required changes? _____

☐ Is construction time affected? _____

_____

Effect on the Warranty:

☐ How does the proposed warranty differ from the specified warranty? _____

_____

☐ Does the manufacturer have a track record of standing behind the warranty? _____

_____

Adapted from CSI Form No. 20.3, 1998 edition

SECTION 01 26 00 – CONTRACT MODIFICATION PROCEDURES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. General.

1. This Section expands upon provisions of the General Conditions and Supplementary Conditions, and includes:

   a. Requests for interpretation (RFI).

   b. RFI Responses (Engineer Clarification, EC).

   c. Field Orders (FO).

   d. Work Change Directives (WCD).

   e. Proposal requests (PR).

   f. Change (Order) proposals (PCO).

   g. Change Orders (CO).

B. Submit RFIs and PCOs to Resident Engineer through OWNER-InSite™ management software administered by Resident Engineer, or Construction Inspector. Access and log-in information will be provided separately. Resident Engineer, or Construction Inspector, will function as gatekeeper, monitor, and director for modifications to Contract.

C. Retain complete printed copy of the document submitted electronically with attachments at CONTRACTOR's office and at the Site for use of personnel during construction. Print copy of electronically created form to assign sequential number and attach associated documents, if any.

D. Resident Engineer, or Construction Inspector, may reject, return, or request more information if improperly submitted or incomplete documents are submitted.

E. The status of RFIs, RFI Responses (ECs), FOs, WCDs, PRs, PCOs and COs will be reviewed and discussed at each progress meeting with the focus on outstanding responses.

1.02 REQUESTS FOR INTERPRETATION (RFIS)

A. General.

1. Submit written (electronic) RFIs through OWNER-InSite™. Resident Engineer, or Construction Inspector, will respond directly or invite others to review, respond, or to provide supplemental information.

2. Submit RFIs to obtain clarification or interpretation of the Contract Documents. Use RFIs to report conflicts, errors, ambiguities, and discrepancies in the Contract Documents.

3. Do not submit an RFI when other form of communication is appropriate, such as submittals, requests for substitutions or "or equals", notices, ordinary correspondence, or other form of communication. Improperly prepared or inappropriate RFIs will be returned without action and with a

request that additional information be provided before additional consideration.

B. Procedure.

1. Submit each RFI separately with the topic (title) limited to one subject. Enter the date the response is due, generally one (1) to two (2) weeks from submittal. The software will automatically number, log the request, track status and calculate the number of days a response is outstanding.

2. In space provided on the software form, describe the interpretation requested. Provide additional information in the form of a single PDF attachment as required. Include narrative, sketches, specification language, or drawing and any reference information as required in sufficient detail for review and response.

3. When applicable, the RFI shall include CONTRACTOR's recommended resolution.

4. Responding party(s) will provide timely review of RFIs. Allow sufficient time for review and response.

5. The software will maintain a log of RFIs that may be queried for status.

6. The responding party will provide a written clarification (EC or RFI Response) to each RFI.

7. If Resident Engineer, Construction Inspector, or ENGINEER requests additional information to make an interpretation, provide information requested within ten days, unless Resident Engineer, or Construction Inspector, allows additional time via correspondence referring to a specific RFI number.

8. If CONTRACTOR or Resident Engineer, or Construction Inspector believes that a change in Contract Price or Contract Times or other change to the Contract is required, check these items on the software form and provide a rough order of magnitude estimate of cost and additional time. A change order proposal with substantiated costs at accepted mark-ups and impacts on critical path would need to be submitted by CONTRACTOR, potentially negotiated, and accepted before a change order is issued by Resident Engineer, or Construction Inspector, amending the Contract Price or Contract Times.

9. Notify Resident Engineer, or Construction Inspector, in writing at weekly progress meeting before proceeding with Work associated with a clarification notice.

1.03 RFI RESPONSES (CLARIFICATION NOTICES, EC)

A. General:

1. RFI responses (Clarification notices, ECs) to RFIs, when required, will be prepared by Resident Engineer, Construction Inspector, or ENGINEER.

2. Clarification notices do not change the Contract Price or Contract Times, and do not alter the Contract Documents.

3. Clarification notices will be issued electronically typically in the portion of the RFI form allocated to a RFI Response. The EC may contain additional

information as an attachment.

B. Procedure.

1. Resident Engineer, or Construction Inspector, or ENGINEER will prepare and submit a written (electronic) clarification response to an RFI within the RFI form. This submission will distribute the response amongst the project participants.

2. If CONTRACTOR or Resident Engineer, or Construction Inspector, believes that a change in Contract Price or Contract Times or other change to the Contract is required, check these items on the software form and provide rough order of magnitude estimated costs and estimated additional times. A change (order) proposal with substantiated costs at accepted mark- ups and impacts on critical path would need to be submitted by CONTRACTOR, potentially negotiated, and accepted before a change order is authorized and issued amending the Contract Price or Contract Times.

3. Notify Resident Engineer, or Construction Inspector, in writing at next progress meeting before proceeding with Work associated with clarification notice.

4. If clarification notice is unclear, submit another RFI.

1.04 FIELD ORDERS (FO)

A. General:

1. Field Orders authorize minor variations in the Work but do not change the Contract Price or Contract Times.

2. Field Orders, when required, will be initiated and issued by Resident Engineer, or Construction Inspector.

3. Field Orders will be issued in a format acceptable to Resident Engineer or Construction Inspector and CONTRACTOR or in the form of Engineers Joint Contract Documents Committee (EJCDC) document C-942, “Field Order”.

4. Resident Engineer, or Construction Inspector, will transmit Field Orders as an attachment to an electronic transmittal labeled “FO- #_” and make executed Field Orders accessible through the transmittal log and document features of OWNER-InSite™ software.

B. Procedure.

1. If CONTRACTOR believes that a change in Contract Price or Contract Times or other change to the Contract is required, immediately notify Resident Engineer, or Construction Inspector, in writing before proceeding with Work associated with the Field Order.

2. If Field Order is unclear, submit an RFI.

1.05 WORK CHANGE DIRECTIVES (WCD)

A. General:

1. Work Change Directives, when required, order additions, deletions, or

revisions to the Work.

2. Work change Directives, when required, will be initiated and issued by Resident Engineer, or Construction Inspector.

3. Work Change Directives do not change the Contract Price or Contract Times but are evidence that the parties to the Contract expect that the change ordered or work documented by the Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

4. Work Change Directives will be issued in a format acceptable to Resident Engineer or Construction Inspector, and CONTRACTOR or in the form of EJCDC document C-940, “Work Change Directive”.

5. Resident Engineer, or Construction Inspector, will transmit Work Change Directives as an attachment to an electronic transmittal labeled “WCD- #” and make executed Work Change Directives accessible through the transmittal log and document features of OWNER-InSite™ software.

B. Procedure.

1. Resident Engineer, or Construction Inspector, will transmit Work Change Directives electronically for CONTRACTOR’s signature, and within five days of receipt, transmit the executed document back to Resident Engineer, or Construction Inspector, for OWNER’s signature.

2. 2 When required by Resident Engineer, or Construction Inspector, document for the Work performed under each separate Work Change Directive, for each day, the number and type of workers employed and hours worked; equipment used including manufacturer, model, and year of equipment, and number of hours; materials used, receipts for and descriptions of materials and equipment incorporated into the Work, invoices and labor and equipment breakdowns for Subcontractors and Suppliers, and other information required by Resident Engineer, or Construction Inspector, in a format acceptable to Resident Engineer, or Construction Inspector. Submit this documentation to Resident Engineer, or Construction Inspector as a Change (Order) proposal.

1.06 PROPOSAL REQUESTS (PR)

A. General:

1. Proposal requests may be initiated by Resident Engineer, or Construction Inspector, or CONTRACTOR. Entity requesting the proposal shall be identified on the request. Identify any time constraints associated with the request on the request.

2. Proposal requests are for requesting the effect on Contract Price and Contract Times and other information relative to contemplated changes in the Work. Proposal requests do not authorize changes or variations in the Work, and do not change the Contract Price or Contract Times or terms of the Contract. Proposal requests are not an authorization to proceed with the proposed Work.

B. Procedure.

1. Proposal requests shall be transmitted as a PDF attachment through OWNER-InSite™.

2. For Resident Engineer, or Construction Inspector, requested proposals, CONTRACTOR shall prepare and submit a Change (Order) proposal that includes the label “PR-#” in the proposal request. Resident Engineer, or Construction Inspector, will outline the objective of the request.

3. For CONTRACTOR requested proposals, CONTRACTOR shall prepare and submit a Change (Order) proposal that include the label “PR-#” in the proposal request. Proposal request shall include an estimate of the cost and time impact and any deviations in the quality or performance that would result from an accepted proposal.

4. Proposal requests may be under consideration for several weeks. Resident Engineer, or Construction Inspector, will notify CONTRACTOR of accepted proposal requests and may request that the Change (Order) proposal be updated and resubmitted. If the associated Change (Order) proposal is approved, a Change Order addressing the PR will be issued to authorize adjustment to the scope of Work.

1.07 CHANGE (ORDER) PROPOSALS (PCO)

A. General.

1. Provide Change (Order) proposal (PCO) to Resident Engineer, or Construction Inspector, in response to each proposal request (PR), and when CONTRACTOR believes a change in the Contract Price or Contract Times or other change to the terms of the Contract is required.

B. Procedure.

1. Transmit PCO to Resident Engineer, or Construction Inspector, through Owner InSite™ with accompanying documentation in the form of a single PDF attachment. Transmit each PCO on a single subject or closely related items directly affected.

2. In space provided on software form, allow the software to automatic number the Change (Order) proposal (PCO), insert a short phrase for the title, leave the optional description field blank, complete general information and upload the PDF attachment with information described in this Section. Check the item that says “Do not proceed until pricing has been approved”. The amount entered for the rough order of magnitude shall be equivalent to the proposed amount supported by spreadsheet documentation in the PDF attachment. The amount of proposed time delay entered into the form shall be equivalent to the delay of activities on the critical path.

3. Resident Engineer, or Construction Inspector, will review Change (Order) proposal (software form, PDF attachment, and comments from reviewers) and either request additional information from CONTRACTOR or make recommendation to OWNER regarding approval of the Change Order proposal.

4. If Resident Engineer, or Construction Inspector, requests additional information to render a decision, submit required information within five

days of receipt of Resident Engineer's, or Construction Inspector's, request, unless Resident Engineer, or Construction Inspector allows greater amount of time. Submit the required information via correspondence that refers to the Change (Order) proposal (PCO) number.

5. If the PCO is recommended for approval by Resident Engineer, or Construction Inspector, and approved by OWNER, the amount will be incorporated into a Change Order letter. Do not proceed with the scope of the PCO until CONTRACTOR is in possession of properly executed Change Order letter.

6. If parties do not agree on terms for the change, OWNER or CONTRACTOR may file a Claim against the other, in accordance with the General Conditions and the Supplementary Conditions. However, CONTRACTOR shall perform the Work.

C. PDF Attachment for PCO.

1. Assemble the following documents in a single PDF file.

a. Provide a narrative description of the proposed change. Describe scope of each proposed change. Include text and edited PDF drawings as required to provide detail sufficient for Resident Engineer's, or Construction Inspector's review and response

b. Provide narrative justification for each proposed change.

c. A spreadsheet in a format acceptable to Resident Engineer, or Construction Inspector, that summarizes work items and total change in Contract Price and Contract Times including fees and mark-ups as defined in the Agreement. Provide sample spreadsheet for Resident Engineer, or Construction Inspector, review and acceptance prior to first use and upon request. The spreadsheet shall have the following detail:

1) List of tasks to accomplish the change.

2) For each task, labor cost breakdown including labor classification, total hours per labor classification, and hourly cost rate for each labor classification.

3) Construction equipment and machinery to be used, including manufacturer, model, and year of manufacture, and number of hours for each.

4) Detailed breakdown of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.

5) Breakdowns of the Cost of the Work and fee for Subcontractors, including labor, construction equipment and machinery, and

6) materials and equipment incorporated into the Work, other costs, and Subcontractor fees.

7) Breakdown of other costs eligible, in accordance with the

General Conditions and the Supplementary Conditions.

8) Other information required by Resident Engineer, or Construction Inspector.

9) CONTRACTOR's fees applied to eligible CONTRACTOR costs and eligible Subcontractor costs.

d. State the total increase, decrease, or no change in Contract Time. If an increase or decrease, state the specific number of work or calendar days that milestones or Substantial Completion will be impacted.

e. Provide certification and signature that the adjustment proposed is the entire adjustment to the Contract to which CONTRACTOR believes it is entitled to as a result of the proposed change.

1.08 CHANGE ORDERS (CO)

A. General:

1. OWNER has developed a workflow for reviewing Change (Order) proposals and administering Change Orders. This workflow outlines the steps, individuals, and entities involved in processing Change Orders. The steps and people involved depend on the magnitude of the Change Order amount (aggregate and accumulative) and the limits of the individual's spending authority. The scope of the change order, if inconsistent with CDPHE- WQCD design criteria or funding agency regulations, could also be rejected in part or whole by the agency funding the Project.

2. Change Orders, which aggregate one or more PCOs, will be issued in letter format on City of Rifle letterhead.

3. A properly executed Change Order will contain the signature of the City Manager and the Resident Engineer, or Construction Inspector, who signs after the CONTRACTOR.

4. The content of the Change Order letter will contain similar information to the EJCDC document C-941, "Change Order".

5. The time required to process a Change Order will vary on the magnitude of the amount (aggregate and accumulative), and if there is a reasonable likelihood of being inconsistent with WQCD design criteria or SRF funding requirements.

B. Procedure.

1. Change (Order) proposals (PCOs) will be screened by the Resident Engineer, or Construction Inspector, for completeness and likelihood of conformance to CDPHE design criteria and funding agency requirements. Incomplete PCOs will be rejected and revised PCOs with additional information will need to be submitted by CONTRACTOR. If there is a reasonable possibility of being inconsistent or non-compliant with CDPHE- WQCD design criteria or funding requirements, Resident Engineer, or Construction Inspector, will contact CDPHE and/or the funding agency for guidance before processing the affected PCO any

further.

2. After OWNER's review and checks and balances, OWNER will prepare Change Order letter aggregating as many PCOs that are ready for action.
3. Resident Engineer, or Construction Inspector, will present the Change Order letter to CONTRACTOR for signature. Two (2) copies will be provided or be able to be downloaded from Owner InSite™.
4. After CONTRACTOR's signature, CONTRACTOR will return both copies to Resident Engineer, or Construction Inspector, for signature.
5. Resident engineer will distribute executed originals to CONTRACTOR and OWNER (file copy), a copy to CDPHE, and will scan and post to Owner InSite™.
6. CONTRACTOR, on receipt of executed Change Order letter shall incorporate scope of change order into the Project including progress schedules and pay applications.

PART 2 -- **PRODUCTS**

OWNER InSite™ management software. A cloud-based application accessible from any IBM or Apple computer without cost to CONTRACTOR.

PART 3 -- **EXECUTION**

OWNER, Resident Engineer, Construction Inspector, ENGINEER, and CONTRACTOR shall make minor adjustments necessary to implement the use the OWNER InSite™ management software. Resident Engineer, or Construction Inspector will have sole discretion in determining if minor adjustments that are proposed or implemented achieve the same result as specified in this Section.

- END OF SECTION -

SECTION 01 29 73 – SCHEDULE OF VALUES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Submit to Resident Engineer, or Construction Inspector, for acceptance a Schedule of Values that allocates cost to each item of the Work. Schedule of Values list of line items shall correspond to each aspect of the Work, establishing in detail the portion of the Contract Price allocated to each major component of the Work.

B. Upon request, support values with data that substantiate their correctness.

C. Submit preliminary Schedule of Values with the correct contract name to the Resident Engineer, or Construction Inspector, for initial review. CONTRACTOR shall incorporate Resident Engineer's or Construction Inspector's comments into the Schedule of Values and resubmit. Resident Engineer, or Construction Inspector, may require corrections and re-submittals until Schedule of Values is acceptable.

D. Schedule of Values and the Progress Schedule updates specified in Section 01 32 16. Progress Schedule, shall be basis for preparing each Application for Payment. Schedule of Values may be used as a basis for negotiating price of changes, if any, in the Work.

E. Include in Schedule of Values unit price payment items with their associated quantity. Provide in the Schedule of Values detailed breakdown of unit prices when required by Resident Engineer, or Construction Inspector.

F. Include in Schedule of Values itemized list of Work for each location of major activity, each building, each major pipeline, each tie-in and shutdown listed in Section 01 14 16, Coordination with Owner's Operation, and for each payment item specified in Section 01 22 13, Measurement and Payment.

G. Requirements for preliminary and updated Schedule of Values are:

1. Schedule of Values shall show division of Work between CONTRACTOR and Subcontractors. Line items for Work to be done by Subcontractor shall include the word, "(SUBCONTRACTED)".

2. Schedule of Values shall include breakdown of costs for materials and equipment, submittal preparation and acceptance, testing, commissioning, training, installation, and other costs used in preparing the Bid by CONTRACTOR and each Subcontractor. List purchase and delivery costs for materials and equipment for which CONTRACTOR may apply for payment as stored materials.

3. Include line items for material and equipment that are only specified on the drawings.

4. Identify each line item with number corresponding to the associated Specification Section number. List sub-items of major products or systems, as appropriate or when requested by Resident Engineer, or Construction Inspector.

5. Sum of individual values shown on the Schedule of Values shall equal the total of associated payment item. Sum of payment item totals in the Schedule of Values shall equal the Contract Price.

6. Include in each line item a directly proportional amount of CONTRACTOR's overhead and profit. Do not include overhead and profit as separate item(s).

7. When applicable, include separate line item for each selected alternate and allowance, and for each unit price item.

8. Include line item for bonds and insurance in payment item for the Base Bid, in amount not exceeding 2.0 percent of the Contract Price. This may be applied for in the first Application for Payment.

9. Include items for the General Conditions, permits (when applicable), construction Progress Schedule, and other items required by Resident Engineer. Include such items in Applications for Payment on schedule accepted by Resident Engineer, or Construction Inspector.

10. Line items for Site maintenance such as dust control, snow removal, compliance with storm water pollution prevention plans and permits, spill prevention control and countermeasures plans, and for construction photographic documentation; temporary utilities and temporary facilities, field offices, temporary controls, field engineering and professional services, and similar Work shall be included in the Schedule of Values and proportioned in Applications for Payment throughout duration of the Work.

11. Include separate line items under each appropriate payment item for mobilization and demobilization. Document for Resident Engineer, or Construction Inspector, the activities included in mobilization and demobilization line items.

    a. Mobilization will be limited to 1.0 percent of the Contract Price, and will be paid in one payment.

    b. Demobilization shall be at least 0.25 percent of the Contract Price and shall be included with the Application for Payment following Substantial Completion, or other schedule accepted by Resident Engineer, or Construction Inspector.

12. Submit Schedule of Values on 8.5-inch by 11-inch white paper in format acceptable to Resident Engineer, or Construction Inspector, for electronic transmittal.

1.02 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Electronically submit to Resident Engineer, or Construction Inspector, one copy of preliminary, accepted, and updated Schedule of Values. Verify that Schedule of Values has correct label affixed (i.e., "Preliminary", "Accepted", and "Updated".

2. Content of Schedule of Values submittals shall conform to Article 1.01 of this Section.

3. Time Frames for Submittals:

   a. Submit preliminary Schedule of Values within time frame specified in the General Conditions.

   b. Submittal of the Schedule of Values shall be in accordance with the General Conditions. Resident Engineer, or Construction Inspector, will not accept Applications for Payment without an acceptable Schedule of Values.

   c. When required by Resident Engineer, or Construction Inspector, promptly submit updated Schedule of Values to include cost breakdowns for changes in the Contract Price.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 29 76 – PROGRESS PAYMENT PROCEDURES

PART 1 -- GENERAL

1.01 PROGRESS PAYMENTS

A. General.

1. CONTRACTOR's requests for payment shall be in accordance with the Construction Phase Agreement, General Conditions and Supplementary Conditions, and the Specifications.
2. Applications for Payment shall utilize templates and forms acceptable to OWNER such as the forms included at the end of this Section.

B. Procedure:

1. Review with Resident Engineer, or Construction Inspector, quantities and Work proposed for each progress payment. Application for Payment shall include only Work, percentages, and quantities recommended by the Resident Engineer, or Construction Inspector.
2. Submit to Resident Engineer, or Construction Inspector, one electronic (PDF format) Application for Payment complete with other documents to accompany the Application. Hand delivers one current set of bound and labeled construction photographs to Resident Engineer.
3. Resident Engineer, or Construction Inspector, will act on request for payment in accordance with the General Conditions and Supplementary Conditions.
4. CONTRACTOR will respond to Resident Engineer's, or Construction Inspector's request for revised Applications or inquiries for additional information promptly.

C. Each request for progress payment shall include:

1. Submit one copy of the completed Application for Payment form, including certification signature, progress estimate sheets, updated baseline project schedule, and stored materials summary. Progress estimate sheets shall have same level of detail as the approved Schedule of Values.
2. Substantiating Data: Include the following with Application for Payment:
   a. Project Narrative Report
   b. Application date
   c. Current construction photographs with captions
   d. Partial release of liens for major subcontractors and vendors
   e. Statement substantiating that CONTRACTOR has updated the set of drawings to be used as Record Drawings for the period of the Application and that Resident Engineer, or Construction Inspector, has reviewed CONTRACTOR's record documents.
   f. Affidavits attesting to off-site stored products. Affidavit shall

list off-site storage locations and describe which items are stored at each location. Use form entitled "Request for Payment for Materials on Hand" or similar document acceptable to Resident Engineer, or Construction Inspector.

3. For materials and equipment not incorporated in the Work but suitably stored on-site, or off-site, submit documentation in accordance with the General Conditions and Supplementary Conditions. Legibly indicate on invoice or bill of sale the specific materials or equipment included in the Application and corresponding payment item number for each.

4. For Applications (other than request for final payment) that include reduction or payment of retainage in an amount greater than that required in the Contract Documents, submit on form acceptable to OWNER consent of surety to partial release or reduction of retainage.

5. CONTRACTOR is required to assist OWNER in documenting costs associated with portions of the project anticipated to be paid for by grant funds. Grant funds (DOLA) for the purchase of the steel water tank have been secured.

D. Requirements for request for final payment are in the General Conditions, as may be modified by the Supplementary Conditions, and Section 01 77 19, Closeout Requirements.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 SUPPLEMENTS

A. The forms listed below, following the "End of Section" designation, are part of this Specification Section:

1. Contractor's Application for Payment (one page).

2. Request for Payment for Materials on Hand (one page)

- END OF SECTION -

Example Contractor's Application for Payment

	Application Period:	Application Date:
To (Owner): **CITY OF RIFLE**	From (Contractor):	Engineer:
Project:	Contract:	
Application No.:	Contractor's Project No.:	Engineer's Project No.:

APPLICATION FOR PAYMENT

Change Order Summary

Approved Work Change Directive

Number	Additions	Deductions	Description
TOTALS			
NET CHANGE BY CHANGE ORDERS			

1. ORIGINAL CONTRACT PRICE	
2. NET CHANGE BY AUTHORIZED CHANGE ORDERS	
3. CURRENT CONTRACT PRICE (Line 1 +/- Line 2)	
4. TOTAL COMPLETED AND STORED TO DATE	
5. VALUE COMPLETED AND STORED THIS PERIOD	
6. RETAINAGE:	
a. 5% of Work Completed and Stored to Date	
7. AMOUNT ELIGIBLE THIS PERIOD (Line 5 – Line 6a)	
8. LESS PREVIOUS PAYMENTS (from prior Application(s))	
9. **AMOUNT DUE THIS APPLICATION**	
10. BALANCE TO FINISH, PLUS RETAINAGE	

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: Date:

Payment of: _____

(Line 8 or other - attach explanation of other amount)

is recommended by: _____

(Resident Engineer, or Construction Inspector) (Date)

Payment of: _____

(Line 8 or other - attach explanation of other amount)

is approved by: _____

(Owner -Utility Director or City Manager) (Date)

REQUEST FOR PAYMENT FOR MATERIALS ON HAND

INSTRUCTIONS

TO CONTRACTORS:

Forward copy to Resident Engineer, or Construction Inspector. Attach evidence of paid purchase (and warehouse receipt when required) to the original.

Retain original in your files with supporting documents for progress payments.

	Date
TO: (Resident Engineer)	Project:
FROM: (Contractor)	

In Accordance with the provisions of the General Conditions of the Contract, request is made for payment of materials on hand for the following materials.

ITEM NUMBER	QUANTITY	UNIT	MATERIALS DESCRIPTION	VALUE	WHERE STORED

AFFIDAVIT

The materials listed above have been purchased exclusively for use on the above referenced project. The material is separate from the other like materials and is physically identified as our property for use only on this contract. The owner may enter upon the premises for inspection, checking or auditing, or for any other purpose, as considered necessary. It is expressly understood and agreed that this information and affidavit is furnished for the purpose of obtaining payment for the above materials before they are delivered to, or incorporated into, the project described above, and that the storage thereof at the locations shown shall not relieve the contractor of full responsibility for the security and protection of all such materials until acceptance by the owner of the completed project.

Contractor: By_____ Title_____ Date _____

SECTION 01 31 13 – PROJECT COORDINATION

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall coordinate the Work, including testing agencies, surveyors, Subcontractors, Suppliers, and others with whom coordination is necessary, in accordance with the General Conditions, Supplementary Conditions, and this Section, to complete the Work within the Contract Times.

B. In accordance with the General Conditions, CONTRACTOR shall cooperate with and coordinate the Work with other contractors, utility service companies, Resident Engineer, Construction Inspector, ENGINEER, loan and grant funding agencies, regulatory agencies, permit grantors, OWNER's employees working at the Site, and other entities working at the Site, in accordance with Section 01 11 13, Summary of Work.

C. Attend and participate in all project coordination and progress meetings, and report on the progress of all Work and compliance with the Progress Schedule.

D. Contractor shall obtain and comply with CDPHE construction dewatering permit, CDPHE stormwater permit for construction activity, other CDPHE permits that may be required for discharge of hydrostatic testing or de-chlorinated water from disinfection activities, blasting permits (if required), and other permits necessary or not contained in the Contract Documents.

E. A City of Rifle building permit is not required. The submittal of drawings and specifications to obtain a building permit from the City of Rifle is not required.

F. CONTRACTOR shall coordinate and comply with the State Electrical Inspector for all required inspections. CONTRACTOR is required to pay fees associated with inspections provided by the State Electrical Inspector. The fee for the State Electrical Inspector changes annually and Contractor may incur costs for re-inspection and extra inspections. CONTRACTOR shall check for the most recent fee. The State Electrical Inspector for Garfield County is Mr. Norman Feck. He can be reached at 303-869-3442 (office) or 877-320-9150 (toll free or 303-869-0347 (office fax) or 877-325-0307 (toll free fax). Required electrical inspections to obtain a Certificate of Occupancy include the following:

1. Temporary Construction Service
2. Rough in.
3. Final
4. And any other inspection required by the State Electrical inspector.

G. The representative for questions and coordination with the Colorado River Fire Rescue (CRFR) is Orrin Moon at 970-625-1243. Coordinate and comply with the CRFR on the following issues.

1. Blasting, if performed.

H. The Xcel representative to coordinate activities related to natural gas and electric service is Mr. Samantha Wakefield at 970-625-6028

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 31 19 – PRE-CONSTRUCTION CONFERENCE

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. A pre-construction conference will be held.
2. CONTRACTOR shall attend the conference prepared to discuss all items on the agenda.
3. Resident Engineer, or Construction Inspector, will distribute an agenda, preside at conference, and prepare and distribute minutes to all conference participants and others as requested.

B. Purpose of conference is to designate responsible personnel, establish working relationships, discuss preliminary matters, and review administrative and procedural requirements for the Project. Matters requiring coordination will be discussed and procedures for handling such matters will be established.

C. Date, Time and Location: Conference will be held after execution of the Contract and before Work starts at the Site. Resident Engineer, or Construction Inspector, will establish the date, time, and location of conference and notify the interested and involved parties.

D. Prior to the conference, submit the following in accordance with the General Conditions along with supplemental information requested here:

1. Preliminary Schedule of Submittals.
2. Preliminary Schedule of Values.
3. Estimated cumulative projected construction cost by month over the construction period in tabular format.

E. CONTRACTOR shall provide information required and contribute appropriate items for discussion. CONTRACTOR shall bring to the conference the following, with sufficient number of copies for each attendee:

1. Preliminary and Baseline Progress Schedule.
2. Preliminary Schedule of Submittals.
3. Preliminary Schedule of Values.
4. List of emergency contact information, in accordance with Article 1.04 of this Section.
5. Estimated cumulative construction cost by month over the construction period in graphic and tabular format.

1.02 REQUIRED ATTENDANCE

A. Representative of each entity attending the conference shall be authorized to act on that entity's behalf.

B. Contractor Attendance: Conference shall be attended by CONTRACTOR's project manager, site superintendent, and safety representative. Project

managers for major subcontractors, and major equipment suppliers shall attend as CONTRACTOR deems appropriate.

C. Other attendees will be representatives of:

1. OWNER.
2. Resident Engineer and/or Construction Inspector.
3. ENGINEER.
4. Authorities having jurisdiction over the Work, if available.
5. Utility owners, as applicable.
6. Others as requested by OWNER, CONTRACTOR, Resident Engineer, Construction Inspector, or ENGINEER.

1.03 AGENDA

A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revisions to this agenda, if any, will be furnished to CONTRACTOR prior to conference.

1. Procedural and Administrative:

a. Project Organization, Personnel and Teams:

1) Designation of roles and personnel including project organization description.

2) Limitations of authority of personnel, including personnel who will sign Contract modifications and make binding decisions with samples of authorized signatures, names, addresses, telephone numbers, and email addresses.

3) Joint safety program presentation by CONTRACTOR's Safety Representative with handouts on the health, safety, and first-aid plan(s) for the project and by Resident Engineer.

4) Lists of proposed Subcontractors and manufacturers (where applicable).

5) Authorities potentially having jurisdiction – CDOT, UPRR, CDPHE, USACOE, City of Rifle.

b. Procedures for communications and correspondence.

c. Copies of the Project Manual and availability.

d. Subcontractors and suppliers. Consider, the following:

1) Steel Tank Supplier/Erector

2) Painting Contractor

3) Utility Company Representatives

4) Others

e. The Work and Scheduling:

1) Scope of the Work.

2) Contract Times, including Milestones (if any).

3) Phasing and sequencing.

4) Preliminary and or Baseline Progress Schedule.

5) Critical path activities.

6) Methods of construction.

7) Excavated material hauling and placement

8) Notice to Proceed.

9) Tax exemption certification.

f. Permits, Easements, and Right of Ways.

1) General discussion.

2) Status of Easements, Right-of Ways, and property Transfer Agreements.

g. Review of insurance requirements.

h. Coordination:

1) Coordination with OWNER's operations.

2) Progress meetings.

i. Products and Submittals:

1) Preliminary Schedule of Submittals, and a discussion of the submittal process and procedures.

2) Shop drawings, samples, and other submittals.

3) Product options, "or equals", and substitutions.

4) Construction photographic documentation.

5) Quality control and testing

j. Contract Modification Procedures.

1) Requests for interpretation (RFIs).

2) Clarification notices (ECs).

3) Field Orders (FOs).

4) Proposal requests (PRs).

5) Change Order proposals (PCOs).

6) Work Change Directives (WCDs).

7) Change Orders (CO).

k. Payment:

1) OWNER's Project financing and funding, as applicable.

2) OWNER's tax-exempt status.

3) Preliminary Schedule of Values.

4) Retainage.

5) Progress payment procedures, dates, and acceptable forms.

6) Prevailing wage rates and payrolls, Davis-Bacon Act Requirements, if applicable.

l. Testing and inspections, including notification requirements.

m. Record documents.

n. Preliminary Discussion of Contract Closeout:

1) Procedures for Substantial Completion.

2) Contract closeout requirements.

3) Correction period.

4) Duration of bonds and insurance.

2. Site Mobilization (if not covered in a separate meeting):

a. Working hours and time outside of normal working hours.

b. Field offices and staging areas.

c. Temporary facilities.

d. Temporary utilities and limitations on utility consumption (where applicable).

e. Utility company coordination (if not done as a separate meeting).

f. Access to Site, access roads, and parking for construction vehicles.

g. Use of premises.

h. Protection of existing property.

i. Security.

j. Temporary controls, such as sediment and erosion control, noise control, dust control, storm water control, and other such measures.

k. Site barriers, temporary fencing, and project sign.

l. Storage of materials and equipment.

m. Reference points and benchmarks; surveys and layouts.

n. Site maintenance during the Project.

o. Cleaning and removal of trash and debris.

p. Restoration.

q. Work in easements and city property.

r. Excess material management.

3. General discussion and questions.

4. Progress Meeting Schedule and conferences.

5. Site visit, if required.

1.04 EMERGENCY CONTACT INFORMATION

A. CONTRACTOR shall provide list of emergency contact information for 24-hour use throughout the Project. Emergency contact information shall be updated and kept current throughout the Project. If personnel or contact information change, provide updated emergency contact information list at the next progress meeting.

B. CONTRACTOR's list of emergency contact information shall include:

1. CONTRACTOR's project manager's office, field office, email, mobile, and home telephone numbers, email, fax

2. CONTRACTOR's Site superintendent's office, field office, email, mobile, and home telephone numbers, email, fax.

3. CONTRACTOR's foreman's field office, email, mobile (if available), and home telephone numbers, email, fax.

4. Major Subcontractors' and Suppliers' office, mobile, and home telephone numbers, email, fax of project manager and foreman (when applicable).

C. OWNER Additional Emergency Contact Information:

1. OWNER's Utilities Director: office, email, and mobile telephone numbers.

2. OWNER's Resident Engineer, office, email, and mobile telephone numbers.

3. OWNER'S Construction Inspector's office, email, and mobile telephone numbers.

4. OWNER's Rifle Regional Water Purification Plant (RRWPP) Superintendent's office, email, and mobile telephone numbers.

5. OWNER's central 24-hour emergency telephone number.

6. ENGINEER's project manager's office, email, and mobile telephone numbers.

7. Utility companies' 24-hour contact telephone number(s), including gas, water, sewer, oil, telephone, cable television/telecommunications, and other companies or concerns having utilities in the vicinity of the Work.

8. Emergency telephone numbers, including: "Emergency: Dial 911", and seven-digit telephone numbers for the hospital, ambulance, police, and fire district nearest to the Site. Provide names of each of these institutions.

9. Dispatcher 911

10. Locates 811

11. Other involved entities as applicable.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 31 20 – PROGRESS AND OTHER MEETINGS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. Progress meetings will be held regularly. CONTRACTOR shall attend each progress meeting prepared to discuss in detail all items on the agenda.
2. Resident Engineer, or Construction Inspector, will preside at progress meetings and will prepare agenda if different than the standing agenda and distribute minutes of progress meetings to all meeting participants and others as requested.
3. Meeting minutes will be prepared and distributed electronically through Owner-InSite™ software or distributed at the subsequent meeting. CONTRACTOR prepared reports and handouts will become a PDF attachment to the meeting minutes and posted in a manner available to participants.
4. Other meetings may be called by the Resident Engineer, Construction Inspector, CONTRACTOR, ENGINEER, or OWNER.

B. Date and Time:

1. Regular Meetings: Initially, every week at a time established by the Resident Engineer, or Construction Inspector. OWNER may adjust frequency of regular meeting.
2. Other Meetings: As required or specified.

C. Place: CONTRACTOR's field office, or at the Site, or other location mutually agreed upon by OWNER and CONTRACTOR.

D. Regular Reports and Handouts: CONTRACTOR shall prepare and electronically transmit twenty-four (24) hours before each progress meeting each of the following:

1. A bulletized list of work accomplished since the previous progress meeting.
2. A list of outstanding RFIs requiring ENGINEER prioritized attention.
3. A list of outstanding submittals requiring ENGINEER prioritized attention.
4. Requested coordination by topic with OWNER, Resident Engineer, ENGINEER, and others.
5. Detailed "look-ahead" schedule of Work planned through the next four (4) weeks, with specific starting and ending dates for each activity, including shutdowns, deliveries of important materials and equipment, Milestones (if any), and important activities affecting the OWNER, Project, and Site.

   When applicable, list of upcoming, planned time off (with dates) for personnel with significant roles on the Project, and the designated contact person in their absence.

E. Additional Reports and Handouts: At the frequency described, CONTRACTOR shall prepare and electronically transmit each of the following:

1. Up-to-date Progress Schedule (once per month with Application for Payment and as requested by Resident Engineer).

2. Up-to-date Schedule of Submittals (as requested by Resident Engineer).

1.02 REQUIRED ATTENDANCE

A. Representatives present for each entity shall be authorized to act on that entity's behalf.

B. Required Attendees:

1. CONTRACTOR:

a. Project manager.

b. Site superintendent.

c. Safety representative.

d. When needed for the discussion of a particular agenda item, the representatives of Subcontractors and Suppliers shall attend meetings.

2. OWNER's representative(s)

a. Resident Engineer

b. OWNER's material testing contractor, when required.

c. When needed for the discussion of a particular agenda item, OWNER will request the participation of the ENGINEER or ENGINEER's sub- consultant, or OWNER's operation or public work's personnel.

3. Others, as appropriate.

1.03 AGENDA

A. Typical Agenda: Be prepared to discuss in detail the topics listed below. Revised agenda, if any, will be furnished by Resident Engineer prior to first progress meeting. Progress meeting agenda may be modified by Resident Engineer during the Project as required.

1. Review, comment, and amendment (if required) of minutes of previous progress meeting.

2. Review of progress since the previous progress meeting.

3. Planned progress through next progress meeting.

4. Safety update from Safety Representative regarding near misses, accident prevention, and safety preparation.

5. Review of Progress Schedule

a. Contract Times, including Milestones (if any)

b. Critical path.

c. Schedules for fabrication and delivery of materials and equipment.

d. Corrective measures, if required. Proposed methods to recover lost time and place Work back on schedule.

6. Submittals:

a. Review status and prioritize critical submittals.

7. Contract Modifications

a. Requests for interpretation (RFIs)

b. Clarification notices (ECs)

c. Field Orders (FOs)

d. Proposal requests (PRs)

e. Change Order proposals (PCOs)

f. Work Change Directives (WCDs

g. Change Orders (CO)

h. Claims.

8. Applications for progress payments.

9. Problems, conflicts, and observations.

10. Quality standards, testing, and inspections.

11. Coordination between parties.

12. Site management issues, including access, security, maintenance and protection of traffic, maintenance, cleaning, and other Site issues.

13. Permits.

14. Commissioning activities.

15. Start-up activities.

16. Construction photographic documentation.

17. Record documents status.

18. Punch list status, as applicable.

19. Other business.

1.04 CONFERENCES

A. Conferences shall be held as specified below for major components of the Work:

1. Pre-Pour Concrete Conference: Prior to any concrete work, a conference shall be held at a date and time established by the Resident Engineer, or Construction Inspector. Attendees shall include Resident Engineer, Construction Inspector, ENGINEER (optional), CONTRACTOR, concrete supplier, and OWNER's material testing laboratory. Topics to be covered shall include scheduling of concrete placement, length of pour and location, finishes, curing time, curing agent, protection, mix designs, plan and specification requirements, rebar placement, forms, construction and expansion joints, concrete testing, aggregate stockpile testing, concrete rejection, batch tickets, weather, pre-wetting, vibration, tolerances,

thickness and rebar coverage, water addition, safety and other items as needed or stated in Division 03.

2. Pre-Erection Conference for Welded Steel Tank: When required by the Technical specifications, the CONTRACTOR shall meet with subcontractors, suppliers, OWNER's operation staff and the Resident Engineer, or Construction Inspector, and others as required to review steel tank erection procedures. Site conditions, preparation requirements, logistics, weather, utilities, welding and testing, accessories and appurtenances, and installation procedures shall be reviewed.

3. Pre-Earthwork Conference: Prior to earthwork operations, a conference shall be held at a date and time established by the Resident Engineer or Construction Inspector. Attendees shall include Resident Engineer, Construction Inspector, ENGINEER (optional), CONTRACTOR, earthwork subcontractors, hauling subcontractors, OWNER's material testing consultant, traffic control subcontractor (if material is to be hauled off-site). safety, railroad crossings, temporary haul road construction, excavation, loading, hauling, placement, compaction, return route of trucks, mud removal, drying, schedule, and other items as needed.

4. Pre-Painting Conference: Prior to each day's painting, coating, or marking activities, a conference shall be held at a time established by the Resident Engineer, or Construction Inspector. Attendees shall include Resident Engineer, Construction Inspection, CONTRACTOR, and painting subcontractor. Topics to be covered include items requiring painting or coatings, weather forecast and weather conditions, and surface preparation, items not to be painted; protection of installed equipment; solvent handling to minimize spills; acceptable paint storage and mixing areas; ventilation requirements, worker protection, safety requirements; color confirmation.

B. Other conferences and meetings as specified in the individual sections.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 32 16 – PROGRESS SCHEDULE

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. Prepare and submit baseline, updated, and recovery Progress Schedules in accordance with the General Conditions and this Section, unless otherwise directed by Resident Engineer, or Construction Inspector.

2. Maintain and update Progress Schedules. Submit updated Progress Schedules as specified in this Section unless otherwise directed by Resident Engineer, or Construction Inspector.

3. OWNER, Resident Engineer, Construction Inspector, and ENGINEER's acceptance of the baseline, updated, and recovery Progress Schedules, and comments or opinions concerning the activities in the Progress Schedules shall not control CONTRACTOR's independent judgment relative to means, methods, techniques, sequences, and procedures of construction. CONTRACTOR is solely responsible for complying with the Contract Times.

1.02 DEFINITIONS

A. Baseline Progress Schedule: A schedule in the same format and style as updated, and recovery Progress Schedule that is provided to Resident Engineer, or Construction Inspector, after Notice of Award to establish the mutually agreed upon Contract Times with specific dates identified for milestones, Substantial Completion, and Application for Final payment. CONTRACTOR shall revise initial baseline schedule until accepted by OWNER, Resident Engineer, Construction Inspector, and ENGINEER. CONTRACTOR, OWNER, Resident Engineer, Construction Inspector and ENGINEER will mutually review schedule for potential errors, omissions, faults in logic, and sequences that may not work for OWNER and make revisions to initial baseline schedule without a change in Contract Price.

B. Updated Progress Schedule: A schedule in the same format as baseline and recovery Progress Schedules that is updated once per month to reflect actual performance and transmitted to the Resident Engineer, or Construction Inspector.

C. Four (4) Week Look-ahead Schedule: A schedule updated each week that identifies specific construction activities, participation of subcontractors, required conferences, requested participation of OWNER's personnel, Resident Engineer, or Construction Inspector, requested participation of specific personnel of ENGINEER, suppliers, and manufacturers, special coordination activities, and activities required to meet near-term milestones. Provide schedule to Resident Engineer, or Construction Inspector for posting electronically and distributed at weekly progress meetings.

D. Recovery Schedule: A schedule prepared by CONTRACTOR and submitted upon certain conditions being triggered to demonstrate CONTRACTOR's plan to accelerate the Work to achieve compliance with the Contract Times for Resident

Engineer's, or Construction Inspector's acceptance. Provide recovery schedule in the same format and style as the baseline, and updated progress schedules.

1.03 SUBMITTALS

A. Initial Baseline Schedule:

1. Develop after Notice of Award.
2. Submit to Resident Engineer, or Construction Inspector, prior to and as a condition precedent/concurrent to OWNER's issuance of a Notice to Proceed.
3. Issue date and "Initial Baseline Schedule" are to be marked on schedule.
4. Provide one (1) 11 inches x 17 inches stapled copies.
5. Provide two (2) full size color plotted, unbound, and rolled copies.
6. Provide one (1) copy of a narrative statement for all work items that fall on critical path.
7. Transmit narrative statement and schedule as a single PDF attachment electronically to Resident Engineer, or Construction Inspector, for posting to Owner Insite™.

B. Accepted Baseline Schedule:

1. Develop after review of Initial Baseline Schedule.
2. Incorporate revisions from the review of initial schedule immediately upon receipt.
3. Transmit as single PDF attachment electronically to Resident Engineer, or Construction Inspector, for posting to Owner Insite™.
4. Issue date and "Accepted Baseline Schedule" are to be marked on schedule.
5. Post one full size color plot on wall of construction offices.

C. Updated Progress Schedule:

1. Update accepted baseline schedule or previously updated schedule at least once each month to identify progress.
2. Provide updated progress schedule each month regardless of degree of progress achieved.
3. Provide listing of activities, durations, and dates that have changed since the previous schedule was issued.
4. Provide narrative identifying causes of delay, duration of delays, and proposed countermeasures.
5. Transmit as single PDF attachment electronically to Resident Engineer, or Construction Inspector, for posting to Owner Insite™.
6. OWNER, Resident Engineer, Construction Inspector, ENGINEER, and CONTRACTOR and other invited guests shall visit Owner InSite™ to view the current schedule.

D. Four (4) Week Look-Ahead Schedule:

Prepare 1 to 2 days in advance of each progress meeting.

Transmit as PDF attachment electronically to Resident Engineer, or Construction Inspector, by 12:00 p.m. day before progress meeting for posting to Owner Insite™. Attachment filename must include the words "Rifle Airport 0.5 MG Water Tank Look-ahead" and date of progress meeting.

Distribute printed copies at each progress meeting. Bring sufficient number of copies for meeting participants.

At each progress meeting, coordinate activities and participation and annotate (update) to mutual satisfaction at each progress meeting.

Resident Engineer, or Construction Inspector, will post marked-up updated version to Owner InSite™.

CONTRACTOR shall incorporate mark-ups prior to issuance of subsequent schedules.

OWNER, Resident Engineer, Construction Inspector, ENGINEER, and CONTRACTOR and other invited guests shall visit Owner InSite™ to view the coordinated (marked-up) version.

E. Recovery Schedules:

1. Submit in accordance with this Section.

1.04 PROGRESS SCHEDULE SOFTWARE

A. Software for baseline, updated and recovery schedules:

1. Microsoft Project 2010 (Windows based)
2. Primavera (Oracle) Project Planner
3. Other software acceptable to Resident Engineer, or Construction Inspector.

B. Software for Four (4) Week Look-Ahead Schedule:

1. Microsoft Excel Spreadsheet
2. Other software acceptable to Resident Engineer, or Construction Inspector.

1.05 PROGRESS SCHEDULE DEVELOPMENT AND CONTENT

A. Content for baseline, updated and recovery schedules:

1. CONTRACTOR's and project name, and symbol legend to be indicated on each page of the schedule.
2. Date issued or revised is to be indicated on the schedule.
3. Organize activities by the following locations and pipelines:
   a. Temporary Facilities
   b. Earthwork
   c. Foundation
   d. Steel Tank and Accessories

e. Piping and Connections

f. Electrical and Controls

g. Painting.

4. Include sufficient number of activities and sub-activities to allow effective monitoring of the progress of the Work.

5. Include sub-activities for:

a. Long-lead procurement and delivery.

b. Submittal related activities

c. Testing

d. Commissioning and start-up activities, if separate from a larger, more comprehensive commissioning and start-up period.

e. Other similar sub-activities.

6. Identify duration, start and finish dates, and relationships to other activities.

7. For each subcontracted activity, identify subcontractor.

8. Each activity shall contain only the work of a single trade or subcontractor.

9. Generally, each activity shall be less than fifteen (15) working days in duration. Procurement and material delivery, surveying and submittal related activities, may exceed fifteen (15) day duration. Activities exceeding fifteen (15) working days in duration shall be separated into two or more individual activities of less than sixteen (16) working days by area, type of work, or other basis to allow for effective monitoring of the Work.

10. Identify activities pertaining to tie-ins and cut-overs for pipeline re-configurations.

11. Include milestones identified in the Agreement, if applicable.

12. Identify dates of Substantial Completion and Application for Final Payment.

13. Identify days for weather contingency and spread throughout the Project.

14. Identify the critical path (zero float path) from the Notice to Proceed through Substantial Completion.

15. Failure by the CONTRACTOR to include any element, activity, or phase required for performance of the Work shall not excuse the CONTRACTOR from completing the Work described in the Contract Documents.

B. Coordination and Constraints:

1. Work times different than 8 hours per shift, greater than 1 shift per day, or greater than 40 hours per week require approval of the Resident Engineer, Construction Inspector, and OWNER.

2. Work on holidays recognized by the OWNER is permitted with

coordination and approval 90 days in advance.

1.06 PROGRESS SCHEDULE FORMAT

A. Initial, baseline, updated and recovery schedules:

1. Software derived horizontal bar chart or Gantt chart.
2. Page or Plot Size: 11 inches by 17 inches, unless otherwise specified or accepted by Resident Engineer, or Construction Inspector.
3. Time Scale: Indicate first date of each work week, and month and year.
4. Critical Path: Clearly indicate activities on the critical path.
5. Submittal Activities: CONTRACTOR may elect to indicate as one summary activity in lieu of separate activities for preparation, transmittal, review, correction, re-submittal, manufacturer's coordination and correction, and approval. Duration of summary activity shall be equivalent to the overall duration identified on the Schedule of Submittals.

B. Four (4) week look-ahead schedule:

1. Spreadsheet format
2. Page Format: 8 ½ inches x 11 inches or 11 inches by 17 inches.
3. Adjust format and appearance to improve ability to scan, read, transmit, or interpret as requested by Resident Engineer.

1.07 TIME IMPACT ANALYSIS

A. Schedule Float: Float is not for the exclusive use or benefit of either the OWNER or the CONTRACTOR. Extension of Contract Time will be granted only to the extent that the equitable time adjustments to the activity or activities affected by the Change Order or delay exceeds the total (positive or zero) float of a critical activity (or path) and extends the Contract Time.

B. Delays Caused by Weather: Seasonal weather conditions shall be considered and included in the planning and scheduling of all work influenced by high or low ambient temperatures, wind, and precipitation to ensure completion of the Work within Contract Time. Seasonable weather conditions shall be determined by an assessment of average historical climatic conditions. Delays caused by weather shall be reviewed and documented at weekly progress meetings.

C. Change Orders and Change Order Requests: In the preparation of change orders and change order requests, a time impact analysis shall be completed by CONTRACTOR to determine the effect on Contract Times and to support a request for an extension of Contract Time. The durations of effected activities shall be altered as mutually agreed upon and recalculated. Contract Time will not be extended unless the schedule recalculation indicates a completion date beyond the current Contract Time.

1.08 DESCRIPTION OF CRITICAL ACTIVITIES ON CRITICAL PATH

A. General:

1. Provide dated narrative statement with Initial Baseline Schedule describing each activity (i.e., critical activity) falling on the critical path.

2. Update narrative statement, or any part thereof, at Resident Engineer's, or Construction Inspector's, request and submit at next progress meeting.

B. Content:

1. Name of the activity.
2. Description of the Activity: Describe all work necessary to complete the activity:
3. Responsibility: Identify CONTRACTOR, subcontractor, supplier, utility or other entity.
4. Procedures: Describe procedures, techniques, and methods to be used to complete the activity. Provide general information about items such as but not limited to forming, excavation, placing, heating, curing, backfill, trenching, and protecting the work. When separate and or different procedures, techniques, and methods are to be employed by the CONTRACTOR due to seasonal or project phasing requirements, such differing procedures, techniques, and methods shall be described.
5. Production Rates: For each component of an activity, identify the planned quantity of each component to be accomplished per day.
6. Equipment: Identify the number, types, and capacities of equipment planned to do the activity.
7. Labor Force: Identify the planned labor force to perform the activity.
8. Work Times: Identify the planned time for the activity in days per week, shifts per day, and hours per shift.

1.09 RECOVERY SCHEDULES

A. Recovery Schedules, General:

1. When updated Progress Schedule indicates that the ability to comply with the Contract Times falls 14 or more days behind schedule, and there is no excusable delay, Change Order, or Work Change Directive to support an extension of the Contract Times, CONTRACTOR shall prepare and submit a Progress Schedule demonstrating CONTRACTOR's plan to accelerate the Work to achieve compliance with the Contract Times ("recovery schedule") for Resident Engineer's, or Construction Inspector's, acceptance.
2. Submit recovery schedule within 14 days after submittal of updated Progress Schedule where need for recovery schedule is indicated.

B. Implementation of Recovery Schedule:

1. At no additional cost to OWNER, do one or more of the following: furnish additional labor, provide additional construction equipment, provide suitable materials, employ additional work shifts, expedite procurement of materials and equipment to be incorporated into the Work, and other measures necessary to complete the Work within the Contract Times.
2. Upon acceptance of recovery schedule by Resident Engineer, or Construction Inspector, incorporate recovery schedule into the next Progress Schedule update.

C. Lack of Action:

1. CONTRACTOR's refusal, failure, or neglect to take appropriate recovery action, or to submit a recovery schedule, is a material breach of the Contract that will constitute evidence that CONTRACTOR is not prosecuting the Work or separable part thereof with the diligence that will ensure completion within the Contract Times. Regardless of whether one or more Milestone or other Contract Time has lapsed as a consequence of CONTRACTOR's falling behind schedule, if CONTRACTOR fails to submit a recovery schedule under the circumstances set forth in and otherwise required by this Section, such lack of action shall constitute sufficient basis for OWNER to exercise remedies available to OWNER under the Contract Documents, including remedial, which remedial measures will constitute consequential damages that will apply in addition to any or non-liquidated damages set forth in the Contract Documents.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 32 33 – PHOTOGRAPHIC DOCUMENTATION

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Provide photographic documentation for the following:

1. Pre-construction.
2. Construction progress.
3. Final.

B. Image Quality:

1. Photographic documentation shall be in color.
2. Photographic images shall be suitably staged and set up ("framed"), focused, and shall have adequate lighting.
3. For still photographs, use camera with minimum 7.0-megapixel resolution.

1.02 QUALITY ASSURANCE

A. Resident Engineer, or Construction, will approve the views to be taken and select time at which images will be taken. Photographic subjects, views, and angles will vary with progress of the Work.

1.03 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Pre-construction Photographic Documentation: Submit acceptable pre-construction photographic documentation (prints and discs) prior to mobilizing to and disturbing the Site. Provide pre-construction photographic documentation no later than first Application for Payment, unless other schedule is accepted by Resident Engineer, or Construction Inspector.
2. Construction Progress Photographic Documentation: Submit acceptable construction progress photographic documentation (prints and discs) monthly. Submit with each Application for Payment, unless otherwise agreed to by Resident Engineer, or Construction Inspector.

B. Closeout Submittals: Submit the following:

1. Final Photographic Documentation: Submit acceptable final photographic documentation (prints and discs) prior to submitting final Application for Payment.

1.04 PHOTOGRAPHIC DOCUMENTATION, GENERAL

A. Photographic Prints:

1. Quantity: For each photograph taken, provide to OWNER one print.
2. Print Size and Finish:

   a. Photographs: Submit five-inch by seven-inch prints on professional-grade, nine-mil thick, photograph paper with semi-

gloss or satin finish, unless otherwise specified.

3. Include the following information on back of each print and front of each disc containing photographic documentation:

   a. Date photograph was taken.

   b. Name of OWNER.

   c. Name of the Site.

   d. Project name.

   e. Description of view shown in photograph.

   f. Photographer name and address.

4. Copyright of all photographs shall remain with OWNER. Photographs may not be used without approval.

B. Digital Files of Photographs:

1. For each photograph taken, provide high-quality digital image on compact disc (CD) in “JPG” file format compatible with Microsoft Windows 7.

2. Image resolution shall be sufficient for clear, high-resolution prints. Minimum resolution shall be 150 dots per inch (dpi). Minimum size of digital images shall be equal to specified print size.

3. Do not imprint date and time in the image.

4. Electronic image filename shall describe the image; do not submit filenames automatically created by digital camera. For example, an acceptable electronic filename would be, “FWPS – Looking West at FW Pump No. 2.jpg”.

5. Submit one copy of each disc with photographic images.

6. Label each CD as specified in Paragraph 1.04.A.3 of this Section.

7. All costs including photographer, lights, equipment, supplies, printing, transportation, etc. shall be paid by CONTRACTOR.

1.05 PRE-CONSTRUCTION PHOTOGRAPHIC DOCUMENTATION

A. Pre-construction Photographic Documentation:

1. Obtain and submit sufficient pre-construction photographic documentation to record Site conditions prior to construction. Photographs shall document work areas of all contracts.

2. Submit specified number of photographs. Pre-construction photographs are not part of required number of construction progress photographs specified in Article 1.06 of this Section.

B. If disagreement arises on condition of the Site and insufficient pre-construction photographic documentation was submitted prior to the disagreement, restore the grounds or area in question to extent directed by Resident Engineer, or Construction Inspector.

1.06 CONSTRUCTION PROGRESS PHOTOGRAPHIC DOCUMENTATION

A. Progress Photographs:

1. Take photographs at least twice per month.
2. Take at least 15 photographs each time photographer is at the Site.
3. Maximum number of progress photographs required will be 720, based on the Contract Times and scope of Project on date Contract Times commence running. Proportionately modify amount of photographic documentation if scope of Project or Contract Times are modified.
4. Provide interior and exterior photographic documentation of each structure as directed by Resident Engineer, or Construction Inspector, at the time photographic documentation is taken.

1.07 FINAL PHOTOGRAPHIC DOCUMENTATION

A. Final Photographs:

1. Take photographs at time and day acceptable to Resident Engineer, or Construction Inspector. Do not take final photographs prior to Substantial Completion. Work documented in final photographs shall be generally complete, including painting and finishing, furnishings, landscaping, and other visible Work
2. Take at least 20 final photographs, based on scope of the Project at the time Contract Times commence running. Proportionately modify the number of final photographs if scope of Project is modified. Final photographs are not part of construction progress photographs required under Paragraph 1.06.A of this Section.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 33 00 – SUBMITTAL PROCEDURES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide submittals in accordance with the General Conditions as modified by the Supplementary Conditions, and this Section.
2. Schedule of Submittals shall list all action, informational, closeout, and maintenance material submittals as defined herein.
3. In addition to the submittals identified on the accepted Schedule of Submittals, CONTRACTOR shall provide submittals for other equipment and materials when requested by Resident Engineer, or Construction Inspector, including proposed and approved substitutes.
4. CONTRACTOR shall provide submittals for materials and equipment regardless of whether the item is specified or only indicated on the Drawings.
5. CONTRACTOR shall provide submittals for equipment and materials that are called out on the drawings with manufacturer's or proprietary names, or model numbers.
6. Provide submittals well in advance of need for the material or equipment, or procedure (as applicable), in the Work and with ample time required for delivery of material or equipment and to implement procedures following Resident Engineer's, Construction Inspectors, or ENGINEER's approval or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until approval or acceptance of related submittals has been obtained in accordance with the Contract Documents.
7. OWNER has implemented and will maintain a cloud and internet-based system for electronic transmission of submittals and for review by Resident Engineer, Construction Inspector, OWNER, ENGINEER, Engineering sub- consultants, Suppliers, Vendors, or any combination thereof. CONTRACTOR is required to use this system, which is called Owner InSite™. There is no cost to CONTRACTOR to access and use Owner InSite™. Owner InSite™ is accessible from IBM and Apple computers via the internet. Access and log-in procedures will be transmitted separately.
8. CONTRACTOR is required to upload submittal documents in PDF file format to Owner InSite™. A properly formatted and labeled transmittal form on CONTRACTOR letterhead must be a part of the submittal documents that are uploaded. The transmittal form must be signed and or stamped by CONTRACTOR. When appropriate, the transmittal form shall indicate that samples, CDs, DVDs, or other items will be or have been delivered separately to Resident Engineer at the field offices.
9. CONTRACTOR is responsible for dimensions to be confirmed and

corrected at the Site, for information pertaining solely to the fabrication processes and to techniques of construction, and for coordinating the work of all trades. CONTRACTOR's signature and or stamp on letter of transmittal accompanying submittal shall be CONTRACTOR's representation that CONTRACTOR has met his obligations under the Contract Documents relative to that submittal.

10. CONTRACTOR shall provide and maintain an up-to-date electronic log of all submittals as classified below if the electronic log maintained by Owner InSite™ is deemed insufficient by either Resident Engineer or CONTRACTOR. An up-to-date submittal log shall be distributed by CONTRACTOR at each construction progress meeting.

11. Only the CONTRACTOR shall make submissions to the Resident Engineer. All data and correspondence prepared by subcontractors and suppliers shall be submitted through the CONTRACTOR.

12. The CONTRACTOR shall prepare submittal packages with sufficient information, and in such a manner, that no more than two submittals are necessary to obtain Resident Engineer's, Construction Inspector's, or ENGINEER's approval or acceptance. If more than two submittals are required, the OWNER reserves the right to deduct the cost of the ENGINEER's or Engineering sub-consultant's review time for additional re-submittals. Payment due ENGINEER from CONTRACTOR will be at same rate as OWNER has agreed to pay ENGINEER.

B. Samples:

1. Conform submittals pertaining to Samples to the General Conditions as modified by the Supplementary Conditions, this Section, and the Specification Section in which the Sample is specified.

2. Furnish at the same time Samples and submittals that are related to the same unit of Work or Specification Section. Resident Engineer, Construction Inspector, or ENGINEER will not review submittals requiring samples without associated Samples. Review of Samples without associated submittals will not occur.

3. 3 Deliver Samples to Resident Engineer, or Construction Inspector, at the field offices (or other locations) with a copy of the letter of transmittal that accompanies the associated submittal.

4. Samples shall clearly illustrate functional characteristics of product, all related parts and attachments, and full range of color, texture, pattern, and material.

5. Samples may be returned, if requested, to the CONTRACTOR at his expense for use on the site if approved. Samples shall be so marked on as- built drawings as to location.

C. Spare Parts, Extra Materials, and Tools:

1. Conform submittals pertaining to Spare Parts, Extra Materials, and Tools to the General Conditions as modified by the Supplementary Conditions, this Section, Section 01 78 43, and the Specification Section in which the Spare Parts, Extra Materials, and Tools are specified.

2. Prior to delivery, CONTRACTOR shall create a submittal. The submittal shall provide a description of each part, material and tool and indicate the quantity of each. The submittal shall describe whether each item is crated, boxed, packaged or shipped loose. The submittal shall indicate how each crate, box, package or loose item is labeled. The submittal shall describe any special storage or handling requirements. Resident Engineer, or Construction Inspector, in its review of the submittal, will designate the delivery locations, which will be at or within one mile of the Site.

3. Deliver to OWNER at the location indicated by Resident Engineer, or Construction Inspector. Each item shall be clearly marked and identified in accordance with Section 01 78 43 Spare Parts and Extra Materials and with the associated specification section number.

4. CONTRACTOR shall assist OWNER with unloading and placement into OWNER's storage. OWNER's storage may be located at the project site or at other locations within or operated by the City of Rifle.

5. Resident Engineer, or Construction Inspector, shall acknowledge receipt at the time of delivery on behalf of OWNER in a manner acceptable to CONTRACTOR and OWNER.

6. Resident Engineer, or Construction Inspector, and CONTRACTOR will maintain a log of spare parts, extra materials, and tools received and the location where stored.

7. CONTRACTOR may not incorporate spare parts and extra materials into construction or use tools during construction without the written consent of the Resident Engineer, or Construction Inspector.

1.02 TYPES OF SUBMITTALS

A. Submittal types are classified as follows: 1) Action Submittals, 2) Informational Submittals, 3) Closeout Submittals, and 4) Maintenance Material submittals. Type of each required submittal is designated in the respective Specification Sections; when type of submittal is not specified in the associated Specification Section, submittal will be classified as follows:

1. Action Submittals include:

   a. Shop Drawings.

   b. Product data.

   c. Operation and maintenance data.

   d. Samples.

   e. Testing plans, procedures, and testing limitations.

   f. Lesson plans, if specified.

2. Informational Submittals include:

   a. Certificates.

   b. Design data sealed and signed by a design professional retained by CONTRACTOR, Subcontractor, or Supplier.

c. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, potentially Hazardous Environmental Condition, and similar reports.

d. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.

e. Field or Site quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site.

f. Supplier reports.

g. Special procedure submittals and other procedural submittals.

h. Qualifications statements.

i. Material data safety sheets (MSDS).

j. Compaction testing reports.

k. Concrete testing reports.

3. Closeout Submittals include:

a. Service and maintenance contracts.

b. Operations and maintenance data to update preliminary data submitted prior to commencement of commissioning.

c. Bonds, such as maintenance bonds and bonds for a specific product or system.

d. Warranty documentation.

e. Record documentation.

f. Software.

4. Maintenance Material Submittals include:

a. Spare parts.

b. Extra materials.

c. Tools.

5. When type of submittal is not specified and is not included in the list above, Resident Engineer, or Construction Inspector, will determine the type of submittal.

B. Not Included in this Section: Administrative and procedural requirements for following are covered elsewhere in the Contract Documents:

1. Requests for interpretations of the Contract Documents.

2. Change Orders, Work Change Directives, and Field Orders.

3. Applications for Payment

4. Progress Schedules.

5. Photographic documentation.

6. Reports and documentation required in accordance with applicable permits

7. Site survey data.

1.03 SUBMITTALS REQUIRED IN THIS SECTION

A. Informational Submittals: Provide the following:

1. Schedule of Submittals:

a. Timing:

1) Provide submittal within time frames specified in the Contract Documents.

2) Provide updated Schedule of Submittals with each submittal of the updated Progress Schedule.

b. Content: In accordance with the General Conditions as modified by the Supplementary Conditions, and this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical. Identify on Schedule of Submittals all submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path. Indicate the following for each submittal:

1) Date by which submittal will be provided to Resident Engineer, or Construction Inspector.

2) Whether submittal will be for a substitution or "equal". Procedures for substitutions and "or equals" are specified in the General Conditions and the Division 01 Specifications

3) Date by which Resident Engineer's, or Construction Inspector's response is required. At least 14 days shall be allowed from the posting of submittals on Owner InSite™ for Resident Engineer, Construction Inspector's, or ENGINEER's review of each simple or straightforward submittal. Allow at least 28 days for large or complex submittals. CONTRACTOR and Resident Engineer, or Construction Inspector, will identify large or complex submittals on the Schedule of Submittals.

4) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other contractors.

c. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules.

d. Coordinate Schedule of Submittals with the Progress Schedule.

e. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project's

critical path, or that that places extraordinary demands on OWNER, Resident Engineer, Construction Inspector, or ENGINEER for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.

f. In preparing Schedule of Submittals:

1) Considering the nature and complexity of each submittal, allow sufficient time for review and revision.

2) Reasonable time shall be allowed for: Resident Engineer, Construction Inspector, or ENGINEER's review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to CONTRACTOR.

3) Identify and accordingly schedule submittals that are expected to have long anticipated review times.

1.04 PROCEDURE FOR SUBMITTALS

A. Log into Owner InSite™, click on Construction Tab, click on Submittal Tab, and click on Create New button.

B. Submittal Identification System: Use the following system, consisting of an Owner-InSite™ automatically generated submittal number and CONTRACTOR provided or selected information:

1. CONTRACTOR Provided Information:

a. Title: Enter the Specification Section Name, or Drawing Number.

b. Description: Add one of the following searchable descriptors:

c. Site - Civil

d. Steel Tank

e. Other terms as necessary, or desired.

f. Date Needed: Indicate the date a response is needed from all reviewers; generally 14 days for a simple submittal or 28 days for a complex submittal from the creation date.

g. Specification Number or Drawing Number: Typically a six- or eight-digit number with appropriate spaces and period entered into the appropriate box followed by a hyphenated two-digit sequential number indicating each separate and unique submittal provided under the associated Specification Section. Six-digit specification number examples are 28 00 00-01 and 28 00 00-02. Eight-digit examples are 27 00 00.13-01 and 27 00 00.13-02. In these examples, the -01 and - 02 indicate initial submittals describing different items related to a common specification section.

h. To: Enter or select the name of the person receiving the submittal. This will generally be the Resident Engineer, or his designee.

i. Sent By: Select the method of transmittal from the drop-down menu.

j. Tracking #: Enter an express mail tracking number if desired.

k. Number of Sets: Indicate 1

l. Submittal Type, indicating type of submittal from amongst the following “Action, Information, Closeout, Maintenance, Pre-construction, Lesson Plan, Spare Parts, Operation and Maintenance Data.

2. Review Cycle Number: Shall be a letter designation indicating the initial submittal or re-submittal associated with each submittal number:

a. “A” = Initial (first) submittal.

b. “B” = Second submittal (e.g., first re-submittal).

c. “C” = Third submittal (e.g., second re-submittal).

C. Transmittal Form for Submittals:

1. Provide separate transmittal form on CONTRACTOR letterhead within each PDF file associated with each submittal. In general, each submittal shall be for the majority or all components specified in one Specification Section. One submittal for each specification is preferred. More than two submittals for each individual specification section or on the same item are to be avoided. Information provided within a submittal shall not pertain to more than one specification Section. Additional transmittal form and separate submittal are preferred when requirements specify lesson plans, operation and maintenance data, closeout documents, and for delivery of spare parts, extra materials, or tools.

2. At beginning of each transmittal form, provide a reference heading indicating: CONTRACTOR’s name, OWNER’s name, Project name, name of CONTRACTOR employee coordinating the submittal. Note that Owner InSite™ will assign the date and submittal number.

3. For submittals with deviations from requirements of the Contract Documents, the transmittal form shall specifically describe each variation and the rationale for each variation.

4. Submittals transmitted by subcontractors or vendors without CONTRACTOR’s transmittal form, CONTRACTOR’s stamp, and CONTRACTOR’s signature with be rejected.

D. Contractor’s Review and Stamp:

1. CONTRACTOR’s Review: Before posting submittals to Owner InSite™, review submittals to:

a. Assure proper coordination of the Work;

b. Determine that each submittal is in accordance with CONTRACTOR’s desires;

c. Verify that submittal contains sufficient information for OWNER, ENGINEER and others to determine compliance with the Contract Documents.

2. Incomplete or inadequate submittals will be returned by Resident Engineer without review and will be counted as the first submission.

3. CONTRACTOR's Stamp and Signature:

   a. Each transmittal form within in each submittal PDF file provided shall bear CONTRACTOR's stamp of approval and signature, as evidence that submittal has been reviewed by CONTRACTOR and verified as complete and in accordance with the Contract Documents.

   b. Each submittal without CONTRACTOR's stamp and signature will be returned without review. Signatures or stamps that appear to be computer generated on transmittal form are permissible and will be interpreted to mean that CONTRACTOR has reviewed the submittal contents, that the contents of the submittal are complete, and that the submittal has been coordinated with the requirements of the Contract Documents.

   c. CONTRACTOR's transmittal form or stamp shall contain the following minimum information:

      1) Project Name: 2MG Water Tank

      2) Contractor's Name: *Example: ABC Construction, Inc.*

      3) Name and contact information of Contractor's employee that coordinated this particular submittal.

      4) Specification Section (or Drawing Number, Sequential Number, Review Cycle number.

         a) Example:

            (1) 40 00 00-01-A (1st Submittal) (First Review)

            (2) 40 00 00-02-A (2nd Submittal) (First Review)

            (3) 40 00 00-03-A (3rd Submittal) (First Review)

            (4) 40 00 00-01-B (1st Submittal) (Second Review)

            (5) 40 00 00-01-C (1st Submittal) (Third Review)

      5) Variations from Contract Documents and rationale: _____

      6) I hereby certify that the Contractor has satisfied Contractor's obligations under the Contract Documents relative to Contractor's review and approval of this submittal.

      7) Approved By (for Contractor): _____

   d. Resident Engineer, or Construction Inspector, may require CONTRACTOR to remove information from the transmittal page that conflicts with automatic generated information created by Owner InSite™.

E. Submittal Marking and Organization:

   1. Mark the specification section number or drawing number on each page of the submittal and each individual component submitted.

   2. In general, arrange submittal information in same order as requirements

are written in the associated Specification Section.

3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to Resident Engineer, or Construction Inspector.

4. Package together information for the same Specification Section. Do not provide required information piecemeal.

F. Format of Submittal and Recipients:

1. Action Submittals and Informational Submittals: Furnish submittal information along with transmittal form in a single PDF, except that submittals of Samples shall be as specified elsewhere in this Section.

2. Samples:

a. Securely label or tag Samples with specification section number and submittal number generated by Owner InSite™. Label or tag shall include clear space at least three inches by three inches in size for affixing Resident Engineer's, Construction Inspector, or ENGINEER's review stamp and or record of disposition. Label or tag shall not cover, conceal, or alter appearance or features of Sample. Label or tag shall not be separated from the Sample.

b. Submit number of Samples required in Specifications. If number of Samples is not specified in the associated Specification Section, provide at least three identical Samples of each item required for Resident Engineer's, or Construction Inspector's, or ENGINEER's approval. Samples will not be returned to CONTRACTOR. If CONTRACTOR requires Sample(s) for CONTRACTOR's use, notify Resident Engineer in writing and provide additional Sample(s). CONTRACTOR is responsible for furnishing, shipping, and transporting additional Samples.

c. Deliver balance of Samples to Resident Engineer, or Construction Engineer at field offices, or in-person, unless otherwise directed by Resident Engineer, or Construction Inspector.

3. Closeout Submittals:

a. Provide the following Closeout Submittals service and maintenance contracts; bonds for specific products or systems; warranty documentation; and sustainable design closeout documentation. On documents such as maintenance contracts and bonds, include on each document furnished original signature of entity issuing the document.

b. Operations and Maintenance Data: Submit in accordance with Section 01 78 23, Operations and Maintenance Data.

c. Record Documentation: Submit in accordance with Section 01 78 39, Project Record Documentation.

d. Software (if applicable): Submit number of copies required in Specification Section where the software is specified. If number of copies is not specified, provide two copies on compact disc in addition to software loaded on to OWNER's computer(s) or microprocessor(s).

4. Maintenance Material Submittals: For spare parts, extra materials, and tools, submit quantity of items specified in associated Specification Section. Furnish in accordance with Section 01 78 43, Spare Parts and Extra Materials.

G. Distribution and Collection:

1. Upon receipt of electronically submitted submittal, Resident Engineer, or Construction Inspector, may determine the disposition of submittals without others, or will distribute submittals electronically to OWNER, ENGINEER, engineering sub-consultants and or others as appropriate for the topic of the submittal for reviewing and for assisting with the determination of the disposition of the submittal.

2. Resident Engineer, or Construction Inspector, will collect comments and recommended dispositions determined by others, coordinate comments and dispositions amongst OWNER, ENGINEER, engineering sub-consultants and others, and communicate the determined disposition to CONTRACTOR via OWNER InSite™.

H. Re-submittals: Refer to the General Conditions for requirements regarding re-submitting required submittals.

1.05 ENGINEER'S REVIEW

A. Timing: Resident Engineer, Construction Inspector, or ENGINEER's review will conform to timing in paragraph 1.03.A.1.b.3.

B. Submittals not required in the Contract Documents will be rejected by Resident Engineer, or Construction Inspector, and will not be reviewed and will be administratively deleted from Owner InSite™ logs. All hardcopies of such submittals will be returned to CONTRACTOR.

C. Action Submittals, Results of Resident Engineer's, or Construction Inspector's Review: Each submittal will be given one of the following dispositions:

1. No Exceptions Taken: Upon return of submittal marked "No Exceptions Taken", order, ship, or fabricate materials and equipment included in the submittal (pending Resident Engineer's, Construction Inspector's, or ENGINEER's approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents.

2. Exceptions as Noted: Upon return of submittal marked "Exceptions as Noted", order, ship, or fabricate materials and equipment included in the submittal (pending Resident Engineer's, Construction Inspector's, or ENGINEER's approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, provided it is in accordance with notations s indicated.

3. Revise and Resubmit: Upon return of submittal marked "Revise and Resubmit", make the corrections indicated and re-submit to Resident Engineer, or Construction Inspector, for acceptance or approval.

4. Rejected: This disposition indicates material or equipment that cannot be accepted or approved. Upon return of submittal marked "Rejected",

repeat initial submittal procedure utilizing approvable material or equipment.

D. Informational Submittals, Results of Resident Engineer's, Construction Inspector's, or ENGINEER's Review:

1. Each submittal will be given one of the following dispositions:

a. No Exceptions Taken: Information included in submittal conforms to the applicable requirements of the Contract Documents, and is acceptable. No further action by CONTRACTOR is required relative to this submittal, and the Work covered by the submittal may proceed, and products with submittals with this disposition may be shipped or operated, as applicable.

b. Revise and Re-submit: Submittal does not conform to applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and conformance with the Contract Documents.

2. The following types of Informational Submittals, when acceptable to Resident Engineer, Construction Inspector, or ENGINEER, will not receive a written response from Resident Engineer, or Construction Inspector. Disposition as "For Information Only" will be recorded in the submittal log. When submittals of the following are not acceptable, Resident Engineer, or Construction Inspector, will provide written response to CONTRACTOR:

a. Material safety data sheets (MSDS).

b. Compaction testing reports.

c. Concrete testing reports.

d. Concrete batch tickets.

E. Closeout Submittals, Results of Resident Engineer's, or Construction Inspector, or ENGINEER's Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Closeout Submittals will not receive a written response from the Resident Engineer, or Construction Inspector. Disposition as "No Exceptions Taken" will be recorded in the submittal log. When Closeout Submittal is not acceptable, Resident Engineer, or Construction Inspector, will provide written response to CONTRACTOR.

F. Maintenance Material Submittals, Results of Resident Engineer's, or Construction Inspector's, or ENGINEER's Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Maintenance Material Submittals will not receive a written response from Resident Engineer. Disposition as "No Exceptions Taken" will be recorded in the submittal log. When Maintenance Material Submittal is not acceptable, Resident Engineer, or Construction Inspector will provide written response to CONTRACTOR, and CONTRACTOR is responsible for costs associated with transporting and handling of maintenance materials until compliance with the Contract Documents is achieved.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 SUBMITTAL RECORDS

A. CONTRACTOR shall provide two (2) printed copies of submittals whose disposition is marked “No Exceptions Taken” and “Exceptions as Noted”. Provide printed copies to Resident Engineer, or Construction Inspector. Organize, format, and label as follows:

1. Organize by specification Section number or drawing number.
2. Place stapled and large format folded material in an 8-1/2-inch x 11-inch manila folder and affix a permanent label. Upon receipt, this material will be placed in hanging folders and stored in file cabinets.
3. Place larger volume materials in white D-ring binders. Material provided to CONTRACTOR by manufacturers in binders may remain in original binders. Upon receipt, this material will be placed on shelves. Affix a permanent label in manner that does not obfuscate information on outside edge of binder. Do not overstuff binders.
4. Affix a permanent label to each manila folder and binder with the specification Section number, specification section name, or drawing number.

B. CONTRACTOR shall maintain printed copies of submittals whose disposition is marked “No Exceptions Taken” and “Exceptions as Noted” in CONTRACTOR’s field office for use in construction.

C. CONTRACTOR personnel shall not build from submittals whose disposition is marked “Rejected” or “Revise and Re-submit” or that do not have a disposition.

- END OF SECTION -

SECTION 01 35 44 – SPILL PREVENTION CONTROL AND COUNTER MEASURES PLAN

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall provide all labor, materials, equipment, tools, professional engineering (when required), and incidentals as shown, specified, and required to comply with Laws and Regulations regarding spill prevention control and countermeasures (SPCC) planning and compliance, including 40 CFR Part 112.

B. CONTRACTOR shall determine whether a SPCC Plan is required. If SPCC Plan is required, CONTRACTOR shall prepare, implement and maintain SPCC Plan as required by Laws and Regulations. Transmit letter to Resident Engineer, or Construction Inspector, presenting results of an evaluation of whether an SPCC plan is required for the Project.

C. If SPCC Plan is not required, CONTRACTOR shall ensure that conditions that preclude the need for SPCC Plan, including the activities of all contractors and Subcontractors at the Site, are maintained throughout duration of the Project. Should changes that affect the storage, use, or handling of oil at the Site occur, reassess the need for SPCC Plan at no additional cost to OWNER and provide to Resident Engineer or Construction Inspector, evaluation letter regarding need for SPCC Plan.

D. If SPCC Plan is required, CONTRACTOR shall develop SPCC Plan and submit for acceptance by Resident Engineer, or Construction Inspector. The SPCC Plan shall be specific to the Site. All contractors are required to comply with the SPCC Plan.

E. In event of violation of SPCC Plan or release of oils attributable to construction operations, CONTRACTOR shall:

1. Immediately issue notifications in accordance with Laws and Regulations, including 40 CFR 110 and 40 CFR 112. When required by Laws and Regulations, report to National Response Center, US Environmental Protection Agency, and other authorities having jurisdiction, if any.

2. Have spill clean-up performed in conformance with Laws and Regulations and the SPCC Plan.

3. Pay fines or civil penalties (or responsible portion thereof) imposed on OWNER by authorities having jurisdiction, and pay costs associated with clean-up of spills.

1.02 QUALITY ASSURANCE

A. Professional Engineer:

1. When required by Laws and Regulations, engage a registered professional engineer legally qualified to practice in the jurisdiction where the Site is located and experienced in providing engineering services of the kind indicated.

1.03 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Certifications: With each evaluation letter and SPCC Plan submittal, include certification signed by preparer of submittal that the submittal conforms to the Contract Documents and Laws and Regulations. Signature on all certifications shall be original.

2. Evaluations:

   a. Transmit letter presenting results of evaluation of whether a SPCC Plan is required for the Project. Submit evaluation no later than fourteen days after the Contract Times commence running, unless longer time is allowed by Resident Engineer, or Construction Inspector.

   b. Submit updated evaluations as required when conditions at the Site change. Submit updated evaluation no later than seven days after the conditions at the Site change, or within seven days of Resident Engineer's, or Construction Inspector's request, unless longer time is allowed by Resident Engineer, or Construction Inspector.

3. SPCC Plan: When SPCC Plan is required:

   a. Submit within fourteen days of receipt of Resident Engineer, or Construction Inspector's receipt of evaluation transmittal.

   b. Update and resubmit the SPCC Plan, or acceptable SPCC Plan amendments, as required when conditions at the Site change. Submit updated SPCC Plan or amendments no later than seven days after the change in conditions at the Site change giving rise to the SPCC Plan change or amendment, or within seven days of Resident Engineer's, or Construction Inspector's request, unless longer time is allowed by Resident Engineer, or Construction Inspector.

4. SPPC Plan Distribution: When SPCC Plan is required, submit copies of letters transmitting SPCC Plan and amendments (if any) to contractors and Subcontractors working at the Site.

5. Qualifications Statements: CONTRACTOR's professional engineer, when requested by Resident Engineer, or Construction Inspector.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 42 00 – REFERENCES

PART 1 -- GENERAL

1.01 DEFINITIONS

A. Definitions and terminology applicable to all the Contract Documents are included in the General Conditions and Supplementary Conditions.

B. Terminology used in the Specifications includes:

1. "Indicated" refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs or schedules in the Specifications and similar locations in the Contract Documents. Terminology such as "shown", "noted", "scheduled", and "specified" are used to help the user locate the reference without limitation on the location.

2. "Installer", "applicator", or "erector" is CONTRACTOR or another entity engaged by CONTRACTOR, either as an employee or Subcontractor, to perform a particular construction activity, including installation, erection, application or similar Work. Installers shall be experienced in the Work that installer is engaged to perform.

   a. The term "experienced", when used with the term "installer" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; being familiar with Laws and Regulations; and having complied with requirements of authorities having jurisdiction, and complying with requirements of the Supplier of the material or equipment being installed.

3. Trades: Use of a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter", unless otherwise indicated in the Contract Documents or required by Laws or Regulations. Such terminology also does not imply that specified requirements apply exclusively to trade personnel of the corresponding generic name.

1.02 APPLICABLE CODES

A. References in the Contract Documents to local code(s) shall mean the following:

1. National Electric Code, latest edition (2014, required by State Electrical Inspector)

2. City of Rifle, Public Works Manual, edition in effect in December 2014.

3. City of Rifle, International Building Codes, 2009 edition.

1.03 OWNER'S REFERENCED SPECIFICATIONS

A. The Work shall comply with the Contract Documents and where indicated the following referenced specifications that can be reviewed and obtained at Rifle City Hall, or at www.rifleco.org:

1. City of Rifle Public Works Manual. Proposed modifications to materials, specifications, standards, requirements, or procedures shall be reviewed

and approved by Resident Engineer.

B. Maintain complete copy of referenced specifications at the Site.

1.04 ABBREVIATIONS

A. Common abbreviations that may be found in the Contract Documents are listed below, alphabetically by their written-out meaning:

Airport Booster Pump Station	ABPS P.S.
Air Pollution Control Division	APCD
alternating current	a-c
ampere	A
ante meridian	a.m.
average	avg
Beaver Creek Water Treatment Plant	BCWTP
Board of Examiners Standardized Testing	BEST
brake horsepower	bhp
British thermal unit	Btu
Centigrade (or Celsius)	C
chlorinated polyvinyl chloride	CPVC
chlorofluorocarbons	CFC
Colorado Department of Transportation	CDOT
Colorado Department of Public Health and Environment	CDPHE
Colorado River Fire and Rescue Authority	CRFRA
Colorado Water Resources and Power Development Auth.	CWRPDA
County Road	CR
cubic inch	cu in
cubic foot	cu ft
cubic yard	cu yd, or CY
cubic feet per minute	cfm
cubic feet per second	cfs
Davis-Bacon	DB
decibel	db
degree Centigrade (or Celsius)	degrees C or ^{o}C
degrees Fahrenheit	degrees F or ^{o}F
diameter	dia
direct current	d-c
Disadvantaged Business Enterprise	DBE

Department of Local Affairs	DOLA
dollars	$
each	ea
efficiency	eff
Environmental Protection Agency	EPA
Engineers Joint Contract Documents	EJCDC
Experience modification rate	EMR
Fahrenheit	F
feet	ft
feet per hour	fph
feet per minute	fpm
feet per second	fps
figure	Fig
flange	flg
foot-pound	ft-lb
gallon	gal
gallons per hour	gph
gallons per minute	gpm
gallons per second	gps
Garfield County Federal Mineral Lease District	GCFMLD
Graham Mesa Water Treatment Plant	GMWTP
gram	g
grams per liter	g/L
Hertz	Hz
horsepower	hp or HP
hour	hr
human-machine interface	HMI
Heating, ventilation, and air-conditioning	HVAC
inch	in.
inches water gage	in. w.g.
inch-pound	in.-lb
inside diameter	ID
International Code Council	ICC
iron pipe size	IPS

thousand pounds	kips
thousand pounds per square inch	ksi
kilovolt-ampere	kva
kilowatt	kw
kilowatt-hour	kwhr or kwh
linear foot	lin ft or LF
liter	L
maximum	max
Minority Business Enterprise	MBE
mercury	Hg
milligram	mg
milligrams per liter	mg/l or mg/L
milliliter	ml
millimeter	mm
million-gallons per day	mgd or MGD
million-gallon	MG
minimum	min
national pipe threads	NPT
net positive suction head	NPSH
net positive suction head available	NPSHA
net positive suction head required	NPSHR
Northeast Booster Pump Station	NEBPS
nominal pipe size	NPS
Notice of Award	NOA
Notice to Proceed	NTP
number	no.
operator interface terminal	OIT
ounce	oz
ounce-force	ozf
outside diameter	OD
parts per hundred	pph
parts per million	ppm
parts per billion	Ppb
polyvinyl chloride	PVC

post meridian	p.m.
pound	lb
Portable document format	PDF
pounds per square inch	psi
pounds per square inch absolute	psia
pounds per square inch gauge	psig
pounds per square foot	psf
process control system	PCS
programmable logic controller	PLC
Pump Station	P.S.
Raw Water Pump Station	RWPS
Recycle Pump Station	RPS
revolutions per minute	rpm
Rifle Regional Water Purification Facility	RRWPF
Standard Dimensional Ratio	SDR
second	sec
specific gravity	sp gr, or SG
square	sq
square foot	sq ft, or sf
square inch	sq in.
square yard	sq yd, or SY
State Revolving Fund	SRF
standard	std
standard cubic feet per minute	scfm
Supervisory Control and Data Acquisition	SCADA
total dynamic head	TDH
totally-enclosed fan-cooled	TEFC
Union Pacific Railroad	UPRR
volt	V
volts alternating current	vac
volts direct current	vdc
Water Quality Control Division	WQCD
Women Business Enterprise	WBE

1.05 REFERENCE STANDARDS

A. Refer to Article 3 of the General Conditions, as may be modified by the Supplementary Conditions, relative to reference standards and resolving discrepancies between reference standards and the Contract Documents. Provisions of reference standards are in effect in accordance with the Specifications.

B. Copies of Standards: Each entity engaged in the Work shall be familiar with reference standards applicable to its construction activity. Copies of applicable reference standards are not bound with the Contract Documents. Where reference standards are needed for a construction activity, obtain copies of standards from the publication source.

C. Abbreviations and Names: Where reference standards, specifications, codes, manuals, Laws or Regulations, or other published data of international, national, regional or local organizations are referred to in the Contract Documents, the organization issuing the standard may be referred to by their acronym or abbreviation only. Following acronyms or abbreviations that may appear in the Contract Documents shall have the meanings indicated below. Listing is alphabetical by acronym.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACS	American Chemical Society
AEIC	Association of Edison Illuminating Companies
AF&PA	American Forest and Paper Association
ABMA	American Bearing Manufacturers Association (formerly Anti-Friction Bearing Manufacturers Association (AFBMA))
AGMA	American Gear Manufacturers Association
AI	Asphalt Institute
AIChE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMA	Acoustical Materials Association
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute

APA	The Engineered Wood Association
API	American Petroleum Institute
APHA	American Public Health Association
AREA	American Railway Engineering Association
ARI	Air Conditioning and Refrigeration Institute
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASQ	American Society for Quality
ASSE	American Society of Safety Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industry
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association
CBMA	Certified Ballast Manufacturers Association
CDA	Copper Development Association
CDPHE	Colorado Department of Public Health and Environment
CDOT	Colorado Department of Transportation
CEMA	Conveyor Equipment Manufacturers Association
CGA	Compressed Gas Association
CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute
DIN	Deutsches Institut fur Normung eV (German Institute for Standardization)

DIPRA	Ductile Iron Pipe Research Association
EJMA	Expansion Joint Manufacturers Association, Inc.
ETL	Intertek Testing Services, Inc. (aka ETL Testing Laboratories, Inc.)
FCC	Federal Emergency Management Agency FM
FRPI	Federal Specification
GA	Gypsum Association
GANA	Glass Association of North America
HEW	Hydraulic Institute
HMI	Hoist Manufacturers Institute
HUD	International Building Code
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Industrial Fasteners Institute
IRI	Industrial Risk Insurers
ISA	Instrumentation, Systems, and Automation Society (formerly Instrument Society of America)
ISO	Insurance Services Office
ISO	International Organization for Standardization
LEED	Lightning Protection Institute
MIA	Marble Institute of America
ML/SFA	Military Specifications
MSS	Monorail Manufacturers Association
NAAMM	National Association of Corrosion Engineers
NAPF	National Association of Pipe Fabricators, Inc.
NARUC	National Builders Hardware Association
NCMA	National Electric Code
NELMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NETA	International Electrical Testing Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NHPMA	Northern Hardwood and Pine Manufacturers Association
NIST	United States Department of Commerce, National Institute of

	Standards and Technology
NLGA	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NSSGA	National Stone, Sand, and Gravel Association
NTMA	National Terrazzo and Mosaic Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
PFI	Pipe Fabrication Institute
PPI	Plastics Pipe Institute
PGMC	Primary Glass Manufacturers Council
PS	Product Standards Section, United States Department of Commerce
RCSC	Research Council on Structural Connections (part of AISC)
RMA	Rubber Manufacturers Association
SAE	Society of Automotive Engineers
SCPRF	Structural Clay Products Research Foundation
SDI	Steel Deck Institute
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturing Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractor’s National Association
SPI	Society of the Plastics Industry
SPIB	Southern Pine Inspection Bureau
SSPC	Society for Protective Coatings
SWI	Steel Window Institute
TEMA	Tubular Exchanger Manufacturers Association
TCNA	Tile Council of North America
UL	Underwriters Laboratories, Inc.
UPRR	Union Pacific Railroad
USACOE	United States Army Corps of Engineers

USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
USGS	United States Geological Survey
USPHS	United States Public Health Service
WCLIB	West Coast Lumber Inspection Bureau
WDMA	Window and Door Manufacturers Association
WWEMA	Water and Wastewater Equipment Manufacturers Association
WWPA	Western Wood Products Association

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 45 16 – FIELD QUALITY CONTROL – GENERAL REQUIREMENTS

PART 1 -- GENERAL

1.01 GENERAL

A. The CONTRACTOR shall assist and cooperate with the Resident Engineer, or Construction Inspector, and ENGINEER to access the Work to perform the OWNER's and ENGINEER's quality assurance and control work. Field quality control is in addition to CONTRACTOR's quality assurance and control measures to assure that the Work is in conformance with requirements in the Contract Documents.

B. The CONTRACTOR's requirements for field engineering services including professional engineering and professional services including surveying are specified in Section 01 71 23, Field Engineering.

C. The CONTRACTOR shall employ and pay for services of an independent testing laboratory to perform specified services. Requirements are specified in Section 01 45 29, Testing Laboratory Services Furnished by Contractor and in individual specifications sections.

D. The OWNER has retained a firm to perform geotechnical, and concrete quality assurance and control work, and some material testing at the OWNER's expense. This firm (HP Geotech) is solely responsible to the OWNER and ENGINEER. A description of planned services and CONTRACTOR requirements are specified in Section 01 45 30, Testing Laboratory Services Furnished by Owner and in individual specifications sections.

E. Field quality control is required by CONTRACTOR and or OWNER on these items, but not limited to these items, with requirements described elsewhere in one or more individual specification sections, on the Drawings, or by permit:

1. Hydrostatic Testing
2. Disinfection of Hydraulic Structures
3. Weld Testing
4. Electrical Testing
5. Instrumentation and Control System Testing

1.02 RELATED SECTIONS

A. Section 01 32 16, Progress Schedule

B. Section 01 45 29, Testing Laboratory Services Furnished by Contractor

C. Section 01 45 30, Testing Laboratory Services Furnished by Owner

D. Section 01 71 23, Field Engineering

1.03 ADMINISTRATIVE PROVISIONS

A. The OWNER will assign personnel to the project to review work in progress. These personnel include the Resident Engineer or Construction Inspector, ENGINEER, OWNER's laboratory testing firm, surveyor, and OWNER's inspectors and representatives from construction, building, and utility

departments.

B. The OWNER may perform observation, material testing, quality control and assurance testing as determined necessary by the OWNER, at OWNER's expense, for any work performed by the CONTRACTOR.

C. Any construction performed at times other than the normal weekday working hours that require construction inspection, observation, or material testing may, at the discretion of the Resident Engineer, be charged to the CONTRACTOR.

D. Should the CONTRACTOR fail to complete the project within the Contract Time, construction observation and consulting time required during completion of the project will be charged to the CONTRACTOR and subtracted from any amounts due from progress or final payments.

E. Whether or not construction observation, material testing, or quality assurance and control work at OWNER's expense will be performed or necessary will be determined by the Resident Engineer, or Construction Inspector.

F. CONTRACTOR shall identify and schedule material and laboratory testing services on the four week look-ahead schedule in accordance with Section 01 32 16, Progress Schedules.

G. CONTRACTOR shall advise CONTRACTOR's testing laboratory and Resident Engineer, or Construction Inspector, at least two days prior to the need for services and for assignment of personnel.

1.04 EARTHWORK

A. Unless otherwise agreed to, CONTRACTOR shall retain a firm other than the OWNER and ENGINEER's geotechnical consultant or OWNER's testing laboratory (HP Geotech).

B. Materials used in the Work may require testing and retesting, as directed by Resident Engineer, or Construction Inspector, during the project. Allow free access to material stockpiles and facilities at all times.

C. The testing laboratories shall collect samples and perform testing of proposed fill materials in the laboratory and the field to demonstrate compliance of the Work with the Contract Documents.

D. CONTRACTOR's testing laboratory shall perform testing required to obtain data for selecting moisture content for placing and compacting fill materials.

E. The frequency of the CONTRACTOR's compaction test shall be in conformance with the standard of care exercised on similar projects in Colorado.

F. Areas for which the OWNER's tests show noncompliance shall be removed and re-compacted or reworked, at the Resident Engineer's, or Construction Inspector's discretion, to conform to the specifications upon receipt of the test results. All costs for reworking and retesting backfill material to meet the specification requirements shall be at CONTRACTOR's expense.

G. OWNER will conduct material evaluations and testing pertaining to overlot grading, trench backfill, and structural backfill in accordance with:

1. ASTM D422, Standard Test Methods for Particle Size Analysis of Soils

2. ASTM D698, Standard Test Methods for Laboratory Compaction

Characteristics of Soil Using Standard Effort.

3. ASTM D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
4. ASTM D1556, Standard Test Methods for Density and Unit Weight of Soil in place by Sand Cone Method.
5. ASTM D2922, Standard Test Methods for Density of Soil and Soil Aggregate in place by Nuclear Methods.
6. ASTMD4318, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.05 CONCRETE

A. The CONTRACTOR or ready-mix concrete producer shall perform quality assurance and control testing in accordance with ACI 214 Section 5.2.

B. OWNER will conduct compression cylinder testing. The testing frequency shall be random testing after the first truck and then approximately every other truck. If, in the opinion of the Resident Engineer, or Construction Inspector, the compression cylinder testing results justify greater frequency, the rate may be reduced to testing every truck. The OWNER anticipates one cylinder from each random test to be tested at 7 days, and one cylinder to be tested at 28 days. The third cylinder will be a hold cylinder to be tested as determined by the Resident Engineer, or Construction Inspector.

C. Unless otherwise noted in these specifications or in the drawings, the OWNER will perform random quality assurance and quality control testing to confirm the CONTRACTOR's tests results, or conformance to requirements.

D. OWNER will perform testing in accordance with:

1. ASTM C31, Standard Practice for Making and Curing Concrete Test Specimens in the Field.
2. ASTM C138, Standard Test Methods for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
3. ASTM C172, Standard Practice for Sampling Freshly Mixed Concrete
4. ASTM C231, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
5. ASTM C143, Standard Test Method for Slump of Hydraulic-Cement Concrete

E. OWNER will conduct the following tests during a placement from each truck:

1. Temperature
2. Unit Weight
3. Slump
4. Air Content

F. Areas for which the tests show noncompliance shall be re-tested by the OWNER at CONTRACTORs expense.

G. In the event that the testing in paragraph E1 through EF4 consistently justifies

less testing in the opinion of the Resident Engineer, or Construction Inspector, the Resident Engineer, or Construction Inspector may decide to eliminate further tests or change the frequency.

H. The CONTRACTOR shall assist the Resident Engineer, or Construction Inspector, and ENGINEER with concrete sampling and testing. The CONTRACTOR shall provide test site areas designated by the Resident Engineer, or Construction Inspector. The test sites shall be approximately 100 square feet in area, level and accessible at all times.

I. In the event that the CONTRACTOR desires to perform materials testing other than by the concrete producer, such as, test cylinders for compression testing to facilitate formwork cycling or other test such as permeability or shrinkage tests, advice or consultations regarding concrete materials or if nonconforming materials are supplied or work occurs, the CONTRACTOR shall retain the services of a concrete materials consultant to work on his behalf and provide the results to the Resident Engineer, or Construction Inspector.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 45 29 – TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall employ and pay for services of independent testing firm and or laboratory to perform specified services.
2. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
   a. Other tests in the Contract Documents that are not specifically assigned to OWNER, Supplier, Manufacturer, or others.
3. CONTRACTOR shall pay for:
   a. Tests not specifically indicated in the Contract Documents as being OWNER's responsibility.
   b. Tests made for CONTRACTOR's convenience, or for his own quality assurance or quality control purposes.
   c. Repeat tests required because of CONTRACTOR's negligence or defective Work, and retesting after failure of test for the same item to comply with the Contract Documents.
4. Testing firm and or laboratory is not authorized to approve or accept any portion of the Work or defective Work; rescind, alter, or augment requirements of Contract Documents.
5. Testing firm or laboratory shall not perform duties of CONTRACTOR.

1.02 REFERENCES

A. Standards referenced in this Section are:

1. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
2. ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.
3. NIST SRM, Standard Reference Materials.

1.03 QUALITY ASSURANCE

A. Qualifications:

1. Testing Laboratory:
   a. Comply with applicable requirements of ASTM E329.
   b. Testing laboratory shall be licensed to operate in the same state as the Site. Where applicable, laboratory shall be certified by the authority having jurisdiction for the types of testing required.
   c. Testing equipment used by laboratory shall be calibrated at

maximum intervals of twelve months by devices of accuracy traceable to one of the following: NIST SRM, ISO/IEC 17025, certified by state or local bureau of weights and measures, or values of natural physical constants generally accepted in the engineering and scientific community.

1.04 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Quality Assurance and Control Submittals and Test Reports: Testing laboratory shall promptly submit to CONTRACTOR and Resident Engineer, or Construction Inspector, results of testing and inspections, including:

   a. Date issued.

   b. Project title, number, and name of the Site.

   c. Testing laboratory name and address.

   d. Name and signature of inspector or person obtaining samples.

   e. Date of inspection or sampling.

   f. Record of temperature and weather.

   g. Date of test.

   h. Identification of material or product tested, and associated Specification Section.

   i. Location in the Project.

   j. Type of inspection or test.

   k. Results of tests and observations regarding compliance with the Contract Documents.

2. Qualifications Statements:

   a. Testing Laboratory:

      1) Qualifications statement indicating experience and facilities for tests required under the Contract Documents.

      2) Copy of report of inspection of facilities during most recent NIST inspection tour. Include memorandum of remedies of deficiencies reported during inspection.

      3) Copy of certificate of calibration for each instrument or measuring device proposed for use, by accredited calibration agency.

1.05 TESTING LABORATORY DUTIES

A. Testing laboratory shall:

1. Cooperate with CONTRACTOR and OWNER and provide qualified personnel promptly on notice.

2. Perform required inspections, sampling, and testing of materials and methods of construction; comply with applicable reference standards and

the Contract Documents; and ascertain compliance with requirements of the Contract Documents.

3. Promptly notify Resident Engineer, or Construction Inspector, and CONTRACTOR of irregularities or deficiencies in the Work that are observed during performance of services.

4. Promptly submit to CONTRACTOR and Resident Engineer, or Construction Inspector, copies of reports of inspections and tests.

5. Perform additional tests and services, as required by CONTRACTOR.

1.06 CONTRACTOR'S RESPONSIBILITIES

A. CONTRACTOR shall:

1. Cooperate with testing laboratory personnel.

2. Provide to testing laboratory preliminary representative samples of materials and products to be tested, in required quantities.

3. Promptly submit to Resident Engineer, or Construction Inspector, copies of results of tests and inspections received from testing laboratory.

4. Provide to laboratory the preliminary design mix proposed for concrete and other material mixes to be tested by testing laboratory.

5. Provide labor and facilities:

   a. For access to the Work to be tested, and where required, to Suppliers' operations.

   b. For obtaining and handling samples at the Site.

   c. For facilitating inspections and tests.

   d. For testing laboratory's exclusive use for storing and curing of test samples.

   e. Forms for preparing concrete test beams and cylinders.

6. Notify laboratory and Resident Engineer, or Construction Inspector, sufficiently in advance of operations to allow assignment of personnel and scheduling of tests to be provided by OWNER's testing laboratory as specified by in Section 01 45 30.

7. Arrange with laboratory and pay for additional services, sampling, and testing required for CONTRACTOR's convenience.

8. CONTRACTOR shall assist Resident Engineer, or Construction Inspector, and testing laboratory with investigation of dis-similar or unusual results, data gaps, errors, and equipment calibration issues.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 45 30 – TESTING LABORATORY SERVICES FURNISHED BY OWNER

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. OWNER has contracted and will pay for services of a material testing laboratory to perform quality assurance and control testing that is in addition to testing performed by the CONTRACTOR.
2. Neither tests, nor approvals shall relieve the CONTRACTOR from his contractual obligations to perform the Work in accordance with the Contract Documents. See Section 01 45 29 for Laboratory Testing Services Furnished by CONTRACTOR.
3. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
   a. Section 01 45 33, Code Required Special Inspections and Procedures
   b. Other tests in the Contract Documents that OWNER may choose to perform for quality assurance or quality control purposes.
4. Testing firm and or laboratory is not authorized to approve or accept any portion of the Work or defective Work; rescind, alter, or augment requirements of Contract Documents.

1.02 REFERENCES

A. Standards referenced in this Section are:

1. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
2. ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.
3. NIST SRM, Standard Reference Materials.

1.03 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Testing laboratory shall promptly submit to OWNER results of testing and inspections, including:
   a. Date issued.
   b. Project title, number, and name of the Site.
   c. Testing laboratory name and address.
   d. Name and signature of inspector or person obtaining samples.
   e. Date of inspection or sampling.
   f. Record of temperature and weather.
   g. Date of test.

h. Identification of material or product tested, and associated Specification Section.

i. Location in the Project.

j. Type of inspection or test.

k. Results of tests and observations regarding compliance with the Contract Documents.

2. OWNER will promptly provide testing results to the CONTRACTOR indicating approval, re-test, or rejection of the Work performed or material placed.

1.04 TESTING LABORATORY DUTIES

A. Testing laboratory shall:

1. Cooperate with CONTRACTOR and provide qualified personnel promptly on notice.

2. Obtain samples of the various materials at the source of supply and test for compliance with the Contract Documents.

3. Tag, seal, label, or otherwise identify the bulk materials so sampled. This sampling and testing shall be repeated whenever the source of supply is changed or whenever the characteristics of the materials change or vary in the opinion of the Resident Engineer.

4. Perform required inspections, sampling, and testing of materials and methods of construction; comply with applicable reference standards and the Contract Documents; and ascertain compliance with requirements of the Contract Documents.

5. Promptly notify Resident Engineer, or Construction Inspectors, of irregularities or deficiencies in the Work that are observed during performance of services.

6. Promptly submit to OWNER copies of reports of inspections and tests.

7. Perform additional tests and services, as required by OWNER.

8. Materials that fail shall be retested by testing laboratory after reworking, or replacement by CONTRACTOR. Retesting shall be at CONTRACTOR's expense.

1.05 CONTRACTOR'S RESPONSIBILITIES

A. CONTRACTOR shall:

1. Cooperate with testing laboratory personnel by providing access to the testing area including ladders for trenches.

2. Provide to testing laboratory preliminary representative samples of materials and products to be tested, in required quantities.

3. Provide to laboratory the preliminary design mix proposed for concrete, grout mortar, and other material mixes to be tested by testing laboratory.

4. Provide labor and facilities:

a. For access to the Work to be tested, and where required, to

Suppliers' operations.

b. For obtaining and handling samples at the Site.

c. For facilitating inspections and tests.

d. A secure location for testing laboratory's exclusive use for storing and curing of test samples on-site

5. Notify Resident Engineer, or Construction Inspector, sufficiently in advance of operations to allow assignment of personnel and scheduling of tests to be provided by OWNER's testing laboratory.

6. CONTRACTOR shall assist Resident Engineer, or Construction Inspector and OWNER's testing laboratory with investigation of dis-similar or unusual results, data gaps, errors, and equipment calibration issues.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

A. If any Work is covered contrary to the instructions or without approval or consent from the Resident Engineer, or Construction Inspector, it shall, if required by the Resident Engineer or Construction Inspector, be uncovered for his examination and properly restored at the CONTRACTOR's expense.

B. If any Work has been covered which the Resident Engineer, or Construction Inspector has not specifically requested to observe prior to its being covered, or if the Resident Engineer, or Construction Inspector, considers it necessary or advisable that covered work be inspected or tested by others, the CONTRACTOR, at Resident Engineer's, or Construction Inspector's request, will uncover, expose, or otherwise make available for observation, inspection, or testing as the Resident Engineer, or Construction Inspector may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such work is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction. If, however, such Work is not found to be defective, the CONTRACTOR will be allowed an increase in Contract Price, or an extension of Contract Time directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction.

- END OF SECTION -

SECTION 01 45 33 – CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope

1. CONTRACTOR shall provide labor, materials, tools, equipment, and incidentals as shown, specified, and required to cooperate with the special inspectors, and testing agencies employed by OWNER, to facilitate special inspections when required by a City of Rifle Building Department official, or when specified in individual specification sections.

2. Special Inspections Required by City of Rifle Building Department:

a. None

1.02 QUALITY ASSURANCE

A. Qualifications:

1. Inspectors employed by OWNER for special inspections will be qualified to perform the testing, observation and inspection required by the applicable building code.

B. Regulatory Requirements:

1. Special Inspections will be in accordance with applicable building code and other Laws and Regulations.

1.03 SUBMITTALS

A. Action Submittals: Submit the following:

1. Samples: Representative samples of materials when requested by Resident Engineer, or Construction Inspector.

B. Informational Submittals: Submit the following, when requested:

1. Certificate of Compliance.

1.04 CONTRACTOR'S RESPONSIBILITIES

A. Prepare submittals when requested by Resident Engineer, or Construction Inspector.

B. Provide safe access to the Work to be tested and inspected.

C. Provide assistance in obtaining and handling test samples at the Site.

D. Facilitate inspections and tests.

E. Provide access to Suppliers' and Subcontractors' operations as required.

F. Notify Resident Engineer, or Construction Inspector, sufficiently in advance to coordinate personnel at the Site. Do not cover the Work to be inspected until special inspections have been completed and the results thereof are acceptable.

G. Special inspections required in this Section do not supersede or make unnecessary inspections and tests required under other Specification Sections or

standard inspections required by Laws and Regulations.

1.05 RESIDENT ENGINEER'S RESPONSIBILITIES

A. Resident Engineer, or Construction Inspector, will:

1. Engage services of inspectors and testing agencies for special inspections.
2. Coordinate activities of individual inspectors and testing agencies with CONTRACTOR.
3. Provide interim reports of inspections and material testing to City of Rifle Building Inspector, Construction Inspector, Resident Engineer, and ENGINEER's consultants.

1.06 INSPECTOR RESPONSIBILITIES

A. Perform specified inspections, sampling, and testing of materials and methods of construction; review and ascertain compliance with Laws and Regulations.

B. Promptly notify Resident Engineer, or Construction Inspector, of irregularities or deficiencies in the Work observed during special inspections. Corrective action, if required, will be determined by Resident Engineer.

C. Promptly submit one copy of each report of inspections and tests to Resident Engineer, or Construction Inspector, including:

1. Date issued.
2. Project title and number.
3. Name and signature of inspector.
4. Date of inspection or sampling and test.
5. Record of temperature and weather.
6. Identification of product and Specification Section.
7. Location in Project.
8. Type of inspection or test.
9. Results of inspections and tests, and observations regarding compliance with Laws and Regulations, and standards.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 45 53 – CLEANING, TESTING AND DISINFECTING HYDRAULIC STRUCTURES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide labor, material, tools, equipment, chemicals, and incidentals as shown, specified, and required to clean, flush, disinfect, and monitor residual disinfectant concentration and test structures and specific pipelines.

2. The Work also includes all labor and materials required to prepare structure and specific pipelines for testing and disinfecting, conveying water to testing location, performing testing, and all labor and materials required to drain, reuse, and dispose of water used for testing and disinfecting.

3. The Work also includes all labor to acquire and comply with CDPHE hydrostatic testing permits, or other discharge permits, if applicable.

B. Hydraulic Structures and Pipelines Scheduled for Hydrostatic Testing and Disinfection: Clean, test, and disinfect interior surfaces of the following in Accordance with AWWA procedures.

1. Welded steel tank.

2. Transmission and distribution piping, except drain piping.

C. Hydraulic Structures and Pipelines Scheduled for Hydrostatic Testing Only: Clean and test the following:

1. Drain Piping

D. Water for Testing:

1. Water for initial testing will be furnished by OWNER. Finished water sources are available. If the source of water is the adjacent 1.0 MG tank which supplies the nearest hydrant, then it may take several fillings of this tank to provide enough water to test the 0.5 MG tank.

2. CONTRACTOR shall provide temporary piping, hoses, valves, backflow preventers, appurtenances, and services required for testing. Heat may be needed in cold weather for both conveyance lines and the interior of the tank.

3. CONTRACTOR shall convey the water to testing location.

4. Finished water for testing may be withdrawn from:

a. Fire hydrant at County Road #333 (aka Hunter Mesa Road).

b. Other locations or temporary arrangements approved by the Resident Engineer, or Construction Inspector.

c. Coordinate with Resident Engineer, or Construction Inspector, and OWNER for water supply location, need for backflow device, and

meter.

5. On withdrawal piping, CONTRACTOR shall install backflow preventer, valve to control rate of flow (after backflow preventer, and other appurtenances necessary to properly control the flow and pressure as determined by the Resident Engineer, or Construction Inspector.

E. Provide chemicals for disinfection and dechlorination.

F. Coordinate testing and disinfection of piping with Resident Engineer, Construction Inspector, and OWNER's operations.

1.02 REFERENCES

A. Standards referenced in this Section are:

1. APHA/AWWA/Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater.
2. AWWA C652, Disinfection of Water-Storage Facilities.
3. NSF/ANSI 60, Drinking Water Treatment Chemicals – Health Effects.

1.03 TERMINOLOGY

A. The following terms are not defined to apply globally to the Contract Documents but, when used in this Section, they have the following meaning:

1. "Hydraulic structures" are tanks and pipelines.

1.04 QUALITY ASSURANCE

A. Testing Laboratory:

1. CONTRACTOR shall take bacteria samples and pay for testing. Testing for bacteria shall be by laboratory certified by the Colorado Department of Public Health and Environment. Submit test results to Resident Engineer, or Construction Inspector. Re-test after corrective action if requested by Resident Engineer.

B. Backflow Prevention Devices:

1. Use reduced pressure zone backflow devices or air gaps to protect potable water sources. Backflow devices shall have certification tag displaying certification within the last year. OWNER will not supply these devices with hydrant meters.

1.05 SUBMITTALS

A. Action Submittals: Provide the following:

1. Product Data:
   a. Data sheets on chemicals used for disinfection and dechlorination.
   b. Proof of NSF/ANSI 60 compliance for chemicals used in disinfection and dechlorination.
2. Procedure Submittals (including proposed plans for water conveyance, control, and disposal):
   a. Cleaning procedures.

b. Permit requirements, if required.

c. Hydrostatic testing procedures and equipment required, by structure or pipeline to be tested.

d. Disinfection procedures and equipment required, by structure or pipeline to be disinfected.

e. Dechorination procedures and equipment required by structure or pipeline to be dechlorinated, or location to be protected.

B. Informational Submittals: Provide the following:

1. Certifications:

a. Certification of each backflow preventer proposed for use.

b. Calibration certification for each flow meter proposed for use except for hydrant meters supplied by OWNER.

c. Certification that tests were performed in compliance with referenced standards.

2. Special Procedure Submittals:

a. Schedule for each test required.

b. Procedure for disposal of chlorinated water, including proposed dechlorination chemical and methods.

c. Provide written notice of intent to test each structure on four (4) week look-ahead schedule. Testing shall not commence without acceptance of Resident Engineer.

3. Site Quality Control Submittals:

a. Results of each test.

PART 2 -- PRODUCTS

2.01 MATERIALS

A. Provide and maintain temporary valves, plugs, and bulkheads, and other water control equipment suitable for the intended use. Do not use materials that would be injurious to the Work. Backflow preventers shall be reduced pressure zone-type.

B. Chemicals:

1. Chemicals used for disinfection and dechlorination shall conform to NSF/ANSI 60.

PART 3 -- EXECUTION

3.01 CLEANING

A. Cleaning Requirements:

1. Prior to testing, remove all scaffolding, planks, tools, rags, dirt, debris, and material not part of the structure.

2. Thoroughly clean walls, floors, columns, rafters, underside of roof, piping,

accessories, and operating equipment by sweeping, high-pressure (200 psi) wash, scrubbing, or other methods that will not injure the Work and existing facilities.

3. Remove from the hydraulic structure all water, dirt, and foreign material accumulated during cleaning. Provide temporary pumps, piping, and facilities as required to discharge water from the cleaning operation in manner acceptable to Resident Engineer and in conformance with Laws and Regulations.

4. Do not proceed with testing until Resident Engineer, or Construction Inspector has accepted in the field results of cleaning.

5. Following cleaning, vent screens shall be checked for correct placement to prevent birds, insects, and other contaminants from entering the structure.

6. Conform to Section 01 74 05, Cleaning.

3.02 TESTING AND DISINFECTION, GENERAL

A. Conform to the following:

1. Test each hydraulic structure separately, unless otherwise coordinated with Resident Engineer, or Construction Inspector.

B. Hydraulic structures shall be free of visible leakage and seepage and shall have measured leakage less than allowable leakage. Repair leaks in manner in accordance with the Contract Documents.

C. Successfully test structure before applying coating systems. Apply and cure protective coatings before starting disinfection.

D. Provide disinfection as late as possible to provide maximum degree of sterility at the time the Work is placed into continuous service.

E. Bacteriological testing shall be performed by certified testing laboratory retained by CONTRACTOR. Testing laboratory shall be acceptable to Resident Engineer, or Construction Inspector. Samples shall be obtained and transported by testing laboratory employee. Results of bacteriological testing shall indicate conformance with the Contract Documents and shall be acceptable to the OWNER and the Colorado Department of Public Health and Environment.

F. Release of water from structure after testing and or disinfection testing shall conform to the CONTRACTOR proposed and Resident Engineer, or Construction Inspector, approved route.

3.03 HYDROSTATIC TESTING OF HYDRAULIC STRUCTURES

A. Analysis of data from hydrostatic tests of hydraulic structures shall be by CONTRACTOR in accordance with this Section. Provide materials, equipment, and labor to obtain test data.

B. Prior to starting hydrostatic testing, perform the following:

1. All elements of the steel structure that will resist pressure exerted by retained fluid shall be in place. All hatches, manways, ladders, ladder cages, vents, level indicators, and piping shall be in place.

2. Valves, gates, blind flanges, and items other than concrete that control the flow of or otherwise retain fluid in the hydraulic structure shall be watertight for the hydrostatic test.

3. Notify Resident Engineer, or Construction Inspector, prior to starting to fill the structure for hydrostatic testing. Minimum time between notice and starting to fill for testing shall be 48 hours.

4. Tank structures shall remain filled with water to the Overflow elevation for a period of 48 hours.

C. Fill the hydraulic structure to the specified water surface test elevation. Where test elevation is not specified or indicated and fluid level in the structure will vary, fill structure to elevation six inches below the overflow outlet.

D. Filling Hydraulic Structures with Water:

1. Fill the portion of the hydraulic structure to be tested at rate that does not exceed two vertical feet per hour.

2. If potable water is used for testing, during filling, provide backflow preventer at the point where water is withdrawn from potable water system.

E. After water has reached specified test elevation and specified wetting period has elapsed, inspect structure's exposed surfaces for leakage. Before starting hydostatic test, repair locations where leakage or weeping is evident.

F. Hydrostatic test duration shall be determined by Resident Engineer, or Construction Inspector, and shall not be less than 24 hours.

G. Allowable Leakage:

1. Leakage during the test period for structures with vertical walls is defined as the volume calculated using the difference in water surface elevations at the start and end of the period adjusted by adding the volume of precipitation and subtracting the volume of evaporation measured during the time period as applicable.

2. No leakage is allowed for welded steel structures.

H. Measurement Locations:

1. Each measurement location shall be marked and given distinct reference number. Mark reference point on face of wall above test water surface in manner that will prevent movement or deterioration of reference point mark during the test.

2. Position the measurement locations to minimize effects of wave action and wind.

I. Evaporation and Precipitation Measurement:

1. In hydraulic structures open to atmosphere, a clear plastic, calibrated, open- topped container not less than 18-inch diameter and at least 18 inches deep shall be partially filled, floated in the hydraulic structure, and held in position near each measurement location. Calibration increments in container shall be 0.1-inch or less.

2. Position containers so that containers are not shaded by hydraulic

structure's walls, away from overhead items such as beams, pipes, and walkways.

J. Test Measurements:

1. Do not start hydrostatic tests when severe weather conditions, such as heavy precipitation, high winds, major changes in average daily temperature, and other severe conditions are predicted for duration of test period.

2. Record the following measurements at each test location at start of test period and at 12-hour intervals thereafter:

   a. Distance from reference point to test water surface.

   b. Depth of water in evaporation-precipitation containers.

   c. Temperature of test water at point 18 inches below water surface.

   d. Temperature of water in evaporation-precipitation containers at mid- depth.

3. If water surface is subject to wave action at measurement location, average water surface elevation of wave oscillations shall be recorded as data.

4. Change in the water surface elevation at each measurement location shall be averaged and adjusted as follows:

   a. Total change in hydraulic structure's water surface elevation shall be adjusted by average change in water surface elevation in evaporation- precipitation containers.

   b. Where averaged water temperature measurements vary by more than three degrees from start to completion of test period, adjustment in test volume shall be determined by change of density of water resulting from change in the average water temperature.

5. Determination of Leakage:

   a. Hydraulic Structures with Vertical Walls: Leakage shall be the drop in water surface elevation measured during the test, multiplied by water surface area of hydraulic structure tested.

   b. Allowable leakage shall be determined by multiplying the initial full volume by the daily leakage allowance and by the leakage test time period in days.

K. Criteria for Acceptance:

1. Hydrostatic test will pass if measured leakage (quantitative loss) is less than allowable leakage and no leaks or weeping is observed.

2. The Resident Engineer, or Construction Inspector, will have sole responsibility and authority to determine and define visual water loss. Regardless of a passing visual test, any damp spots in exposed surfaces shall be repaired.

3. If test becomes unreliable due to excessive precipitation or other external

factors, re-start the test.

4. If hydrostatic test fails, the hydraulic structure may be re-tested immediately without repairs. If subsequent hydrostatic test fails, repair probable areas of leakage and repeat the hydrostatic test.

5. Re-test hydraulic structure until it meets criteria specified for acceptance. Repair probable leakage areas before testing. The Resident Engineer, or Construction Inspector, shall review and accept the CONTRACTOR's recommendations prior to performing any repair work.

L. Reuse and Disposal of Water Used in Hydrostatic Tests:

1. Obtain approval of Resident Engineer, or Construction Inspector, before water used in one hydrostatic test is pumped to a different hydraulic structure for reuse in subsequent test.

2. Upon completion of disinfection of each hydraulic structure, dechlorinate contents of hydraulic structure until chlorine residual is below detection or below level necessary for a compliant discharge. Dechlorinate water using sodium bisulfite or other dechlorination chemical acceptable to Resident Engineer, or Construction Inspector. Dechlorination shall be in accordance with AWWA C653.

3.04 TESTING OF APPURTENANT PIPING

A. Test piping appurtenant to hydraulic structures in accordance with the Contract Documents.

3.05 DISINFECTING HYDRAULIC STRUCTURES

A. Hydraulic structures to be disinfected shall be chlorinated by CONTRACTOR in accordance with Method 2 in AWWA C652, unless otherwise specified or indicated in the Contract Documents. Method 2 is generally summarized as the spray application of a chlorine solution (200 mg/L) to all surfaces. The disinfected surfaces shall remain in contact with the strong chlorine solution for at least 30 minutes, but no more than 8 hours.

B. Disinfection:

1. Provide temporary taps, plugs, valves, drains, pumps, tanks, piping, facilities, and connections required to disinfect, dechlorinate, and remove chlorinated water as specified. Disinfection and dechlorination will occur during months of potential freezing conditions. Review site conditions for discharge and drainage pathways.

2. Disinfect hydraulic structures immediately before each structure is placed in operation to prevent facility from becoming contaminated after disinfection.

3. Use solution of water and liquid chlorine, calcium hypochlorite, or sodium hypochlorite. Placement of chlorine powder or tablets inside hydraulic structure as means of disinfection is not allowed. Placement of chlorine powder or tablets inside pipelines as a means of disinfection will be allowed when approved by the Resident Engineer, or Construction Inspector.

4. Introduce chlorine solution into hydraulic structure in manner accepted by

Resident Engineer, or Construction Inspector.

5. Add potable water to hydraulic structure with the chlorine solution. If a hydrant is a source of potable water, introduce water to hydraulic structure through a backflow prevention device, unless otherwise approved by the Resident Engineer, or Construction Inspector.

6. Upon completion of disinfection of each hydraulic structure, dechlorinate contents of hydraulic structure until chlorine residual is below detection or below level necessary for a compliant discharge. Dechlorinate water using sodium bisulfite or other dechlorination chemical acceptable to Resident Engineer, or Construction Inspector. Dechlorination shall be in accordance with AWWA C653.

7. Discharge of chlorinated water into a sewer will not be allowed without written approval of OWNER of the wastewater conveyance system and wastewater treatment facility. Do not discharge chlorinated water onto roadways or into ditches, storm sewers, drainage culverts, streams, or wetlands.

C. After disinfection is completed and before hydraulic structure is placed in service, test the hydraulic structure for bacteria in accordance with AWWA C652 and "Standard Methods for Examination of Water and Wastewater".

D. Samples for bacteriological testing shall be obtained from each disinfected hydraulic structure as follows:

1. Immediately After Completion of Disinfection: Minimum of two samples.

2. Twenty-four Hours after Obtaining First Set of Samples: Minimum of two samples.

E. Sampling and testing for bacteriological tests shall conform to Paragraph 3.2.E of this Section. Test results shall indicate satisfactory results for bacteria, in accordance with requirements of the Owner and the Colorado Department of Public Health and Environment, before hydraulic structure will be Substantially Complete.

F. Repeat the disinfection procedure at no additional cost to OWNER until test results indicate satisfactory results for bacteria.

G. Disinfection and leakage testing may occur simultaneously.

- END OF SECTION -

SECTION 01 51 05 – TEMPORARY UTILITIES/FACILITIES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall provide all temporary utilities and facilities required for the Project.

1. Make all arrangements with utility service companies for temporary services and obtain required permits and approvals for temporary utilities.
2. Pay all utility service costs for fuel, and other utility services required for the Work, with the exception of water.
3. Continuously maintain adequate utilities and facilities for all purposes during the Project, until removal of temporary utilities and temporary facilities. At minimum, provide and maintain temporary utilities through Substantial Completion and removal of temporary field offices and sheds.
4. Should OWNER occupy part of the Project prior to Substantial Completion of the entire Work, cost of utilities consumed via temporary utilities serving the portion occupied by OWNER will be shared proportionately between OWNER and CONTRACTOR as mutually agreed to by the parties.
5. Maintain, including cleaning, temporary utilities and continuously provide consumables as required.
6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and requirements of Project.
7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.

B. Provide the following temporary utilities and facilities:

1. Electricity
2. Lighting, as required.
3. Telephone and communications.
4. Heating, ventilating, and temporary enclosures, as required.
5. Water
6. Sanitary facilities.
7. First-aid facilities.
8. Fire protection.
9. Equipment to access confined spaces.
10. Storage areas for concrete cylinders.

1.02 REQUIREMENTS FOR TEMPORARY UTILITIES AND TEMPORARY

FACILITIES

A. Electrical:

1. Provide and pay for temporary electrical service required for the Work, including generators for continuous power for temporary field offices and sheds. Provide temporary outlets with circuit breaker protection and ground fault protection. Comply with latest version of NEC and requirements of State Electrical Inspector.

B. Lighting.

1. Minimum lighting shall be five foot-candles for open areas and ten foot-candles for stairs and shops.

C. Telephone and Communications.

1. Provide temporary telephone and communications required for CONTRACTOR's operations at the Site and for summoning emergency medical assistance.

D. Heating, Ventilating, and Enclosures.

1. Provide sufficient temporary heating, ventilating, and enclosures to ensure safe working conditions and prevent damage to the Work.

2. Provide temporary enclosures and partitions required to maintain required temperature and humidity.

E. Water.

1. Provide temporary water facilities including piping, valves, meters backflow preventers, pressure regulators, and other appurtenances.

2. Potable water is available from the fire hydrant near the access road on County Road #333 (aka Hunter Mesa Road) and the yard hydrant near the 1.0 MG tank.

3. Continuously maintain adequate water flow and pressure for all purposes during the Project, until removal of temporary water system.

4. CONTRACTOR will not be charged for reasonable amounts of water obtained from OWNER.

F. Sanitary Facilities.

1. Provide suitably-enclosed chemical or self-contained toilets and consumables for CONTRACTOR's employees, Resident Engineer, ENGINEER, and visitors to the Site. Location of temporary toilets shall be acceptable to Resident Engineer.

2. Provide supply of potable drinking water and related facilities and consumables for all personnel using the Site.

3. Provide suitable temporary washing facilities for employees and visitors.

G. First-aid Facilities.

1. Provide temporary first-aid stations at or immediately adjacent to the Site's major work areas, and inside CONTRACTOR's temporary field office. Locations of first-aid stations shall be determined by

CONTRACTOR's safety representative.

2. Provide list of emergency telephone numbers for each telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section 01 31 19, Pre-Construction Conference.

H. Fire Protection.

1. Provide temporary fire protection, including portable fire extinguishers rated not less than 2A or 5B in accordance with NFPA 10, Portable Fire Extinguishers, for each temporary building.

2. Comply with NFPA 241, Safeguarding Building Construction, Alternation, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.

I. Equipment for Confined Spaces.

1. The Contractor shall provide safety measures for activities within confined spaces, i.e., tanks, vaults, excavations, or manholes, including communication procedures, ventilation, atmospheric testing, gas detector, safety equipment, and tripod winch assembly.

1.03 USE OF OWNER'S SYSTEM

A. Use of Permanent Utility Systems Provided Under the Project:

1. Permanent electrical, lighting, water, heating, ventilating, and fire protection systems and first-aid facilities may be used to provide temporary utilities and temporary facilities when available if the following are met:

a. Obtain Resident Engineer's, or Construction Inspector's, written permission to use OWNER's permanent systems.

b. Permanent systems to be used for temporary utilities or temporary facilities shall have achieved Substantial Completion, including complete functionality of all controls.

c. CONTRACTOR shall pay all costs while using permanent system, including operation (except electricity charges), maintenance, replacement of consumables, and provide replacement parts.

2. The following permanent facilities do not exist at the site:

a. Electric

b. Telephone and communication facilities.

c. Sanitary facilities.

d. Lighting

e. Natural Gas

f. Fire Hydrant (Potable)

g. Sewer

PART 2 -- PRODUCTS

MATERIALS AND EQUIPMENT

A. Materials and equipment for temporary systems may be new or used, but shall be adequate for purposes intended and shall not create unsafe conditions, and shall comply with Laws and Regulations.

B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

PART 3 -- EXECUTION

3.01 INSTALLATION

A. Install temporary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.

B. Location of Temporary Utilities and Temporary Facilities:

1. Locate temporary systems for proper function and service.
2. Temporary systems shall not interfere with or provide hazards or nuisances to the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and/or work of utility companies.
3. Do not install temporary utilities on the ground, with the exception of temporary extension cords, hoses, quick connect pipe, and similar systems in place for short durations.

C. Modify and extend temporary systems as required by progress of the Work.

3.02 USE

A. Maintain temporary systems to provide safe, continuous service as required.

B. Properly supervise operation of temporary systems:

1. Enforce compliance with Laws and Regulations.
2. Enforce safe practices.
3. Prevent abuse of services.
4. Prevent nuisances and hazards caused by temporary systems and their use.
5. Prevent damage to finishes.
6. Ensure that temporary systems and equipment do not interrupt continuous progress of construction.

C. At end of each work day, check temporary systems and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.03 REMOVAL

A. Completely remove temporary utilities, facilities, equipment, and materials when no longer required. Repair damage caused by temporary systems and their removal and restore the Site to condition required by the

Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.

B. Where temporary utilities are disconnected from existing utility, provide suitable, watertight or gastight (as applicable) cap or blind flange, as applicable, on service line, in accordance with requirements of utility owner.

C. When permanent utilities and systems have been used for temporary utilities, upon Substantial Completion, replace all consumables such as filters and light bulbs and parts used during the Work.

- END OF SECTION -

SECTION 01 52 13 – CONTRACTOR'S FIELD OFFICE AND SHEDS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. If CONTRACTOR does have field offices acceptable to Resident Engineer or Construction Inspector, CONTRACTOR shall provide a field office for CONTRACTOR's use with at least the minimum facilities specified, or have alternative space or arrangements acceptable to Resident Engineer, or Construction Inspector.
2. Provide required storage and work sheds.
3. Pay for required permits and utilities for Field offices. Field offices and sheds shall comply with Laws and Regulations.

B. Location:

1. Locate field offices and sheds in accordance with the Contract Documents and in accordance with the Site mobilization discussions at the pre- construction conference. Space is available at the Site or at adjacent 3MG tank site.

C. Furnish in field office one complete set of the Contract Documents for ready reference by interested parties. In addition to the reference set, comply with Section 01 78 39, Project Record Documents.

PART 2 -- PRODUCTS

2.01 FIELD OFFICE AND SHEDS, FURNISHINGS, AND EQUIPMENT

A. Furnishings for Field Office or Alternative Space:

1. Construction: As required by CONTRACTOR and sufficient for Project meetings.
2. Utilities and Services: Provide the following:
   a. Telephone service.
   b. Internet service.
   c. Computer network and related facilities as required for CONTRACTOR needs.
3. Furnishings:
   a. Conference Facilities: Provide conference area with meeting table and chairs sufficient for four people. Conference facilities and furnishings with suitable utilities, lighting, and temperature controls prior to the first progress meeting, unless otherwise approved by Resident Engineer, or Construction Inspector.
   b. Other furnishings required by CONTRACTOR.
   c. Polycom VTX 1000 speaker phone, or acceptable equal.

d. White board, dry erase markers, erasers.

4. Provide on field office an exterior identification sign displaying CONTRACTOR's company name. Maximum size of sign shall be four feet by eight feet. Sign shall be suitable for outdoor use for the duration of the Project.

5. Furnish and maintain at CONTRACTOR's field office two or more protective helmets for use by visitors to the Site.

B. Storage and Work Sheds:

1. Provide storage and work sheds sized, furnished, and equipped to accommodate personnel, materials, and equipment involved in the Work, including temporary utility services and facilities required for environmental controls sufficient for personnel, materials, and equipment.

PART 3 -- EXECUTION

3.01 INSTALLATION

A. Installation:

1. Install field offices, sheds, and related facilities in accordance with Laws and Regulations.

a. A City of Rifle building permit is not required.

b. A state electrical permit is required.

2. Install materials and equipment, including prefabricated structures, in accordance with manufacturer's instructions.

3.02 MAINTENANCE AND REMOVAL

A. Maintenance:

1. Clean and maintain field offices and sheds as required.

2. Provide consumables as required.

B. Removal:

1. Do not remove field offices and sheds until after final application for payment has been made, unless otherwise approved by the Resident Engineer, or Construction Inspector.

2. Remove field offices and sheds and restore areas prior to final inspection.

- END OF SECTION -

SECTION 01 57 05 – TEMPORARY CONTROLS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide and maintain methods, equipment, and temporary controls as required to control environmental conditions at the Site and adjacent areas.
2. Maintain controls until no longer required.
3. Temporary controls include, but are not limited to, the following:
   a. Erosion and sediment controls
   b. Noise controls.
   c. Dust control.
   d. Pest and rodent control.
   e. Control of water, including storm water runoff.
   f. Pollution control.
   g. Survey control

B. Related Sections:

1. Section 01 35 44, Spill Prevention Control and Countermeasures Plan

1.02 1.2 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
   a. Plan for construction staging
   b. Location and details of temporary erosion and sediment controls.
2. Product Data:
   a. Silt fencing materials.

B. Informational Submittals: Submit the following:

1. Procedural Submittals:
   a. Proposed dust control measures, when submittal is requested by Resident Engineer.
   b. Copy of permit applications and permits obtained.

PART 2 -- PRODUCTS

2.01 MATERIALS FOR TEMPORARY EROSION AND SEDIMENT CONTROLS

A. General:

1. Materials utilized for erosion and sediment controls shall be as indicated

in the Contract Documents, or as specified in this Section.

B. Silt Fencing:

1. Filter Cloth:

a. Mirafi 100X filter cloth, or equal.

b. Height: Two feet, minimum.

2. Fence Support Posts:

a. Length: Three feet, minimum.

b. Material: Metal or other acceptable material with "U" or "I" cross section, or minimum 1.25-inch by 1.25-inch hardwood.

C. Straw Bale Dike.

1. Bales shall be firmly-packed, unrotted straw bound firmly with baling wire. Cross-sectional area on the small end of each bale shall be approximately 12 inches by 12 inches or larger.

2. Posts shall comply with requirements for silt fencing support posts, or may be suitable reinforcing steel.

D. Mulch Materials and Soil Stabilization.

1. Mulch shall be unrotted straw or salt hay.

2. Soil stabilization emulsions, when used, shall be an inert, eco-friendly chemical manufactured for the specific purpose of erosion control and soil stabilization, applied with mulch or stabilization fibers.

3. Wood-fiber or paper-fiber, when used, shall be 100 percent natural and biodegradable.

4. Erosion control mat or netting shall be biodegradable. Acceptable materials include jute, excelsior, straw or coconut fiber, and cotton.

PART 3 -- EXECUTION

3.01 NOISE CONTROL

A. Noise Control – General:

1. CONTRACTOR’s vehicles and equipment shall minimize noise emissions to greatest degree practicable. Provide mufflers, silencers, and sound barriers when necessary.

2. Noise levels shall comply with Laws and Regulations, including OSHA requirements and local ordinances.

3. Noise emissions shall not interfere with the work of OWNER or others.

3.02 DUST CONTROL

A. Dust Control – General:

1. CONTRACTOR shall determine applicable requirements for fugitive dust control for the Site and coordinate activities for compliance.

2. CONTRACTOR shall utilize one or more control techniques accepted by

the Air Quality Control Division of CDPHE and suitable for the Site.

3. If applicable, CONTRACTOR shall submit an Air Pollution Emissions Notice (APEN) to CDPHE and pay fees associated with the application or permit.

4. Suitable control techniques for the disturbed areas of the site include:

   a. Watering

   b. Re-vegetation

   c. Compaction

   d. Wind Breaks

   e. Controlling vehicle speed.

   f. Furrowing the soil.

   g. Minimizing the areas of disturbance

   h. Synthetic or natural cover for slopes.

5. Suitable control techniques for unpaved roadway areas of the site include:

   a. Watering

   b. Gravelling

   c. Paving

   d. Controlling vehicle speed.

6. Suitable control techniques for mud and dirt carry-out onto paved surfaces include:

   a. Gravel entry ways.

   b. Covering the load.

   c. Washing vehicle wheels.

   d. Not overfilling trucks.

7. Control objectionable dust caused by CONTRACTOR's operation of vehicles and equipment, clearing, and other actions. To minimize airborne dust, apply water or use other methods listed above.

8. CONTRACTOR shall prevent blowing and movement of dust from exposed soil surfaces and access roads to reduce on- and off-Site damage, nuisances, and health hazards associated with dust emissions. Control may be achieved by irrigation in which the Site shall be sprinkled with water until the surface is moist. Apply dust controls as frequently as required without creating nuisances such as excessive mud and ponding of water at the Site.

9. Remove dust and dirt/mud from roadways and access roads at a maximum interval of seven days or as required by the Resident Engineer, or Construction Inspector.

3.03 PEST AND RODENT CONTROL

A. Pest and Rodent Control – General:

1. Provide rodent and pest control as required to prevent infestation of the Site and storage areas.
2. Employ methods and use materials that do not adversely affect conditions at the Site or on adjoining properties.
3. In accordance with Laws and Regulations, promptly and properly dispose of pests and rodents trapped or otherwise controlled.

3.04 WATER CONTROL

A. Water Control – General:

1. Provide methods to control surface water and water from excavations and structures to prevent damage to the Work, the Site, and adjoining properties.
2. Control fill, grading, and ditching to direct water away from excavations, pits, tunnels and other construction areas and to direct drainage to proper runoff courses to prevent erosion, damage, or nuisance.

B. Equipment and Facilities for Water Control: Provide, operate, and maintain equipment and facilities of adequate size to control surface water.

C. Discharge and Disposal: Dispose of drainage water in manner to prevent flooding, erosion, and other damage to any and all parts of the Site and adjoining areas, and that complies with Laws and Regulations.

3.05 POLLUTION CONTROL

A. Pollution Control – General:

1. Provide means, methods, and facilities required to prevent contamination of constructed facilities, soil, water, and atmosphere caused by discharge of noxious substances from construction operations.
2. Equipment used during construction shall comply with Laws and Regulations.
3. Tankers, pipelines, and hoses used in oil and gas operations that may have come into contact with oil and gas fluids and hydraulic fracturing chemicals shall not be used on the project.
4. Sample fluids for contamination when requested by Resident Engineer, or Construction Inspector, at no Cost to OWNER.

B. Spills and Contamination:

1. Comply with requirements of Section 01 35 44, Spill Prevention Control and Countermeasures Plan.
2. Provide equipment and personnel to perform emergency measures required to contain spills and to remove contaminated soils and liquids.
3. Excavate contaminated material and properly dispose of off-Site, and replace with suitable compacted fill and topsoil.

C. Protection of Surface Waters:

1. Implement special measures to prevent harmful substances from entering surface waters. Prevent disposal of wastes, effluents, chemicals, and

other such substances in or adjacent to surface waters and open drainage routes, in sanitary sewers, or in storm sewers.

D. Atmospheric Pollutants:

1. Provide systems for controlling atmospheric pollutants related to the Work.
2. Prevent toxic concentrations of chemicals and vapors.
3. Prevent harmful dispersal of pollutants into atmosphere.

E. Solid Waste:

1. Provide systems for controlling and managing solid waste related to the Work.
2. Prevent solid waste from becoming airborne, and from discharging to surface waters and drainage routes.
3. Properly handle and dispose of solid waste.

3.06 EROSION AND SEDIMENT CONTROL

A. Installation and Maintenance of Erosion and Sediment Controls – General:

1. General:

a. Provide erosion and sediment controls as the Work progresses into previously undisturbed areas.

b. Installation of erosion and sediment controls shall be as indicated in the Contract Documents or as specified in this Section. In the event of conflict between the requirements of the Drawings and specifications, the more restrictive requirement will govern.

c. Use necessary methods to successfully control erosion and sedimentation, including ecology-oriented construction practices, vegetative measures, and mechanical controls. Use best management practices (BMP) in accordance with applicable Laws and Regulations to control erosion and sedimentation during the Project.

d. Plan and execute construction, disturbances of soils and soil cover, and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation. Provide temporary measures for controlling erosion and sedimentation, as indicated in the Contract Documents and as required for the Project.

e. Where areas must be cleared for storage of materials or equipment, or for temporary facilities, provisions shall be made for regulating drainage and controlling erosion and sedimentation, subject to the Resident Engineer’s, or Construction Inspector’s, approval.

f. Provide erosion and sediment controls, including stabilization of soils, at the end of each workday.

2. Coordination:

a. Coordinate erosion and sediment controls with this Section's requirements on water.

b. Coordinate temporary erosion and sediment controls with construction of permanent drainage facilities and other Work to the extent necessary for economical, effective, and continuous erosion and sediment control.

3. Before commencing or concurrent with activities that will disturb soil or soil cover at the Site, provide all erosion and sediment control measures for the areas where soil or soil cover will be disturbed.

4. In general, implement construction procedures associated with, or that may affect, erosion and sediment control to ensure minimum damage to the environment during construction. When requested by Resident Engineer or Construction Inspector, CONTRACTOR shall implement any and all additional measures required to comply with Laws and Regulations.

5. Vegetation Removal: Remove only those shrubs, grasses, and other vegetation that must be removed for construction. Protect remaining vegetation.

6. Access Roads and Parking Areas: When possible, access roads and temporary roads shall be located and constructed to avoid adverse effects on the environment. Provisions shall be made to regulate drainage, avoid erosion and sedimentation, and minimize damage to vegetation.

7. Earthwork and Temporary Controls:

a. Control erosion to minimize transport of silt from the Site into existing waterways and surface waters. Such measures shall include, but are not limited to, using berms, silt fencing, baled straw silt barriers, gravel or crushed stone, mulching and soil stabilization, slope drains, and other methods. Apply such temporary measures to erodible materials exposed by activities associated with the construction of the Project.

b. Hold to a minimum the areas of bare soil exposed at one time.

c. Construct fills and waste areas by selectively placing fill and waste materials to eliminate surface silts and clays that will erode.

d. In performing earthwork, eliminate depressions that could serve as mosquito pools.

e. CONTRACTOR shall provide special care in areas with steep slopes, where disturbance of vegetation shall be minimized to maintain soil stability.

8. Work Stoppage: If the Work is temporarily stopped or suspended for any reason, CONTRACTOR when requested by Resident Engineer, or Construction Inspector, shall provide additional temporary controls necessary to prevent environmental damage to the Site and adjacent areas while the Work is stopped or suspended.

B. Silt Fencing:

1. When requested by Resident Engineer, or Construction Inspector, install and maintain silt fencing in a vertical plane, at the location(s) shown or indicated on the Drawings.
2. Locations of Silt Fencing:
   a. Where possible, install silt fencing along contour lines so that each given run fencing is at the same elevation.
   b. On slopes, install silt fencing at intervals not more than 25 feet spacing on slopes greater than 4:1 otherwise at bottom of slopes.
   c. Provide silt fencing around perimeter of each stockpile of topsoil, general fill material, and excavated material. Install silt fencing before expected precipitation and maintain until stockpile is removed.
   d. Do not install silt fencing at the following types of locations:
      1) Area of concentrated storm water flows such as ditches, swales, or channels.
      2) Where rock or rocky soils prevent full and uniform anchoring of silt fencing.
      3) Across upstream or discharge ends of storm water piping or culverts.
3. Installation:
   a. Securely fasten wire mesh to posts, and securely fasten filter cloth to wire mesh.
   b. When two sections of filter cloth abut each other, fold over edges and overlap by minimum of six inches and securely fasten to wire mesh.
   c. Embed posts in the ground to the depth necessary for proper controls; embed posts to at least 16 inches below ground.
   d. Filter cloth and wire mesh shall extend a minimum of eight inches below ground and a minimum of 16 inches above ground.
   e. Remove sediment accumulated at silt fencing as required. Repair and reinstall silt fencing as required.
4. Maintenance:
   a. Do not allow formation of concentrated storm water flows on slopes above silt fencing unless so shown or indicated in the Contract Documents. If unauthorized concentrated storm water flows occur, stabilize the slope via earthmoving and other stabilization measures as required to prevent flow of concentrated storm water flows toward silt fencing.

C. Mulching and Soil Stabilization:
1. Use mulching to temporarily stabilize exposed soil and fill material.
   a. Immediately following final grading, provide mulch and stabilize with mats or netting, or sprayed soil stabilization emulsion with

fiber additive.

b. Application of mulching for soil stabilization shall be as follows.

1) Unrotted Straw or Salt Hay: 1.5 to two tons per acre.

2) Soil stabilization emulsions, when used, shall be applied in accordance with manufacturer's instructions, and shall be applied with mulch or stabilization fibers.

3) Wood-fiber or Paper-fiber Application: 1,500 lbs. per acre, installed by hydroseeding.

c. Where mats or netting are used:

1) Cover entire area to be stabilized with mats or netting.

2) Provide anchoring trenches at the top and bottom of slopes to receive mats or netting. Bury at least the top and bottom ends of mat or netting, four inches or more wide, at top and bottom of slope. Tamp trench full of soil. Four inches from trench, secure mat or netting with appropriate staples spaced at intervals of 10 inches.

3) Overlap adjacent strips of mat or netting by at least four inches.

D. Temporary Stone Construction Entrance:

1. Where construction vehicles will regularly transit to paved surfaces from unstabilized surfaces, provide a temporary stone construction entrance (tracking pad). CONTRACTOR’s vehicles shall use temporary construction entrances.

2. Provide temporary stone construction entrances of the width, length, and thickness shown or indicated on the Drawings. When not shown or indicated on the Drawings, temporary stone construction entrance shall be not less than 50 feet long, by 20 feet wide, by eight inches deep.

3. Installation:

a. Ensure that subgrade under temporary stone construction entrance is suitably dense for the intended purpose. Suitably prepare subgrade as required for temporary construction entrance.

b. Provide on subgrade a layer of geotextile fabric, installed in accordance with geotextile manufacturer's recommendations for separation.

c. Provide stone on installed geotextile. Grade stone for passage of vehicles.

4. Maintenance:

a. Maintain temporary stone construction entrance at not less than the minimum required thickness. Add stone as required to maintain thickness.

b. When upper layer of temporary stone construction entrance

becomes contaminated with soil, remove the contaminated material and replace with clean stone.

c. Using water to wash down temporary construction entrance or paved areas onto which soil material has been tracked is not allowed.

3.07 REMOVAL OF TEMPORARY CONTROLS

A. Removals – General:

1. Upon completion of the Work, remove temporary controls and restore Site to specified condition. If condition is not specified, restore Site to pre-construction condition.

2. After soils are permanently stabilized, remove from the Site temporary erosion and sediment controls.

- END OF SECTION -

SECTION 01 57 33 – SECURITY

PART 1 -- GENERAL

The site is currently fenced.

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall safely guard all the Work, products, equipment, and property from loss, theft, damage, and vandalism until Substantial Completion. CONTRACTOR's duty includes safely guarding OWNER's property in vicinity of the Work and other private property from injury or loss in connection with performance of the Work.
2. If site cannot be secured, provide watchmen as required to provide required security and prevent unauthorized entry.
3. Costs for security specified in this Section shall be paid by CONTRACTOR.
4. Make no claim against OWNER for damage or theft resulting from trespass.
5. Provide full compensation for damage to property of OWNER and others arising from failure to provide adequate security.
6. Adjust security measures with the progress of the Work.

1.02 CONTRACTOR'S SITE ACCESS AND SECURITY PROCEDURES

A. Conform to OWNER's security procedures and access restrictions at Site and auxiliary locations throughout entire Project. CONTRACTOR, including Subcontractors and Suppliers, shall comply with the following:

1. Auxiliary Parking Locations: CONTRACTOR may park vehicles around the 1.0 MG tank. Coordinate with Resident Engineer, or Construction Inspector, prior to use of such areas.
2. Parking: Do not park outside of designated CONTRACTOR parking area, which will be determined by Resident Engineer, or Construction Inspector, Prepare and maintain parking area as required.

1.03 TEMPORARY FENCING

A. If security fencing or barriers are breached or temporarily removed for the Work, provide temporary watchmen or fencing to secure and safely guard all the Work, products, equipment, and property from loss, theft, damage, vandalism until permanent facilities or barriers are restored.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

A. Resident Engineer or Construction Inspector will provide access code or key to security gates and locked facilities.

B. Notify Resident Engineer, or Construction Inspector, at progress meeting of increase or decrease in site security measures.

- END OF SECTION -

SECTION 01 58 00 – PROJECT IDENTIFICATION AND SIGNS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall furnish, install, and maintain temporary Project identification and informational signs.
2. Sign materials shall be as specified herein and constructed as detailed in the civil Drawings.
3. Provide the following sign:
   a. Project Identification sign indicating:
      1) The name of the project.
      2) OWNER's name and City of Rifle logo.
      3) Mayor's name, City Manager's name.
      4) ENGINEER's name, address, and logo.
      5) Resident Engineer's, or Construction Inspector's name and phone number.
      6) CONTRACTOR's name, contact information, logo.
         a) No external funding.
4. No signs, except those specified, shall be displayed, unless approved by OWNER.

1.02 QUALITY ASSURANCE

A. Qualifications: Sign maker shall be a professional in the type of Work required, regularly engaged in work similar to that required.

1.03 SUBMITTALS

A. Action Submittals: Submit the following:

1. Materials type and grade.
2. Arrangement, size, trim, framing, supports, and finishes.
3. Size and font of lettering.
4. Graphic design displaying layout of logos and information.
5. Color Samples.

PART 2 -- PRODUCTS

2.01 MATERIALS AND CONSTRUCTION

A. Performance Criteria: Signs and supports shall withstand 75 mile per hour wind.

B. Materials:

1. Signs shall be 3/4-inch thick, exterior-grade plywood, or material of similar

ruggedness.

2. Provide signs with trim, mitered on edges.

C. Finishing: Provide finish that can withstand weather and dust.

PART 3 -- EXECUTION

3.01 INSTALLATION, MAINTENANCE, AND REMOVAL

A. Location of signs shall be as shown or indicated on the Contract Documents, or as directed by Resident Engineer, or Construction Inspector.

B. Maintenance:

1. Maintain signs so they are clean, legible, and upright. Cut grass, weeds, and other plants so that signs are not covered or obscured.

2. Repair and repaint damaged signs. Relocate signs as required by progress of the Work.

C. Remove signs upon completion of Project or when directed by Resident Engineer, or Construction Inspector.

- END OF SECTION -

SECTION 01 61 00 – COMMON PRODUCT REQUIREMENTS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope: This Section includes:

1. Common requirements for products.

1.02 TERMINOLOGY

A. The following terms are not defined to apply globally to the Contract Documents but, when used in this Section, they have the following meaning:

1. “Products” includes materials, equipment, components, accessories, fixtures, systems, and other goods incorporated in the Work. Products do not include machinery and equipment used for preparing, fabricating, conveying, erecting, or installing the Work.

1.03 PRODUCT REQUIREMENTS

A. Provide products that have not been previously been incorporated into another project or facility unless otherwise indicated in the Contract Documents.

B. To the extent possible, provide products of the same generic kind from a single source.

C. Provide products complete with accessories, trim, finish, fasteners, and other items shown, indicated, or required for a complete installation for the indicated use and performance.

D. Standard Products: When available, and unless custom or nonstandard options are specified or indicated, provide standard products of types that have been produced and used successfully in similar situations on other projects.

E. Visual Matching: Where required in the Contract Documents, provide products that match referenced existing construction, approved mock-ups, or approved Sample, as determined by Resident Engineer, or Construction Inspector.

F. Where the Contract Documents include the phrase “as selected” for product color, finish pattern, option, or similar phrase, provide products selected by Resident Engineer, or Construction Inspector, as follows:

1. Standard Range: Where the Contract Documents include the phrase “standard range of colors, patterns, textures” or similar phrase, provide color, pattern, density, or texture selected by Resident Engineer, or Construction Inspector, from manufacturer’s product line that does not include premium items.

2. Full Range: Where the Contract Documents include the phrase “full range of colors, patterns, textures” or similar phrase, Resident Engineer, or Construction Inspector, will select color, pattern, density, or texture from manufacturer’s entire product line, including standard and premium items.

1.04 COMPATIBILITY

A. Similar products by the same Supplier shall be compatible with each other, unless otherwise indicated in the Contract Documents or approved by Resident

Engineer, or Construction Inspector.

B. Provide products compatible with products previously selected or installed on the Project.

1.05 PRODUCT WARRANTIES

A. Warranties specified for products shall be in addition to, and run concurrent with, CONTRACTOR's general warranty and guarantee and requirements for the required correction period. Disclaimers and limitations in specific product warranties do not limit CONTRACTOR's general warranty and guarantee.

1. Product manufacturer's warranty is preprinted written warranty published by product manufacturer and specifically endorsed by product manufacturer to OWNER.

2. Special warranty is written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by product manufacturer's warranty or to provide increased rights to OWNER.

B. Requirements for Special Warranties: Provide written special warranty document that contains appropriate terms and identification, ready for execution by product manufacturer and OWNER. Submit draft warranty with submittals required for product.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed by product manufacturer and other parties as appropriate.

2. Specified Form: When specified forms are included in the Contract Documents, prepare written document, properly executed by product manufacturer and OWNER, using appropriate form.

3. Refer to Specifications for content and requirements for submitting special warranties.

C. Submit product manufacturer's warranties and special warranties as submittals in accordance with Schedule of Submittals accepted by Resident Engineer, or Construction Inspector.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01 62 00 – PRODUCT OPTIONS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR's options for selecting products.
2. Requirements for consideration of "or-equal" products.

1.02 TERMINOLOGY

A. The following terms are not defined to apply globally to the Contract Documents but, when used in this Section, they have the following meaning:

1. "Products" includes materials, equipment, components, accessories, fixtures, systems, and other goods incorporated in the Work. Products do not include machinery and equipment used for preparing, fabricating, conveying, erecting, or installing the Work.

1.03 PRODUCT OPTIONS

A. For products specified only by reference standard or description, without reference to Supplier, provide products meeting that standard, by a Supplier or from a source that complies with the Contract Documents.

B. For products specified by naming one or more products or Suppliers, provide the named products that comply with the Contract Documents, unless a substitute product is approved by ENGINEER in accordance with Section 01 25 00, Substitution Procedures.

C. For products specified by naming one or more products or Suppliers and the term, "or equal", when CONTRACTOR proposes a product or Supplier as an "or equal", the proposed "or equal" item will be evaluated for conformance to the project requirements and Contract Documents.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 65 00 – PRODUCT DELIVERY REQUIREMENTS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. This Section includes the general requirements for preparing for shipping, delivering, and handling materials and equipment.
2. CONTRACTOR shall make all arrangements for transporting, delivering, and handling of materials and equipment required for prosecution and completion of the Work.
3. When required, move stored materials and equipment without additional compensation and without changes to the Contract Times.

1.02 SUBMITTALS

A. Refer to individual Specification Sections for submittal requirements relative to delivering and handling materials and equipment.

1.03 PREPARING FOR SHIPMENT

A. When practical, factory-assemble materials and equipment. Match mark or tag separate parts and assemblies to facilitate field assembly. Cover machined and unpainted parts that may be damaged by the elements with strippable, protective coating.

B. Package materials and equipment to facilitate handling, and protect materials and equipment from damage during shipping, handling, and storage. Mark or tag outside of each package or crate to indicate the associated purchase order number, bill of lading number, contents by name, CONTRACTOR name, equipment number, and approximate weight. Include complete packing lists and bills of materials with each shipment.

C. Protect materials and equipment from exposure to the elements and keep thoroughly dry and dust-free at all times. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Lubricate bearings and other items requiring lubrication in accordance with manufacturer's instructions.

D. Advance Notice of Shipments:

1. Keep Resident Engineer, or Construction Inspector, informed of delivery of all materials and equipment to be incorporated in the Work.

E. Do not ship materials and equipment until:

1. Related Shop Drawings, Samples, and other submittals have been approved or accepted (as applicable) by Resident Engineer (or Construction Inspector) or ENGINEER, including, but not necessarily limited to, all Action Submittals associated with the materials and equipment being delivered.
2. Manufacturer's instructions for handling, storing, and installing the associated materials and equipment have been submitted to and accepted by Resident Engineer, or Construction Inspector, in accordance

with the Specifications.

3. Results of source quality control testing (factory testing), when required by the Contract Documents for the associated materials or equipment, have been reviewed and accepted by Resident Engineer, or Construction Inspector.

4. Facilities required for handling materials and equipment in accordance with manufacturer's instructions are in place and available.

5. Required storage facilities have been provided.

1.04 DELIVERY

A. Scheduling and Timing of Deliveries:

1. Arrange deliveries of materials and equipment in accordance with the accepted Progress Schedule and in ample time to facilitate inspection prior to installation.

2. Schedule deliveries to minimize space required for and duration of storage of materials and equipment at the Site or delivery location, as applicable.

3. Coordinate deliveries to avoid conflicting with the Work and conditions at Site, and to accommodate the following:

   a. Work of other contractors and OWNER.

   b. Storage space limitations.

   c. Availability of equipment and personnel for handling materials and equipment.

   d. OWNER's use of premises.

4. Deliver materials and equipment to the Site during regular working hours.

5. Deliver materials and equipment to avoid delaying the Work and the Project, including work of other contractors, as applicable. Deliver anchor system materials, including anchor bolts to be embedded in concrete or masonry, in ample time to avoid delaying the Work.

B. Deliveries:

1. Shipments shall be delivered with CONTRACTOR's name, Subcontractor's name (if applicable), Site name, and Project name, (example: "ABC Construction Co., City of Rifle, Colorado, 2MG Water Tank") clearly marked.

2. Site may be listed as the "ship to" or "delivery" address; but OWNER shall not be listed as recipient of shipment unless otherwise directed in writing by Resident Engineer.

3. Provide CONTRACTOR's telephone number to shipper; do not provide OWNER's or ENGINEER's telephone number.

4. Arrange for deliveries while CONTRACTOR's personnel are at the Site. CONTRACTOR shall receive and coordinate shipments upon delivery. Shipments delivered to the Site when CONTRACTOR is not present will be refused by OWNER, Resident Engineer, and Construction Inspector,

and CONTRACTOR shall be responsible for the associated delays and additional costs, if incurred.

5. The Site is constrained with limited turnaround space. Verify size of delivery vehicles before delivery of materials to the Site.

C. Containers and Marking:

1. Have materials and equipment delivered in manufacturer's original, unopened, labeled containers.

2. Clearly mark partial deliveries of component parts of materials and equipment to identify materials and equipment, to allow easy accumulation of parts, and to facilitate assembly.

D. Inspection of Deliveries:

1. Immediately upon delivery, inspect shipment to verify that:

a. Materials and equipment comply with the Contract Documents and approved or accepted (as applicable) submittals.

b. Quantities are correct.

c. Materials and equipment are undamaged.

d. Containers and packages are intact and labels are legible.

e. Materials and equipment are properly protected.

2. Promptly remove damaged materials and equipment from the Site and expedite delivery of new, undamaged materials and equipment, and remedy incomplete or lost materials and equipment to furnish materials and equipment in accordance with the Contract Documents, to avoid delaying progress of the Work.

3. Advise Resident Engineer, or Construction Inspector, in writing when damaged, incomplete, or defective materials and equipment are delivered, and advise Resident Engineer, or Construction Inspector, of the associated impact on the Progress Schedule.

1.05 HANDLING OF MATERIALS AND EQUIPMENT

A. Provide equipment and personnel necessary to handle materials and equipment, including those furnished by OWNER, by methods that prevent soiling or damaging materials and equipment and packaging.

B. Provide additional protection during handling as necessary to prevent scraping, marring, and otherwise damaging materials and equipment and surrounding surfaces.

C. Handle materials and equipment by methods that prevent bending and overstressing.

D. Lift heavy components only at designated lifting points.

E. Handle materials and equipment in safe manner and as recommended by the manufacturer to prevent damage. Do not drop, roll, or skid materials and equipment off delivery vehicles or at other times during handling. Hand-carry or use suitable handling equipment.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 66 00 – PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. This Section includes general requirements for storing and protecting materials and equipment.

1.02 STORAGE

A. Store and protect materials and equipment in accordance with manufacturer's recommendations and the Contract Documents.

B. CONTRACTOR shall make all arrangements and provisions necessary for, and pay all costs for, storing materials and equipment. Excavated materials, construction equipment, and materials and equipment to be incorporated into the Work shall be placed to avoid injuring the Work and existing facilities and property, and so that free access is maintained at all times to all parts of the Work and to public utility installations in vicinity of the Work. Store materials and equipment neatly and compactly in locations that cause minimum inconvenience to OWNER, other contractors, public travel, and occupants of adjoining property. Arrange storage in manner to provide easy access for inspection.

C. Store materials and equipment to become property of OWNER to facilitate their inspection and ensure preservation of quality and fitness of the Work, including proper protection against damage by freezing, moisture, and high temperatures with ambient temperatures as high as 100 degrees F. Store in indoor, climate-controlled storage areas all materials and equipment subject to damage by moisture, humidity, heat, cold, and other elements, unless otherwise acceptable to OWNER. When placing orders to Suppliers for equipment and controls containing computer chips, electronics, and solid-state devices, CONTRACTOR shall request, coordinate, and comply with specific temperature and humidity limitations on materials and equipment, because temperature inside cabinets and components stored in warm temperatures can approach 200 degrees F.

D. CONTRACTOR shall be fully responsible for loss or damage (including theft) to stored materials and equipment.

E. Do not open manufacturer's containers until time of installation, unless recommended by the manufacturer or otherwise specified in the Contract Documents.

F. Do not store materials or equipment in structures being constructed unless approved by Resident Engineer in writing.

G. Do not use other private property for storage without written permission of the OWNER or other person in possession or control of such premises.

1.03 PROTECTION

A. Equipment shall be boxed, crated, or otherwise completely enclosed and protected during shipping, handling, and storage, in accordance with Section 01 65 00, Product Delivery Requirements.

B. Store all materials and equipment off the ground or floor on raised supports such as skids or pallets.

C. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Painted equipment surfaces that are damaged or marred shall be repainted in their entirety in accordance with equipment manufacturer and paint manufacturer requirements, to the satisfaction of Resident Engineer.

D. Protect electrical equipment, controls, and instrumentation against moisture, water damage, heat, cold, and dust. Space heaters provided in equipment shall be connected and operating at all times until equipment is placed in operation and permanently connected.

1.04 UNCOVERED STORAGE

A. The following types of materials may be stored outdoors without cover on supports so there is no contact with the ground:

1. Reinforcing steel, steel plates.
2. Piping and fittings, except polyvinyl chloride (PVC), or high-density polyethylene (HDPE) pipe.
3. Concrete blocks.
4. Metal access hatches, vents, ladders, cages,

1.05 1.5 COVERED STORAGE

A. The following materials and equipment may be stored outdoors on supports and completely covered with covering impervious to water:

1. Rough lumber.
2. PVC and HDPE pipe and fittings.
3. Grout and mortar materials.

B. Tie down covers with rope, and slope covering to prevent accumulation of water.

C. Store loose granular materials, with covering impervious to water, in well-drained area or on solid surfaces to prevent mixing with foreign matter.

1.06 FULLY PROTECTED STORAGE

A. For items not immediately installed, store all material and equipment not named in Articles 1.4 and 1.5 of this Section on supports in buildings, trailers, or completed structures with approval of the Resident Engineer that have roof and fully closed walls on all sides. Covering with Visqueen plastic sheeting or similar material in open spaces without a roof, is not acceptable. Comply with the following:

1. Provide heated storage for materials and equipment that could be damaged by low temperatures or freezing. Snow tarps with the space beneath heated is an acceptable practice.
2. Provide air-conditioned storage for materials and equipment that could be damaged by high temperatures.
3. Protect mechanical and electrical equipment from being contaminated by dust, dirt, and moisture.
4. Establish Contractor’s contingency funds and use, if necessary, to maintain humidity at levels recommended by manufacturers for electrical

and electronic equipment not otherwise protected.

1.07 MAINTENANCE OF STORAGE

A. On scheduled basis, periodically inspect stored materials and equipment to ensure that:

1. State of storage facilities is adequate to provide required conditions.
2. Required environmental conditions are maintained on continuing basis.
3. Materials and equipment exposed to elements are not adversely affected.

1.08 RECORDS

A. Keep up-to-date account of materials and equipment in storage to facilitate preparation of Applications for Payment, if the Contract Documents provide for payment for materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 71 23 – FIELD ENGINEERING

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall provide field engineering services and professional services of the types indicated for the Project, including:

1. Furnishing civil, geotechnical, structural, survey and other professional engineering and professional services specified or required to execute CONTRACTOR's construction methods.
2. Developing and making all detail surveys and measurements required for construction; including any staking, and all other working lines, elevations, and stationing on centerlines or approved offset.
3. Providing materials required for benchmarks, control points, batter boards, grade stakes, structure and pipeline elevation stakes, and other items.
4. Storing and maintaining a calibrated transit, theodolite, or total station (theodolite with electronic distance measurement device); leveling instrument; and related implements such as survey rods and other measurement devices, at the Site at all times, and having a skilled instrument person available when necessary for laying out the Work.
5. Being solely responsible for all locations, dimensions and levels. No data other than Change Order, Work Change Directive, or Field Order shall justify departure from coordinates, dimensions and levels required by the Contract Documents.
6. Rectifying all Work improperly installed because of not maintaining, not protecting, or removing without authorization established reference points, stakes, marks, and monuments. Replace property corners disturbed by CONTRACTOR actions.
7. Providing such facilities and assistance necessary for Resident Engineer, Construction Inspector, or ENGINEER to check lines and grade points placed by CONTRACTOR. Do not perform excavation or embankment work until all cross-sectioning necessary for determining payment quantities for Unit Price Work have been completed and accepted by Resident Engineer, or Construction Inspector.

1.02 OWNER'S SURVEYOR

A. Horizontal and vertical controls have been established as shown on the drawings.

B. The OWNER may elect to review and or verify CONTRACTOR established lines, grades, and elevations by surveys. The CONTRACTOR shall provide access to assist with such efforts.

C. OWNER performed reviews or surveys shall not relieve the CONTRACTOR's responsibility for correct lines, grades, elevations, and structure layout.

1.03 CONTRACTOR'S SURVEYOR

A. Employ or retain the services of an experienced surveyor, and as needed a Professional Land surveyor, with experience and capability of performing surveying and layout tasks required in the Contract Documents and as required for the Work. Surveyor's tasks include, but are not necessarily limited to, the following:

1. Providing required surveying equipment, including transit or theodolite, level, stakes, and surveying accessories.
2. Establishing required lines and grades for constructing all facilities, structures, pipelines, and site improvements.
3. Preparing and maintaining professional-quality, accurate, well organized, legible notes of all measurements and calculations made while surveying and laying out the Work.
4. Prior to backfilling operations, survey, locate, and record on a copy of the Contract Documents accurate representation of buried Work and Underground Facilities encountered.
5. Complying with requirements of the Contract Documents relative to surveying and related work.
6. A pre-survey conference shall be held immediately after the pre-construction meeting. The Resident Engineer or Construction Inspector, CONTRACTOR, CONTRACTOR's Surveyor, OWNER, and OWNER's Surveyor shall attend. A surveying schedule shall be submitted as showing work locations. Items to be discussed include control points, equipment to be utilized, record keeping, and traffic control.

1.04 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Surveying:
   a. Submit original field books or electronic data within two days after completing survey Work.
   b. Submit certified survey in accordance with this Section.
2. Certificates: When requested by Resident Engineer, or Construction Inspector, submit certificate signed by professional engineer or professional surveyor, as applicable, certifying that elevations and locations of the Work comply with the Contract Documents. Explain all deviations, if any.
3. Qualifications Statements:
   a. Surveyor: When requested by Resident Engineer, or Construction Inspector, submit name and address of firm, and resumes of each person, and professional land surveyor, and crew chief conducting the survey Work.

1.05 RECORDS

A. Maintain at the Site a complete and accurate log of control and survey Work as it

progresses.

1. Survey data shall be in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in the locality where the Site is located and as required by permitting authorities. Original field notes, computations, and other surveying data shall be recorded by CONTRACTOR's surveyor in CONTRACTOR-furnished hard-bound field books or electronically in similar format. Completeness and accuracy of survey Work, and completeness and accuracy of survey records, including field books, shall be responsibility of CONTRACTOR. Failure to organize and maintain survey records in an appropriate manner that allows reasonable and independent verification of calculations, and to allow identification of elevations, dimensions, and grades of the Work, shall be cause for rejecting the survey records, including field books. Survey records shall be property of the OWNER and shall be available for review and reproduction at all times. When required, survey records shall be stamped with the seal and signed by the Professional Land Surveyor.

2. Illegible notes or data, and erasures on any page of field books, are unacceptable. Do not submit copied notes or data. Corrections by ruling or lining out errors will be unacceptable unless initialed by the surveyor. Violation of these requirements may require re-surveying the data questioned by Resident Engineer, or construction inspector.

B. Upon completion of foundation and major Site improvements, prepare a survey showing dimensions, locations, angles and elevations of construction and locations and elevations of Underground Facilities encountered during the Work.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 SURVEYING

A. Reference Points:

1. Refer to the General Conditions, as may be modified by the Supplementary Conditions, regarding reference points.

2. OWNER's established reference points damaged or destroyed by CONTRACTOR will be re-established by OWNER at CONTRACTOR's expense.

3. From OWNER-established reference points, establish lines, grades, and elevations necessary to control the Work. Obtain measurements required for executing the Work to tolerances specified in the Contract Documents.

4. Establish, place, and replace as required, such additional stakes, markers, and other reference points necessary for control, intermediate checks, and guidance of construction operations.

B. Construction Surveying: Comply with the following:

1. Alignment Staking: Provide alignment stakes at 50-foot intervals on tangent, and at 25-foot intervals on curves.

2. Slope Staking: Provide slope staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Re-stake at every ten-foot difference in elevation.

3. Structure: Stake out structure(s), including elevations, and check prior to and during construction.

4. Pipelines: Stake out pipelines including elevations and stations, and check prior to and during construction.

5. Road: Stake out roadway elevations at 50-foot intervals on tangent, and at 25-foot intervals on curves.

6. Cross-sections: Provide original, intermediate, and final staking as required, for site work other locations as necessary for quantity surveys.

7. Easement Staking: Provide easement staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Also provide wooden laths with flagging at 100-foot maximum intervals.

8. Record Staking: Provide permanent stake at each blind flange and each utility cap that is provided for future connections. Stakes for record staking shall be material acceptable to Resident Engineer, or Construction Inspector.

C. Accuracy:

1. Establish CONTRACTOR's temporary survey references points for CONTRACTOR’s use to at least second-order accuracy (e.g., 1:10000). Construction staking used as a guide for the Work shall be set at least third- order accuracy (e.g., 1:5000). Basis on which such orders are established shall provide the absolute margin for error specified below.

2. Horizontal accuracy of easement staking shall be plus or minus 0.1 feet. Accuracy of other staking shall be plus or minus 0.04 feet horizontally and plus or minus 0.02 feet vertically.

3. Survey calculations shall include an error analysis sufficient to demonstrate required accuracy.

- END OF SECTION -

SECTION 01 71 33 – PROTECTION OF THE WORK AND PROPERTY

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage, as specified in the General Conditions and this Section.

B. To prevent damage, injury, or loss, CONTRACTOR's actions shall include the following:

1. Storing apparatus, materials, supplies, and equipment in an orderly, safe manner that will not unduly interfere with progress of the Work or work of other contractors or utility company.
2. Providing suitable storage facilities for materials subject to injury by exposure to weather, theft, breakage, or otherwise.
3. Placing upon the Work or any part thereof only loads consistent with the safety and integrity of that portion of the Work.
4. Frequently cleaning up refuse, rubbish, scrap materials, and debris caused by CONTRACTOR's operations so that, at all times, the Site is safe and orderly, and workmanlike in appearance.
5. Providing barricades and guard rails around the following: openings, for scaffolding, for temporary stairs and ramps, around excavations, for elevated walkways, and other hazardous areas.

C. Do not, except after written consent from proper parties, enter or occupy privately-owned land with personnel, tools, materials or equipment, except on lands and easements provided by OWNER.

D. CONTRACTOR has full responsibility for preserving public and private property and facilities on and adjacent to the Site. Direct or indirect damage done by, or on account of, any act, omission, neglect, or misconduct by CONTRACTOR in executing the Work, shall be restored by CONTRACTOR, at his expense to condition equal to that existing before damage was done.

1.02 BARRICADES AND WARNING SIGNALS

A. Barricades and Warning Signals – General:

1. Where Work is performed on or adjacent to roadway, access road, right-of- way, or public place, provide barricades, fences, lights, warning signs, danger signals, flagmen, and take other precautionary measures for protecting persons, property, and the Work.
2. Paint or provide barricades to be visible at night.
3. From sunset to sunrise, furnish and maintain at least one light at each barricade.
4. Erect sufficient barricades to keep vehicles from being driven on or into Work under construction.

5. Furnish flagmen in sufficient numbers to protect the Work.
6. CONTRACTOR's responsibility for maintaining barricades, signs, lights, and for providing watchmen shall continue until the Work is accepted in accordance with the General Conditions.

1.03 TREE AND PLANT PROTECTION

A. Tree and Plant Protection – General:

1. Protect existing trees, shrubs, and plants on or adjacent to the Site, shown or designated to remain in place, against unnecessary cutting, breaking, or skinning of trunk, branches, bark, or roots.
2. Do not store materials or park equipment within the drip line.
3. In areas subject to traffic, provide temporary fencing or barricades to protect trees and plants.
4. Fires are not allowed.
5. Within the limits of the Work, water trees and plants that are to remain to maintain their health during construction operations.
6. Cover all exposed roots with burlap, which shall be kept continuously wet. Cover exposed roots with earth as soon as possible. Protect root systems from mechanical damage and damage by erosion, flooding, runoff, or noxious materials in solution.
7. If branches or trunks are damaged, prune branches immediately and protect cut or damaged areas with emulsified asphalt compounded specifically for horticultural use in manner acceptable to Resident Engineer.
8. When directed by Resident Engineer, or Construction Inspector, remove and dispose of off-Site damaged trees and plants that die or suffer permanent injury, and replace damaged tree or plant with specimen of equal or better quality.
9. Coordinate Work in this Article with clearing and grubbing activities.

1.04 PROTECTION OF EXISTING STRUCTURES

A. Underground Facilities:

1. Underground Facilities are defined in the General Conditions.
2. All Underground Facilities known to OWNER and ENGINEER, except water, gas, sewer, electric, and communications services to individual buildings and properties, are shown. This information is the best available to OWNER and ENGINEER but, in accordance with the General Conditions, is not guaranteed to be correct or complete.
3. CONTRACTOR shall explore ahead of trenching and excavation Work and shall uncover obstructing Underground Facilities sufficiently to determine their location and elevation, to prevent damage to Underground Facilities, and to prevent service interruption to building or parcels served by Underground Facilities. If CONTRACTOR damages an Underground Facility, CONTRACTOR shall restore it to original condition,

in accordance with requirements of the owner of the damaged facility and the General Conditions.

4. Necessary changes in the location of the Work may be directed by Resident Engineer, Construction Inspector, OWNER or ENGINEER to avoid Underground Facilities not shown or indicated on the Contract Documents.

5. If permanent relocation of an existing Underground Facilities is required and is not otherwise shown or indicated in the Contract Documents, CONTRACTOR will be directed in writing to perform the Work. When the relocation Work results in a change in the Contract Price, Contract Time, or both, the relocation Work shall be paid after execution of associated Change Order, in accordance with the Contract Documents.

B. Surface Structures:

1. Surface structures are existing buildings, structures, and other facilities at or above ground surface, including their foundations or any extension below ground surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, exposed piping and utilities, poles, exposed wires, posts, signs, markers, curbs, walks, and other facilities visible at or above ground surface.

2. Existing surface facilities, including but not limited to guard rails, posts, fences, guard cables, signs, poles, markers, and curbs that are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at CONTRACTOR'S expense.

C. Protection of Underground Facilities and Surface Structures:

1. CONTRACTOR shall sustain in their places and protect from direct or indirect injury all Underground Facilities and surface structures located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure or facility. Before proceeding with the Work of sustaining and supporting such structure or facility, CONTRACTOR shall satisfy Resident Engineer that methods and procedures to be used have been approved by party owning same.

2. CONTRACTOR shall bear all risks attending the presence or proximity of all Underground Facilities and surface structures within or adjacent to limits of the Work, in accordance with the Contract Documents. CONTRACTOR shall be responsible for damage and expense for direct or indirect injury caused by his Work to structures and facilities. CONTRACTOR shall repair immediately damage caused by his Work, to the satisfaction of owner of damaged structure or facility.

1.05 PROTECTION OF INSTALLED PRODUCTS

A. Protect installed products to prevent damage from subsequent operations. Remove protection facilities when no longer needed prior to completion of Work.

B. Control traffic to prevent damage to equipment, materials, and surfaces.

C. Coverings:

1. Provide coverings to protect equipment and materials from damage.
2. Cover projections, wall corners and jambs, sills, and soffits of openings, in areas used for traffic and for passage of products in subsequent work.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 73 24 – CONNECTIONS TO EXISTING WATER SYSTEM FACILITIES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. Table 01 73 24A identifies connections (tie-ins) to OWNER's existing water system.
2. Requirements for tie-ins and shutdowns necessary to complete the Work are described in Section 01 14 16, Coordination with Owner's Operations. Certain tie-ins may be coordinated with a common shutdown or no shutdown.
3. CONTRACTOR shall provide labor, materials, tools, equipment, and incidentals shown, specified, and required for connections to existing facilities.

B. Coordination:

1. Review installation procedures under other Sections and coordinate Work that must be performed with or before the Work specified in this Section.

C. Related Sections:

1. Section 01 14 16, Coordination with Owner's Operations.
2. Section 01 73 29, Cutting and Patching.

D. General:

1. To extent possible, materials, equipment, systems, piping, and appurtenances that will be placed into service upon completion of connection to existing facilities shall be checked, successfully tested, and in condition for operation prior to making connections to existing facilities, if valves, gates, or similar watertight and gastight isolation devices are not provided at the connection point.
2. Obtain Resident Engineer's, or Construction Inspector's, approval prior to commencement of steps under this Section.
3. Only major activities and not all activities are presented in Table 01 73 24-A.

Table 01 73 24-A

CONNECTION TO EXISTING WATER SYSTEM FACILITIES

Tie-In #	Item	Description	Example Sequence*	Comments
1	Temporary Water Service during Construction	Temporary line/hose at hydrant to fill trucks for hauling finished water to the site for construction, testing, etc.	1. Use the temporary line/hose to fill trucks. 2. Install reduced pressure zone backflow device and protect from freezing if in place during cold weather. When temporary water service is no longer needed, disconnect from potable system.	• Install temporary connection to the hydrant. • Remove the temporary connection or line/hose when no longer needed.
2	Connection to 12-inch supply/ distribution main near the 1.0 MG tank.	Connection to 12-inch supply/ distribution main near the 1.0 MG tank.	Remove section of 12-inch PVC main and install a 12-inch tee and gate valve	
3	Connection to existing yard hydrant	Temporary line/hose at the yard hydrant for site construction, testing, etc.	1. Use the temporary line/hose for as needed construction water. 2. Install reduced pressure zone backflow device and protect from freezing if in place during cold weather. When temporary water service is no longer needed, disconnect from potable system.	• Install temporary connection to the hydrant. • Remove the temporary connection or line/hose when no longer needed.

*Construction sequences described herein represent example sequences only. Contractor is solely responsible for determining and executing actual construction sequence.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 73 29 – CUTTING AND PATCHING

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall perform cutting and coring, and rough and finish patching of holes and openings in existing construction.

B. Cutting, coring, rough patching, and finish patching shall be by CONTRACTOR.

C. Provide cutting, coring, fitting and patching, including attendant excavation and backfill, required to complete the Work, and to:

1. remove and replace defective Work;
2. remove samples of installed Work as specified or required for testing;
3. remove construction required to provide for specified alterations or addition to existing work;
4. uncover Work for Resident Engineer's or Construction Inspector's observation of covered Work or observation by authorities having jurisdiction;
5. connect to completed Work not performed in proper sequence;
6. remove or relocate existing utilities and pipes that obstruct the Work in locations where connections must be made;
7. make connections or alterations to existing or new facilities.

D. Structural Elements: Do not cut or patch structural elements in manner that would change structural element's load-carrying capacity as load deflection ratio.

E. Operating Elements: Do not cut or patch operating elements in manner that would reduce their capacity to perform as intended. Do not cut or patch operating elements or related components in manner that would increase maintenance requirements or decrease operational life or safety.

1.02 SUBMITTALS

A. Action Submittals: Submit the following:

1. Cutting and Patching Request:

a. Submit written request to Resident Engineer, or Construction Inspector, well in advance of executing cutting or alteration affecting:

1) Design function or intent of Project.
2) Work of OWNER or other contractors.
3) Structural value or integrity of an element of the Project.
4) Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
5) Efficiency, operational life, maintenance, or safety of operational elements.

6) Visual qualities of sight-exposed elements.

b. Request shall include:

1) Identification of Project.

2) Description of affected Work of CONTRACTOR and work of others.

3) Necessity for cutting.

4) Effect on work of OWNER or other contractors, or on structural or weatherproof integrity of Project.

5) Description of proposed Work, describing: scope of cutting and patching; trades who will be executing the Work; products proposed to be used; extent of refinishing; schedule of operations; alternatives to cutting and patching, if any.

6) Designation of party responsible for cost of cutting and patching, when applicable.

7) Written permission of other contractors whose work will be affected.

2. Should conditions of Work, or schedule, indicate a change of materials or methods, submit written recommendation to Resident Engineer, or Construction Inspector, including:

a. Conditions indicating change.

b. Recommendations for alternative materials or methods.

c. Submittals as required for substitutions.

B. Informational Submittals: Submit the following:

1. Submit written notice designating time Work will be uncovered, to provide for observation. Do not begin cutting or patching operations until accepted by Resident Engineer, or Construction Inspector.

C. Conform to submittal requirements in Specifications for application and installation of materials used for patching.

1.03 WARRANTY

A. Replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials in manner that does not void required or existing warranties.

PART 2 -- PRODUCTS

2.01 MATERIALS, GENERAL

A. Materials:

1. Use materials in conformance with the Contract Documents.

2. If not shown or indicated in the Contract Documents, use materials and products that are identical to existing materials and products affected by cutting and patching Work.

3. For exposed surfaces, use materials that visually match existing adjacent surfaces to fullest extent possible. If identical materials are unavailable or cannot be used, use materials whose installed performance will equal or surpass that of existing materials.

PART 3 -- EXECUTION

3.01 GENERAL

A. Perform cutting and coring in such manner that limits extent of patching.

B. Core drill holes to be cut through concrete and masonry unless other methods are accepted by Resident Engineer, or Construction Inspector, in writing.

3.02 INSPECTION

A. Examine surfaces to be cut or patched and conditions under which cutting or patching are to be performed before starting cutting or patching Work.

B. Report unsatisfactory or questionable conditions to Resident Engineer, or Construction Inspector, in writing. Do not proceed with the Work until unsatisfactory conditions are corrected.

3.03 PREPARATION

A. Provide temporary support as required to maintain structural integrity of Project, to protect adjacent Work from damage during cutting, and to support the Work to be cut.

B. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that will be exposed during cutting and patching operations. Do not allow concrete pieces, slurry or tailings, rocks, rebar, etc., to fall onto equipment or to cause damage.

1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

2. Do not cut existing pipe, conduit, ductwork, or other utilities serving facilities scheduled to be removed or relocated until provisions have been made to bypass them.

C. Protect installed equipment including motors from dust generated by cutting and patching by covering, wrapping or isolating.

3.04 CORING

A. Perform coring with non-impact rotary tool using diamond core drills. Size holes for pipe, conduit, sleeves, equipment or mechanical seals, as required.

B. Protect existing equipment, utilities and adjacent areas from water and other damage covered by drilling operations.

C. Vacuum or otherwise remove slurry or tailings from the Work area following drilling.

D. Do not core-drill through electrical conduit or other utility lines embedded in walls or floors without approval of the Resident Engineer, or Construction Inspector. To extent possible, avoid cutting reinforcing steel in floors and walls. After core-

drilling, coat exposed concrete and steel with Sika 62 or equal before installing the utility or equipment through the penetration.

3.05 CUTTING

A. Cut existing construction using methods least likely to damage elements retained or adjoining construction, and that will provide proper surfaces to receive installation or repair.

1. In general, use hand or small power tools designed for sawing or grinding, not hammering and chopping.

2. Cut through concrete and masonry using concrete wall saw with diamond saw blades.

a. Provide for control, on both sides of walls, of slurry generated by sawing.

B. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Provide temporary covering over openings where not in use.

C. To avoid marring existing finished surfaces, cut or drill from exposed or finished side into concealed side.

D. Provide adequate bracing of area to be cut prior to start of cutting.

E. Provide equipment of adequate size and capacity to remove cut panel.

F. Do not cut through electrical conduit or other utility lines embedded in walls or floors without approval of Resident Engineer, or Construction Inspector. To extent possible, avoid cutting reinforcing steel in floors and walls. After cutting, coat exposed concrete and steel with Sika 62, or equal.

3.06 PATCHING

A. Patch construction by filling, repairing, refinishing, closing-up and similar operations following performance of other Work. Patch with durable seams that are as inconspicuous as possible. Provide materials and comply with installation requirements specified, in the Specifications.

B. Where feasible, test patched areas to demonstrate integrity of installation.

C. Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

D. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in manner that eliminates evidence of patching and refinishing.

1. For continuous surfaces, refinish to nearest intersection.

2. For an assembly, refinish entire unit.

E. Patch, repair or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.07 CLEANING

A. Clean areas and spaces where cutting, coring and patching are performed. Clean piping, conduit, or similar constructions before applying paint or other

finishing materials. Restore damaged coverings of pipe and other utilities to original condition.

B. Clean dust, dirt, and debris from cutting and patching at direction of Resident Engineer.

- END OF SECTION -

SECTION 01 74 05 – CLEANING

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall execute cleaning during the Project, at completion of the Work, and as required by the General Conditions and this Section.
2. Maintain in a clean manner the Site, the Work, and areas adjacent to or affected by the Work.

1.02 REFERENCES

A. Standards referenced in this Section are:

1. NFPA 241, Safeguarding Construction, Alteration, and Demolition Operations.

1.03 PROGRESS CLEANING

A. General: Clean the Site, work areas, and other areas occupied by CONTRACTOR at least weekly. Dispose of materials in accordance with the General Conditions and the following:

1. Comply with NFPA 241 for removing combustible waste materials and debris.
2. Do not hold non-combustible materials at the Site more than three days if the temperature is expected to rise above 80 degrees F. When temperature is less than 80 degrees F, dispose of non-combustible materials within seven days of their generation.
3. Provide suitable containers for storage of waste materials and debris.
4. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately.

B. Site:

1. Keep outdoor, dust-generating areas wetted down or otherwise control dust emissions.
2. If mud or dirt accumulates from construction vehicles on the paved areas near the entrance on County Road 333 (aka Hunter Mesa Road), remove daily during excavation and hauling periods and as directed by Resident Engineer, or Construction Inspector. Notify Resident Engineer, or Construction Inspector when tracking pad at construction entrance needs maintenance to remain effective. Keep mud and debris from the road.
3. Provide concrete truck washout structures and maintain.

C. Work Areas:

1. Clean areas where the Work is in progress to level of cleanliness necessary for proper execution of the Work.
2. Remove liquid spills promptly and immediately report spills to Resident

Engineer, or Construction Inspector, and authorities having jurisdiction.

3. Where dust would impair proper execution of the Work, broom-clean or vacuum entire work area, as appropriate.

4. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

D. Installed Work: Keep installed Work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of material or equipment installed, using only cleaning agents and methods specifically recommended by material or equipment manufacturer. If manufacturer does not recommend specific cleaning agents or methods, use cleaning agents and methods that are not hazardous to health and property and that will not damage exposed surfaces.

E. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration until Substantial Completion.

F. Cutting and Patching:

1. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

2. Thoroughly clean piping, conduit, surfaces to be coated or finished, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

G. Waste Disposal:

1. Properly dispose of waste materials, surplus materials, construction debris, and rubbish off the Site.

2. Do not burn or bury rubbish and construction waste materials at the Site.

3. Do not discharge volatile or hazardous substances, such as mineral spirits, oil, or paint thinner, into storm sewers, sanitary sewers, on the ground.

4. Do not discharge wastes into surface waters or drainage routes.

5. CONTRACTOR shall be solely responsible for complying with Laws and Regulations regarding storing, transporting, and disposing of waste.

H. During handling and installation of materials and equipment, clean and protect construction in progress and adjoining materials and equipment already in place. Apply protective covering where required for protection from dust, damage or deterioration, until Substantial Completion.

I. Clean completed construction as frequently as necessary throughout the construction period.

1.04 CLOSEOUT CLEANING

A. Complete the following prior to requesting inspection for Substantial Completion:

1. Clean and remove from the Site rubbish, waste material, debris, and other foreign substances.

2. Sweep paved areas broom-clean. Remove petrochemical spills, stains, and other foreign deposits.

3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
4. Leave surface waterways, drainage routes, storm sewers, and gutters open and clean.
5. Repair pavement, roads, seeded and other areas affected by construction operations and restore to specified condition; if condition is not specified, restore to pre-construction condition.
6. Clean exposed exterior and interior hard-surfaced finishes to a dust and dirt- free condition, free of spatter, grease, stains, fingerprints, films, dust, and similar foreign substances.
7. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, and similar spaces.
8. In unoccupied spaces, sweep concrete floors broom-clean.
9. Remove non-permanent tags and labels.
10. Touch up and otherwise repair and restore chipped, scratched, dented or otherwise marred surfaces to specified finish and match adjacent surfaces.
    a. Do not paint over “UL” or similar labels, including mechanical and electrical nameplates.
11. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint, and mortar droppings, and other foreign substances.
12. Leave the Site clean, and in neat, orderly condition, satisfactory to Resident Engineer, or Construction Inspector.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 75 11 – COMMISSIONING AND STARTUP PROCEDURES

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall commission, initially start up, and place equipment installed under the Contract into successful operation. Commissioning shall be in accordance with the equipment manufacturer's written instructions and as instructed by Supplier at the Site.
2. Commissioning includes general activities, ready-to-test determinations, functional testing, and performance testing.
3. Provide all material, labor, tools, and equipment required to complete equipment adjustments, commissioning and start-up.
4. Provide fuel, electricity, water, filters, and other expendables required for start-up of equipment, unless otherwise agreed or specified.

B. Coordination:

1. CONTRACTOR shall coordinate general activities, commissioning and start-up with other contractors, as necessary.
2. Resident Engineer, or Construction Inspector, will make determination that equipment, tank, system, or pipeline is ready-to-test. Functional testing shall not commence until Resident Engineer, or Construction Inspector, has determined that equipment or system is ready to test.
3. Do not start up system or subsystem for continuous operation until all components of that system or subsystem, including instrumentation and controls, have been commissioned as described in this Section.
4. OWNER will provide one or two personnel to assist CONTRACTOR in commissioning and starting up equipment, but responsibility for proper operation is CONTRACTOR's.
5. Supplier shall be present during checkout, start-up, and initial operation, unless otherwise acceptable to Resident Engineer, or Construction Inspector.

C. OWNER's Assumption of Responsibility for Equipment and Systems:

1. OWNER will assume responsibility for the equipment upon Substantial Completion, unless specific equipment or systems are accepted earlier by Resident Engineer, or Construction Inspector, in writing.
2. CONTRACTOR is responsible for equipment and system maintenance during commissioning up until Substantial Completion.
3. Prior to the commencement of commissioning, CONTRACTOR shall:
   a. Complete system field quality control testing in accordance with the Contract Documents.
   b. Submit acceptable final operations and maintenance data in

accordance with Section 01 78 23, Operations and Maintenance Data.

c. Obtain from Resident Engineer, or Construction Inspector, certificate of Substantial Completion for either entire Work or the portion being turned over to OWNER.

1.02 SUBMITTALS

A. Action Submittals: submit the following plan for each equipment, system, unit process, mechanical system, or pipeline.

1. Testing Plan: Spreadsheet list of activities required to commission, start-up, and place items into service with required actions identified for CONTRACTOR, ENGINEER, Resident Engineer or Construction Inspector, OWNER, and each Subcontractor and supplier. This list shall breakdown and group activities by 1) actions needed to determine readiness to test, 2) actions required to perform functional testing, and 3) actions required to conduct performance testing. This spreadsheet submitted 30 days before each test will be reviewed at progress meetings and updated by meeting participants each week.

2. Supplier's certification of installation in accordance with Paragraph 3.09.B of this Section.

3. Facility Start-up and Performance Evaluation Plan:

a. Develop plan in conjunction with Resident Engineer, or Construction Inspector, and OWNER's Operations personnel detailing step by step instructions for start-up of each unit process and complete facility.

b. Include method of evaluation and overall performance report for each unit process.

c. Include length of time needed for start-up of each unit process and complete facility.

d. For computer or PLC subsystem applications software programming being performed by OWNER, coordinate with OWNER's programming personnel or consultant for start-up assistance.

e. Plan shall consist of bound copies of a Start-up and Performance Evaluation Forms; use one form for each unit process.

f. CONTRACTOR shall develop a standard form. The Start-up and Performance Evaluation Form is to minimally include the following:

1) Description of unit process, equipment, or system being started.

2) Equipment and devices included in unit processes

3) Unit process start-up procedures (i.e., valves to be open/closed, order of equipment start-up, etc.)

4) Requirements for water, power, chemicals, and similar items needed for start-up

5) CONTRACTOR certification that each unit process is capable of performing its intended function(s), including fully automatic operation.

6) Space for evaluation comments.

1.03 DEFINITIONS

A. Commissioning: Activities and events leading up to functional testing and activities and events continuing through performance testing and placement of facilities into OWNER's operation.

B. Functional Test: Test performed in the presence of Resident Engineer or Construction Inspector, after Resident Engineer's determination of readiness–to-test, to demonstrate that installed equipment meets the manufacturer's installation, calibration, and adjustment requirements and other specified requirements.

C. Performance Test: Test performed in presence of Resident Engineer or Construction Inspector, after functional testing to demonstrate that individual equipment, system, or unit process meets specified performance requirements.

D. Start-up: Entire plant and component parts are placed into operation to produce potable water.

E. Unit Process: Portion of a facility that performs specific process function, such as flash mixing, flocculation, sedimentation, microfiltration, disinfection, raw water pumping, finished water pumping, each mechanical system, and each chemical system.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 COORDINATION AT PROGRESS MEETINGS

A. Testing plans will be reviewed for progress at each progress meeting. Meeting participants will review completed activities, planned activities and activities that need additional attention to complete.

3.02 READINESS TO TEST DETERMINATION

A. A readiness to test determination will be made by Resident Engineer, or Construction Inspector, based on the following as a minimum:

1. General activities completed, including:

a. Cleaning, as required under other provisions of the Contract Documents.

b. Removing temporary protective coatings and bracing.

c. Flushing and replacing lubricants, where required by manufacturer.

d. Lubrication.

e. Checking shaft and coupling alignments and resetting where required.

f. Checking and setting motor, pump, and other equipment rotation, safety interlocks, and belt tensions.

g. Checking and correcting (if necessary) leveling plates, grout, bearing plates, anchorage devices, fasteners, and alignment of piping, conduits, and ducts that may place stress on the connected equipment.

h. Performing applicable minimum checkout requirements as described in Paragraph 3.10.

i. All adjustments required.

2. Receipt of operation and maintenance data.

3. Acceptable testing plan based upon operation and maintenance data. When applicable, the testing plan shall describe allocation of costs between CONTRACTOR and OWNER for partial utilization of facilities.

4. Acceptable completion of Work adjacent to, or interfacing with, equipment to be tested, including items furnished by OWNER.

5. Availability and acceptability of manufacturer's representative, when specified to assist in testing of respective equipment.

6. Equipment and electrical tagging complete.

7. Delivery of spare parts and tools complete.

8. Notification by CONTRACTOR of equipment readiness for testing.

3.03 FUNCTIONAL TESTING

A. Conduct as specified in individual specification Sections, or as directed by Resident Engineer, or Construction Inspector. For most equipment and systems, CONTRACTOR will be able to conduct functional testing without assistance of OWNER.

B. Coordinate scheduling and participation of CONTRACTOR, OWNER, Resident Engineer or Construction Inspector, manufacturer's representative and others at progress meeting.

C. If in Resident Engineer's, or Construction Inspector's opinion, equipment or system meets functional requirements specified, such equipment or system will be accepted for purposes of advancing to the performance testing phase.

3.04 PERFORMANCE TESTING

A. Conduct as specified in individual specification Sections, or as directed by Resident Engineer, or Construction Inspector.

B. Coordinate scheduling and participation of CONTRACTOR, OWNER, Resident Engineer, or Construction Inspector, manufacturer's representative and others at progress meeting.

C. Obtain approval from Resident Engineer, or Construction Inspector that functional test requirements have been satisfied prior to beginning performance testing.

D. Follow approved testing plan and detailed procedure specified.

E. Use source and type of fluid, gas, or solid for testing as specified.

F. Unless otherwise indicated, furnish labor, materials, and supplies for conducting testing, taking samples and recording performance measurements.

G. Prepare performance test report summarizing test method and results.

H. Obtain approval from Resident Engineer, or Construction Inspector, that equipment meets performance requirements specified prior to advancing to facility start-up and performance evaluation phase.

3.05 FACILITY START-UP AND PERFORMANCE EVALUATION

A. CONTRACTOR shall start up facility with assistance of Owner's personnel. CONTRACTOR shall support OWNER's operations personnel throughout facility start-up and performance evaluation (burn-in) period.

B. Sequence each unit process to point that complete facility is operational for evaluation of unit process and facility performance.

C. Demonstrate proper operation of required interfaces within and between individual unit processes to Resident Engineer's, or Construction Inspector's satisfaction.

D. Provide Subcontractor and equipment manufacturers' staff adequate to prevent delays.

E. Schedule ongoing work so as not to interfere with or delay completion of facility start-up.

F. After facility is operating, complete performance testing of those items of equipment or systems not previously tested.

G. During start-up period, operate Work, instruct designated plant personnel in function and operation of Work, and cause various operational circumstances to occur. As a minimum, these circumstances shall include minimum and maximum flows per unit process train, random equipment failures, tank overflows, surcharges, and bypasses.

H. Acceptability of Work's performance will be based on simulated operating conditions.

I. Intent of start-up testing is for CONTRACTOR to demonstrate to Resident Engineer or Construction Inspector, OWNER and ENGINEER that Work will function as a complete and operable system under normal as well as emergency operating conditions and is ready for acceptance.

3.06 OWNER'S RESPONSIBILITIES

A. Assist CONTRACTOR in developing Facility Start-up and Performance Evaluation Plan detailing step by step instructions for start-up of each unit process and complete facility.

B. Provide treated water (from RRWPF) and other items as specified for facility start-up, unless otherwise indicated.

C. Operate process units and devices, with support of CONTRACTOR.

D. Provide labor and materials as required for sampling and laboratory analyses.

E. OWNER will furnish operations staff to start-up and operate facility. OWNER may

supplement its personnel with staff of others.

3.07 START-UP PERIOD

A. Make adjustments, repairs, and corrections, necessary to complete facility start-up and to successfully place equipment into operation.

B. In addition to any incremental start-up of individual system components, demonstrate that entire system operates for 3 days without significant interruption. This period is in addition to any functional, or performance testing periods specified elsewhere.

C. Significant interruption may include any of the following:

1. Failure to provide and maintain qualified onsite personnel and equipment as scheduled.
2. Failure to meet watertightness, sanitary features, operability or level control.
3. Upon failure, another 3 continuous day period must be satisfied unless otherwise directed by Resident Engineer, or Construction Inspector.
4. Other failures or interruptions as determined by Resident Engineer, or Construction Inspector.

3.08 FACILITY PERFORMANCE EVALUATION:

A. During start-up period, conduct performance evaluation for purpose of evaluating full capabilities of facility and performance of instrumentation and SCADA system until system is operable including SCADA system and control functions.

B. Certify on Facility Performance Evaluation Form, that the system is capable of performing its intended functions, including fully automatic and computerized operation.

3.09 SERVICES OF SUPPLIERS AND MANUFACTURERS

A. When specified, furnish services of competent, qualified representatives of material suppliers and equipment manufacturers as specified, including supervising installation, adjusting, checkout, start-up, and testing of materials and equipment.

B. Certification:

1. When services by Supplier are required at the Site, within 7 days after first test operation of equipment, submit to Resident Engineer, or Construction Inspector, a letter from Supplier, on Supplier's letterhead, stating that materials and equipment are installed in accordance with Supplier's requirements and installation instructions, and in accordance with the Contract Documents.
2. Submit to Resident Engineer a copy of the letter.

3.10 MINIMUM CHECK-OUT REQUIREMENTS

A. Valves:

1. Inspect manual and automatic control valves, and clean bonnets and stems.

2. Tighten packing glands to ensure no leakage, but allow valve stems to operate without galling.
3. Replace packing in valves to retain maximum adjustment after system is determined to be complete.
4. Replace packing on valves that continue to leak.
5. Remove and repair bonnets that leak.
6. After cleaning, coat packing gland threads and valve stems with surface preparation of “Molycote” or “Fel-Pro”.

B. Tighten flanges and other pipe joints after system has been placed in operation. Replace gaskets that show signs of leakage after tightening.

C. Inspect all joints for leakage:

1. Promptly remake each joint that appears to be faulty; do not wait for rust or other corrosion to form.
2. Clean threads on both parts, and apply compound and remake joints.

D. Remove rust, scale, and foreign matter from equipment and renew defaced surfaces.

E. Check each electrical power and control circuit to verify that operation complies with the Contract Documents.

F. Inspect each level and pressure gauge and other instrument for calibration. Replace items that are defaced, broken, or that read incorrectly.

G. Excess Gasses and Fluids:

1. Vent gasses trapped in systems.
2. Verify that liquids are drained from all parts of gas or air systems.

- END OF SECTION -

SECTION 01 77 19 – CLOSEOUT REQUIREMENTS

PART 1 -- GENERAL

1.01 GENERAL

A. Section Includes.

1. Substantial Completion.
2. Final inspection.
3. Request for final payment.

1.02 SUBSTANTIAL COMPLETION

A. Procedures for requesting and documenting Substantial Completion for the entire Work or a portion thereof are in the General Conditions, as may be modified by the Supplementary Conditions.

B. Substantial Completion is defined in the Supplementary Conditions.

1.03 INSPECTIONS

A. Procedures for requesting and documenting inspections are in the General Conditions, as may be modified by the Supplementary Conditions.

B. Schedule inspections for a part of the work or the entire Work at regular progress meetings.

C. Prior to performing inspections for partial utilization:

1. Review and confirm in writing that punch list items have been resolved.
2. Submit guarantee/warranty information for equipment, materials, and coatings.
3. If applicable, change over locks and deliver keys and access cards.
4. Remove temporary construction facilities as requested by Resident Engineer, or Construction Inspector.
5. Submit red-lined as-built (record) drawings.

D. Prior to performing final inspection of the entire Work:

1. Obtain certificate of occupancy from State Electrical Board.
2. If applicable, obtain certificate of occupancy from City of Rifle Building Department.
3. Review and confirm in writing that punch list items have been resolved.
4. If applicable, change over remaining locks and deliver keys and access cards.
5. Submit red-lined as-built (record) drawings.
6. Submit guarantee/warranty information for buildings, equipment, materials.
7. Disconnect temporary utilities.
8. Dismantle and remove field offices, sheds, and temporary construction

facilities, and restore and seed surfaces which these items impacted.

1.04 REQUEST FOR FINAL PAYMENT

A. Procedure:

1. Submit request for final payment in accordance with the Construction Services Agreement and General Conditions, as may be modified by the Supplementary Conditions, using procedure specified in Section 01 29 76, Progress Payment Procedures.

B. Request for final payment shall include:

1. Documents required for progress payments in Section 01 29 76, Progress Payment Procedures.
2. Documents required in the General Conditions, as may be modified by the Supplementary Conditions.
3. Releases or Waivers of Lien Rights:
   a. When submitting releases or waivers of Lien rights, provide release or waiver by CONTRACTOR and each Subcontractor and Supplier that provided CONTRACTOR with labor, material, or equipment totaling $1,000 or more.
   b. Provide list of Subcontractors and Suppliers for which release or waiver of Lien is required.
   c. Each release or waiver of Lien shall be signed by an authorized representative of entity submitting release or waiver to CONTRACTOR, and shall include Subcontractor's or Supplier's corporate seal if applicable.
   d. Release or waiver of Lien may be conditional upon receipt of final payment.
4. Request for final payment shall not be made until the items on the list are complete and approved, record drawings submitted, damaged surfaces repaired or restored and warranties submitted.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION –

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:	Owner: City of Rifle	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

This definitive Certificate of Substantial Completion applies to:

Date of Substantial Completion:

The Work to which this certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [revised tentative] [definitive] list of items to be completed or corrected, is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contact Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract documents.

Executed by Engineer — Date

Accepted by Contractor — Date

Accepted by Owner — Date

SECTION 01 78 23 – OPERATIONS AND MAINTENANCE DATA

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. OWNER will prepare its own operational procedures for the Rifle Airport 0.5 MG tank project. For CONTRACTOR furnished equipment and systems, CONTRACTOR shall collect, supplement, organize, and transmit installation, operation, and maintenance data prepared by equipment manufacturer or system supplier to Resident Engineer, or Construction Inspector, for posting to Owner InSite™ for ENGINEER's use.
2. CONTRACTOR shall submit installation, operation, and maintenance data, (herein collectively called "data") in accordance with this Section and in accordance with requirements elsewhere in the Contract Documents.
3. Data described in this Section may be provided initially with equipment submittals or in subsequent submittals.
4. CONTRACTOR shall provide editable and revisable files of all software programming, such as programmable logic controller programs, prepared specifically for the Project. Third-party, licensed, commercially available software is excluded from requirements of this Article; submit copies of commercially-available, licensed, third-party software, where required, in accordance with the Contract Documents.
5. Submit data related to the following types of equipment and systems:
   a. Welded-steel tank and accessories.
   b. Cathodic protection system
   c. Electrical equipment and systems.
   d. Valves and related accessories.
   e. Instrumentation and control devices and systems.

1.02 DEFINITIONS

A. Installation Data:

1. Complete bills of material and parts lists (per drawing or per equipment assembly basis).
2. Installation instructions.
3. Assembly and dis-assembly instructions.
4. Calibration information and parameters.
5. Manufacturer's name, address, telephone number, fax number, and Internet website address.
6. Manufacturer's local service representative's or local parts supplier's name, address, telephone number, fax number, Internet website address,

and e-mail addresses, when applicable.

7. Certificate of Proper Installation.

B. Operation Data:

1. Model number, serial number(s) for equipment, or assembly furnished, and indicate the specific alternatives, optional equipment, and features furnished, and the specific operation and maintenance provisions for the equipment, assembly, or system furnished.

2. For each part or piece include the following information:

a. Parts cross-reference number. Cross-reference number shall be used to identify the part on assembly drawings, Shop Drawings, or other type of graphic illustration where the part is clearly shown or indicated.

b. Part name or description.

c. Manufacturer's part number.

d. Quantity of each part used in each assembly.

e. Current unit price. Price list shall be dated.

3. Complete, detailed written operating instructions for each equipment, assembly, or system including: function; operating characteristics; limiting conditions; operating instructions for start-up, normal and emergency conditions; regulation and control; operational troubleshooting; and shutdown. Also include, as applicable, written descriptions of alarms generated by equipment and proper responses to such alarm conditions.

4. Written explanations of all safety considerations relating to operation and maintenance procedures. Include specific information required in the Specification Section for the material or equipment, data required by Laws and Regulations, and data required by authorities having jurisdiction.

C. Maintenance Data:

1. Complete instructions for ordering replaceable parts, including reference numbers (such as shop order number or serial number) that will expedite the ordering process.

2. Complete manufacturer's recommended inventory levels for spare parts, extra stock materials, and consumable supplies for the initial two years of operation. Consumable supplies are items consumed or worn by operation of materials or equipment, and items used in maintaining the operation of material or equipment, including items such as lubricants, seals, reagents, and testing chemicals used for calibrating or operating the equipment. Include estimated delivery times, shelf-life limitations, and special storage requirements.

3. Complete detailed, written preventive maintenance instructions including all information and instructions to keep materials, equipment, and systems properly lubricated, adjusted, and maintained so that materials, equipment, and systems function economically throughout their expected service life. Instructions shall include:

a. Written explanations with illustrations for each preventive maintenance task such as inspection, adjustment, lubrication, calibration, and cleaning. Include pre-startup checklists for each equipment item and maintenance requirements for long-term shutdowns.

b. Recommended schedule for each preventive maintenance task.

c. Troubleshooting instructions.

d. List of required maintenance tools and equipment.

4. Repair instructions.

D. Programming and Configuration Files:

1. An editable and revisable copy of all software programming, such as programmable logic controller programs.

2. An editable and revisable copy of all system configuration files prepared specifically for the Project, such as instrumentation devices and SCADA display configurations.

3. Programming and configuration files shall be hand delivered on a labeled CD or DVD to Resident Engineer, or Construction Inspector, after preparing submittal to document transmittal.

1.03 SUBMITTALS

A. CONTRACTOR shall transmit data in the form of an action submittal with one or more PDF document attachments (except for programming and configuration files) for subsequent posting by Resident Engineer, or Construction Inspector, to designated locations and folders on Owner InSite™.

B. Submittal shall consist of one or more PDF attachments, the number of attachments will vary on the manufacturer's presentation of information, construction progress, and the requirements of the individual specification sections.

C. CONTRACTOR shall supplement manufacturer's prepared information to provide required information listed in this Section if not contained in manufacturer's standard documents.

D. CONTRACTOR shall rename document filenames established by manufacturers that are ambiguous to equipment names and equipment tags that correspond to terms and tags used in the Contract Documents. Add descriptors such as "Installation Data", "Operation Data", "Maintenance Data" or "Supplemental Data". An example of an acceptable filename is FW Pump 1 Installation Data.pdf. Examples of an un- acceptable name are 7160.pdf and pump.pdf.

E. Provide separate PDF document files for drawings larger than 8-1/2 inches x 11 inches. Reduced drawings are acceptable only if reduction is to not less than one- half original size and all lines, dimensions, lettering, and text are completely legible on the reduction.

F. Document clarity shall be original-quality copies indistinguishable from originals. If original is in color, scanned copies shall be in color. Submittals that contain

documents that are unclear, not completely legible, off-center, skewed, or where text or drawings are obscured or unreadable are unacceptable and will be rejected. Pages that contain approval or date stamps, comments, or other markings that cover text or drawing are unacceptable and will be rejected.

G. Clearly mark with PDF comment and mark-up tools (arrows, boxes, circles, underlining) to indicate all components of materials and equipment on catalog pages for ease of identification. In standard or pre-printed documents, indicate options furnished or cross out (strike-through) inapplicable content. Using highlighters to so indicate options furnished is unacceptable.

H. Incomplete or inaccurate submittals will be rejected.

I. Make separate submittals as necessary for test data, service reports, service contracts, warranty bonds, and closeout information.

J. Supplement the manufacturer's standard operation and maintenance manuals, installation manuals, and other pre-prepared documents with the data and information specified in this section when data specified in this Section is not included.

1.04 FORMAT OF MULTI-DOCUMENT PDF FILES

A. If manufacturer provides, or if CONTRACTOR combines multiple PDF files into a single PDF file, the combined PDF file shall be electronically searchable.

1. Within each combined file, provide a table of contents that covers all documents, and provide bookmarks for the following:

a. Each chapter, subsection, and document listed in the table of contents.

b. Each figure.

c. Each table.

d. Each appendix.

1.05 PRELIMINARY AND FINAL DATA

A. Data submitted prior to commencement of commissioning will be considered as preliminary data.

B. At Substantial Completion, preliminary data will be considered final except when the as-built or as-configured situation is different than the preliminary data.

C. CONTRACTOR shall update data and submit replacement data to reflect the as-built condition at Substantial Completion.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall maintain record documents and submit to Resident Engineer, or Construction Inspector, at closeout in accordance with the Specifications, General Conditions, and Supplementary Conditions.

B. Maintenance of Record Documents:

1. Maintain a complete set of the Project Manual in clean, dry, legible condition for sole purpose of recording the as-built condition and modifications to the Contract. Record documents are defined as: Drawings, Specifications, and Addenda; Shop Drawings, Samples, and other CONTRACTOR submittals, including records of test results, approved or accepted as applicable, by Resident Engineer, or Construction Inspector; Change Orders, Work Change Directives, Field Orders, photographic documentation, survey data, and all other documents pertinent to the Work.

2. If directed, provide file cabinets and racks for proper storage and easy access to record documents. File record documents in accordance with the edition of the Construction Specification Institute's "MasterFormat" used for organizing the Project Manual, unless otherwise accepted by Resident Engineer.

3. Make record documents available for inspection upon request of Resident Engineer, or Construction Inspector, ENGINEER or OWNER.

4. Do not use record documents for purpose other than serving as Project record.

5. Maintain record documents at the work site and do not remove without Resident Engineer's, or Construction Inspector's approval.

C. Submittal of Record Documents:

1. Submit the following record documents:

   a. Drawings.

   b. Project Manual including Specifications and Addenda (bound).

2. Prior to readiness for final payment one copy of final record documents. Submit complete record documents; do not make partial submittals.

3. Submit record documents with transmittal letter on CONTRACTOR letterhead complying with letter of transmittal requirements in Section 01 33 00, Submittal Procedures.

4. Record documents submittal shall include certification as part of transmittal information or added to cover of drawings, with original signature of official authorized to execute legal agreements on behalf of CONTRACTOR, reading as follows:

   "[Insert Contractor's corporate name] has maintained and submitted

record documentation in accordance with the General Conditions and Supplementary Conditions, Section 01 78 39, Project Record Documents, and other elements of Contract Documents, for the City of Rifle, CO, Rifle Airport 0.5 MG Water Tank project. We certify that each record document submitted is complete, accurate, and legible relative to the Work performed under our Contract, and that the record documents comply with the requirements of the Contract Documents.

[Provide signature, print name, print signing party's corporate title, and date]"

1.02 RECORDING CHANGES

A. General:

1. At the start of the Project, label each record document to be submitted as, "PROJECT RECORD" using legible, printed red letters.
2. Keep record documents current. Make entries on record documents within two working days of receipt of information required to record the change.
3. Do not permanently conceal the Work until required information has been recorded.
4. Accuracy of record documents shall be such that future searches for items shown on the record documents may rely reasonably on information obtained from accepted record documents.
5. Marking of Entries:
   a. Use erasable, colored pencils (not ink or indelible pencil) for marking changes, revisions, additions, and deletions to record documents.
   b. Clearly describe the change by graphic line and make notations as required. Use straight-edge to mark straight lines. Writing shall be legible and sufficiently dark to allow scanning of record documents into legible electronic files.
   c. Date all entries on record documents.
   d. Call attention to changes by drawing a "cloud" around the change(s) indicated.
   e. Mark initial revisions and additions in red. Mark deletions in green. Mark comments in blue. In the event of overlapping changes, use different colors for subsequent changes.

B. Drawings:

1. Record changes on copy of the Drawings. Submittal of CONTRACTOR-originated or -produced drawings as a substitute for recording changes on the Drawings is unacceptable.
2. Record changes on plans, sections, schematics, and details as required for clarity, making reference dimensions and elevations (to Project datum) for complete record documentation.

3. Record actual construction including:
   a. Depths of various elements of foundation relative to Project datum.
   b. Horizontal and vertical location of underground facilities referenced to permanent surface improvements. For each underground facility, including pipe fittings, provide dimensions to at least two permanent, visible surface improvements.
   c. Location of exposed utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
   d. Changes in structural and architectural elements of the Work, including changes in reinforcing.
   e. Field changes of dimensions, arrangements, and details.
   f. Changes made in accordance with Change Orders, Work Change Directives, and Field Orders.
   g. Changes in details on the Drawings. Submit additional details prepared by CONTRACTOR when required to document changes.
4. Recording Changes for Schematic Layouts:
   a. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items are shown schematically and are not intended to portray physical layout. For such cases, the final physical arrangement shall be determined by CONTRACTOR subject to acceptance by Resident Engineer, or Construction Inspector.
   b. Record on record documents all revisions to schematics on Drawings, including: piping schematics, ducting schematics, process and instrumentation diagrams, control and circuitry diagrams, electrical one-line diagrams, motor control center layouts, and other schematics when included in the Contract. Record actual locations of equipment, lighting fixtures, in-place grounding system, and other pertinent data.
   c. When dimensioned plans and dimensioned sections on the Drawings show the Work schematically, indicate on the record documents, by dimensions accurate to within one inch in the field, centerline location of items of Work such as conduit, piping, ducts, and similar items
      1) Clearly identify the Work item by accurate notations such as “cast iron drain”, “rigid electrical conduit”, “copper waterline”, and similar descriptions.
      2) Show by symbol or note the vertical location of Work item; for example, “embedded in slab”, “under slab”, “in ceiling plenum”, “exposed”, and similar designations. For piping not embedded, also provide elevation dimension relative to Project datum.

3) Descriptions shall be sufficiently detailed to be related to Specifications.

d. Resident Engineer, or Construction Inspector, may furnish written waiver of requirements relative to schematic layouts shown on plans and sections when, in Resident Engineer's, or Construction Inspector's judgment, dimensioned layouts of Work shown schematically will serve no useful purpose. Do not rely on waiver(s) being issued.

5. Supplemental Drawings:

a. In some cases, drawings produced during construction by ENGINEER or CONTRACTOR supplement the Drawings and shall be included with record documents submitted by CONTRACTOR. Supplemental record drawings shall include drawings provided with Change Orders, Work Change Directives, and Field Orders and that cannot be incorporated into the Drawings due to space limitations.

b. Supplemental drawings provided with record drawings shall be integrated with the Drawings and include necessary cross-references between drawings. Supplemental record drawings shall be on sheets the same size as the Drawings.

c. When supplemental drawings developed by CONTRACTOR using computer-aided drafting/design (CADD) software are to be included in record drawings, submit electronic files for such drawings in a mutually agreeable AutoCAD format as part of record drawing submittal. Submit electronic files on compact disc labeled, "Supplemental Record Drawings", together with CONTRACTOR name, Project name, and Contract name and number.

C. Specifications and Addenda:

1. Mark each Section to record:

a. Manufacturer, trade name, catalog number, and Supplier of each product and item of equipment actually provided.

b. Changes made by Addendum, Change Orders, Work Change Directives, and Field Orders.

PART 2 -- **PRODUCTS (NOT USED)**

PART 3 -- **EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01 78 43 – SPARE PARTS AND EXTRA MATERIALS

PART 1 -- GENERAL

1.01 DESCRIPTION

A. CONTRACTOR shall furnish spare parts data and extra materials for materials and equipment as specified in accordance with the Contract Documents. Include in Contract Price those spare parts required under the specifications herein.

B. List of Spare Parts and Extra Materials: With the Shop Drawings and product data for each Specification Section, for those items not included in the bid price, submit a complete list of spare parts, extra stock materials, maintenance supplies, and special tools required for maintenance ("spare parts and extra materials") for two years of operation, with unit prices in current United States funds, and source(s) of supply for each.

C. Packaging and Labeling: Furnish spare parts and extra materials in manufacturer's unopened cartons, boxes, crates, or other original, protective covering suitable for preventing corrosion and deterioration for maximum length of storage normally anticipated by manufacturer. Packaging of spare parts and extra materials shall be clearly marked and identified with name of manufacturer, applicable equipment, equipment tag number from Contract Documents, manufacturer's part number, part description, and part location in the equipment. Protect and package spare parts and extra materials for maximum shelf life normally anticipated by manufacturer.

D. Storage Prior to Delivery: Prior to furnishing spare parts and extra materials to Resident Engineer, store spare parts and extra materials in accordance with the Contract Documents and manufacturers' recommendations. Deliver all spare parts and extra materials specified within an individual specification section at one time.

E. Delivery Time and Eligibility for Payment:

1. Deliver spare parts and extra materials to OWNER to locations directed by Resident Engineer or Construction Inspector.

2. Spare parts and extra materials are not eligible for payment until delivered to OWNER and CONTRACTOR is in possession of transmittal letter signed by Resident Engineer.

3. Procedure for Delivery: Deliver spare parts and extra materials to OWNER's storage locations throughout the City as directed by Resident Engineer, or Construction Inspector. When spare parts and extra materials are delivered, CONTRACTOR and Resident Engineer, or Construction Inspector, will mutually inventory the spare parts and extra materials delivered to verify compliance with the Contract Documents regarding quantity and part numbers. Additional procedures for delivering spare parts and extra materials to OWNER, if required, will be developed by Resident Engineer, or Construction Inspector and complied with by CONTRACTOR.

4. Transfer Documentation:

5. Furnish on CONTRACTOR letterhead a letter of transmittal for spare

parts and extra materials furnished under each Specification Section. Letter of transmittal shall be submitted electronically on Owner InSite™ and accompany spare parts and extra materials at time of delivery. 2. Resident Engineer, or Construction Inspector, and CONTRACTOR will sign transmittal letter to indicate transfer to OWNER and make entry into a storage location specific log of stored items.

6. Letter of transmittal shall include the following:

   a. Information required for letters of transmittal in Section 01 33 00, Submittal Procedures.

   b. Transmittal shall list spare parts and extra materials furnished under each Specification Section. List each individual part or product and quantity furnished.

   c. Provide space for signatures of CONTRACTOR and Resident Engineer as follows: space for signature, space for printed name, and date.

F. CONTRACTOR shall be fully responsible for loss or damage to spare parts and extra materials until spare parts and extra materials are received by OWNER.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

SECTION 09 90 00 – PAINTING

PART 1 -- GENERAL

1.01 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, tools, equipment, and incidentals, as shown, specified, and required to furnish and apply paint systems to a new welded steel potable water storage tank.
2. CONTRACTOR shall be responsible for surface preparation in accordance with the manufacturer's product literature.
3. CONTRACTOR shall paint the interior of the welded steel tank with an NSF 61 certified paint system, including accelerators, thinners and solvents, suitable for potable water in immersion service.
4. CONTRACTOR shall paint the exterior of the welded steel tank.
5. Remove all substances, primers, and all intermediate coats of paint or other protective coatings on surfaces identified to receive a painting system in order to provide surfaces acceptable for application of the painting system specified.
6. Stepped-down mock-ups, with acceptable variations in color, prepared by the CONTRACTOR for all painting systems showing all components of the surface preparation and paint system application shall be approved by the Resident Engineer, or Construction Inspector, before any start of any Work. Check all dry film thicknesses; demonstrate methods of surface preparation and methods of application.
7. Paint colors shall be acceptable to the Resident Engineer, or Construction Inspector.
8. Paint exposed or immersed steel access cover plates, steel ladders and grating, and similar metallic features.
9. Do not paint over equipment labels, vent screens, or instrumentation.

1.02 REFERENCES

A. Comply with referenced standards listed on manufacturer's literature, and:

1. ANSI/NSF Standards
2. ASTM Standards
3. SSPC Standards

B. Comply with Code of Federal regulations:

1. 29 CFR 1910 – Occupational Safety and Health Administration
2. 29 CFR 1926 – Safety and Health Regulations for Construction

1.03 QUALITY ASSURANCE

A. Engage a single applicator capable of painting the interior and exterior of the tank simultaneously, unless otherwise approved by the Resident Engineer, or

Construction Inspector.

B. The applicator must have documented skill and successful experience with the painting of welded steel water storage tanks.

C. Obtain paint system products for interior of tank from only one manufacturer.

D. Obtain paint system products for exterior of tank from only one manufacturer.

E. Prime, intermediate if applicable, and top coats, shall be compatible.

F. Store and apply product in accordance with manufacturer's product literature.

G. Apply paint in weather or controlled conditions suitable for the product application, including surface temperature suitably above the dew point listed in the manufacturer's literature.

H. Store thinners and solvents that could contaminate the water supply in appropriate containers and in locations that preclude or minimize the potential for contamination.

I. Paint systems shall be applied in a manner to be consistent with magnesium anode cathodic protection.

1.04 SUBMITTALS

A. Applicator name and experience.

B. Product data for paint system including manufacturer's literature for each component of the paint system, thinners and solvents, additives and curing accelerants, and color charts.

C. State the number of gallons of each product being purchased for delivery to the Site and the square foot area calculated to be covered by each product with stated assumptions regarding product losses. When requested by Resident Engineer or Construction Inspector, provide information on quantities purchased and quantities applied.

D. Application plan for each coating system to be applied. Plan to include the following information:

1. Paint manufacturer's written approval of application plan.
2. Mixing method, mixing time, and induction time (minimum and maximum of based on temperature range.)
3. Surface preparation standard.
4. Types of brushes or rollers to be used.
5. Types of airless or conventional spray equipment to be used, including orifice size, fan type, type of spray gun, total output of at spray tip, and pressure for proper atomization of coating, type of heater to warm paint and lines from pump to nozzle. Type of grounding system for spray gun.
6. Type of thinner to be used and under what circumstances thinners may be used.
7. Recoat times (minimum and maximum based on temperature range).
8. Paint application thickness requirements.

9. A color sample inclusive of each prime, intermediate, and top-coat before application of Work begins.

10. Submit cure time tables for all coatings at various temperature ranges that may be encountered. Submit forced ventilation and heating plan for tank interior.

E. Comprehensive disposal plan for all generated waste, including identification of waste transporters, and disposal facilities.

1.05 PROJECT CONDITIONS

A. For curing the interior of the steel tank, CONTRACTOR shall supply supplemental heat sources as may be required to maintain both ambient and surface temperatures within the range recommended by the manufacturer.

B. Properly vent heat sources.

C. CONTRACTOR shall supply compressed air equipment capable of delivering an oil free source of air for abrasive blast cleaning.

D. Abrasive blasting, scraping, necessary to achieve product application requirements for immersion service shall be provided as part of the Work.

E. Before painting starts, all surfaces to be painted and floors shall be cleaned of dust using commercial vacuum equipment and dust containment systems.

F. CONTRACTOR shall supply dehumidification equipment, if necessary, to maintain conditions inside of tank required by paint system manufacturer.

PART 2 -- PRODUCTS

2.01 INTERIOR PAINTING SYSTEM - ACCEPTABLE MANUFACTURERS AND SYSTEMS

A. Sherwin Williams

1. Primer: Moisture Cured Urethane: Corothane 1 Galvapac 1K Zinc Primer; 2 to 4 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 2 to 4 mils DFT.

2. Intermediate Coat: Polyamide Epoxy Macropoxy 846 PW; 4 to 6 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 4 to 6 mils DFT.

3. Finish Coat: Polyamide Epoxy Macropoxy 846 PW; 4 to 6 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 4 to 6 mils DFT.

B. Tnemec

1. Primer: Moisture Cured Urethane: Hydro-Zinc Series 91-H20 with Urethane Accelerator 44-710; 2.5 to 3.5 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 2.5 to 3.5 mils DFT.

2. Intermediate Coat: Polyamidoamine Epoxy Pot-a-Pox Plus Series N140F; 4 to 6 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 4 to 6 mils DFT.

3. Finish Coat: Polyamidoamine Epoxy Pot-a-Pox Plus Series N140F; 4 to 6 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 4 to 6 mils DFT.

C. PPG:

1. Primer: Amercoat 2/Sigmacover 2; 5 to 8 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 5 to 8 mils DFT.

2. Finish Coat: Amercoat 2/Sigmacover 2; 5 to 8 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 5 to 8 mils DFT.

2.02 EXTERIOR PAINTING SYSTEM - ACCEPTABLE MANUFACTURERS AND SYSTEMS

A. Sherwin Williams

1. Primer: Corothane 1 Galvapac 1K Zinc; 3 to 4 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 3 to 4 mils DFT

2. Intermediate Coat: Corothane I Ironox B; 3 to 5 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 3 to 5 mils DFT.

3. Finish Coat: Corothane I HS; 2 to 3 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds and sharp angles of 2 to 3 mils DFT.

B. Tnemec

1. Primer: Moisture Cured Urethane: Hydro-Zinc Series 91-H20 with Urethane Accelerator 44-710; 2.5 to 3.5 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of2.5 to 3.5 mils DFT.

2. Intermediate Coat: Polyamidoamine Epoxy Pot-a-Pox Plus Series N140 or N140F; 4 to 6 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 4 to 6 mils DFT.

3. Finish Coat: Polyamidoamine Epoxy Pot-a-Pox Plus Series N140 or N140F; 4 to 6 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 4 to 6 mils DFT.

C. Wasser

1. Prime: MC Zinc 100; 3 to 5 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds and sharp angles of 3 to 5 mils DFT.

2. Intermediate Coat: MC Ferrox B 100; 3 to 5 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 3 to5 mils DFT.

3. Finish Coat: MC Luster 100; 2 to 4 mils DFT at any individual spot measurement, with a stripe coat of all crevices, welds, and sharp angles of 2 to 4 mils DFT.

PART 3 -- EXECUTION

3.01 INSPECTION

A. Examine the areas and conditions under which painting Work is to be performed and notify resident Engineer, or Construction Inspector, in writing of conditions detrimental to the proper and timely completion of the Work.

B. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the Resident Engineer, or Construction Inspector.

C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to the formation of a durable paint film capable of performing in accordance with the claims made in the manufacturer's product literature for the surfaces and conditions encountered.

D. Do not paint over existing paint where there is no assurance that existing paint will provide an acceptable surface for the long-term adherence and durability of painting systems specified or where the manufacturer requires removal of all existing paint in order to recommend the use of the specified painting system.

3.02 SURFACE PREPARATION

A. General:

1. Test for moisture content of surfaces before commencement of painting Work.

2. Perform all preparation and cleaning procedures as specified herein and in strict accordance with paint manufacturer's approved instructions for each particular surface and atmospheric condition.

3. CONTRACTOR shall remove all hardware, hardware accessories, machined surfaces, and similar items already in place and that do not require surface preparation and painting operations.

4. Clean surface to be painted before applying any painting system components. Remove oil and grease with clean cloths and cleaning solvents prior to mechanical cleaning.

B. Ferrous Metals:

1. Comply with manufacturer's recommendations for type and size of abrasive in order to provide a surface profile meeting the manufacturer's painting system requirements for type function and location of surface. Verify that manufacturer recommended profiles have been achieved on prepared surfaces. Report profiles to Resident Engineer, or Construction Inspector, using test method C in in compliance with ASTM D4417.

2. Clean exterior ferrous surfaces including structural steel and miscellaneous metal of all oil, grease, dirt, mill scale and all other contamination by commercial blast cleaning complying with SSPC SP6 at the time of paint system application, using SSPC VIS 1 as a standard of Comparison.

3. Clean interior ferrous surfaces including structural steel and miscellaneous metal of all oil, grease, dirt, mill scale and all other contamination by near-white blasting complying with SSPC SP10 at the

time of paint system application, using SSPC VIS 1 as a standard of Comparison.

4. Touch-up shop applied prime coats which have been damaged or have bare areas.

5. Power tool clean, complying with SSPC-3, in order to remove welding splatter and slag.

6. Cleaning: Tank shall be cleaned to remove sediment and coarse debris and disposed of in accordance with local, state and federal regulations.

3.03 PROTECTION OF PROPERTY AND STRUCTURES

A. Protect property and structures adjacent to Work from waste residues resulting from cleaning, surface preparation, and paint application.

B. Use shrouding, vacuum blasting, or other approved methods for cleaning and surface preparation of exterior surfaces.

C. During blast cleaning and surface preparation of exterior surfaces, control exhausting of dust and grit, using shrouding, negative pressure containment/dust collection, or other means to protect adjacent property and structures and prevent dust/grit from escaping. Similarly control removal and temporary storage of residues to protect adjacent property and structures.

D. For painting of exterior surfaces, use rollers, shrouding, or other approved methods as required to protect adjacent property and structures from windblown paint residues.

E. Submit proposed procedures for cleaning, surface preparation and paint application detailing methods to be used to protect adjacent property and structures from residues. Do not proceed with cleaning, surface preparation, or painting until proposed procedures are approved by Resident Engineer or Construction Inspector.

3.04 MATERIALS PREPARATION

A. General:

1. Mix and prepare painting materials in strict accordance with manufacturer’s product literature.

2. Do not mix painting materials produced by different manufacturers.

3. Thinners required for the work shall be produced, or listed as approved by the paint system manufacturer.

B. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat of paint where multiple coats of the same material are to be applied. Provide a code number to identify material tinted by the manufacturer.

C. Mixing:

1. For those products requiring constant agitation, use methods in compliance with manufacturer’s product literature, to prevent settling during paint application.

D. Stir all materials before application to produce a mixture of uniform density, and as required during the application of the materials. Do not stir any film which may

form on the surface into the material. Remove the film and, if necessary, strain the material before using.

3.05 APPLICATION

A. General:

1. Apply paint systems by brush, roller, or airless spray in accordance with manufacturer's recommendations and in compliance with Paint Application Specifications No. 1 in SSPC Volume 2, where applicable. Use brushes best suited for the type of material being applied. Use rollers of carpet, velvet back, or high pile sheep's wool as recommended by manufacturer for material and texture required. Use air spray and airless spray equipment recommended by manufacturer for specific painting systems specified. Submit a list of application methods proposed, listing paint systems and location.

2. Paint dry film thicknesses required are the same regardless of the application method. Succeeding coats shall be applied according to manufacturer's recommendations.

3. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Ensure that all surfaces, edges, corners, crevices, welds, and exposed fasteners receive a film thickness equivalent to that of flat surfaces.

4. Welds, crevices, and sharp angles shall be stripped coated with each coat.

B. Minimum/Maximum Paint Film Thickness:

1. Apply each material at not less than, nor more than, manufacturer's recommended spreading rate, and provide total dry film thickness as specified.

2. Apply additional coats of paint if required to obtain required total dry film thickness.

C. Scheduling Surface Preparation and Painting:

1. Apply first coat to material to surfaces that have been clean, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration in consideration of atmospheric conditions existing at the time of surface preparation and painting. Surfaces that have started to rust before first coat application is complete shall be brought back to required standard by abrasive blasting.

2. Allow sufficient time between successive coats to permit proper drying. Do not re-coat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

3. Scarify primers and other painting system components by brush-blasting if paint has been exposed for long lengths of time or under conditions beyond manufacturer's written recommendations for the painting system

involved, the intended use, or the method of application proposed for subsequent coats of paint.

4. Schedule cleaning and painting so that dust and other contaminants from the clean process will not fall on wet, newly painted surfaces.

D. Prime Coats: Re-coat primed and sealed areas where there is evidence of suction spots nor unsealed areas in first coat, to assure a finish coat with no burn through or other defects caused by insufficient sealing.

E. Brush Application:

1. Brush-out and work all brush coats onto the surfaces in an even film. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

2. Brush apply all primer or first coats, unless otherwise permitted to use mechanical applicators.

F. Mechanical Applicators:

1. Use mechanical methods for paint application when approved by paint system manufacturer and Resident Engineer, or Construction Inspector.

2. Wherever spray application is used, apply each coat to provide an equivalent hiding of brush applied coats. Do not double back with spray equipment for the purpose of building up film thickness of two coats in one pass.

G. Completed Work: Match approved samples or mock-up for color, texture, and coverage. Remove, refinish, or repaint Work not in compliance with the specified requirements as required by the Resident Engineer or Construction Inspector.

3.06 FIELD QUALITY CONTROL

A. Notify Resident Engineer, or Construction Inspector, after completion of each coat of paint. After checking of film thickness, and for other imperfections, and after approval by Resident Engineer, or Construction Inspector, proceed with succeeding coat.

B. Provide Resident Engineer, or Construction inspector, one new dry film thickness gage for checking film thickness and one set of visual standards to check surface preparation. Mikrotest 6 thickness gage as manufactured by ElectroPhysik, or equal.

C. Provide one holiday detector for holiday testing. The holiday detector will remain the property of the Contractor. Model M-1, as manufactured by Tinker and Rasor, or equal. Holiday testing will be performed by Contractor and witnessed by Resident Engineer, or Construction inspector. Notify Resident Engineer, or Construction Inspector, in advance of holiday testing.

D. Additional coats shall be applied to produce the thickness specified in the manufacturer’s literature and to correct holidays.

3.07 ADJUSTMENT AND CLEAN-UP

A. Correct all damages to the work of other trades by cleaning, repairing or replacing, or re-painting, as acceptable to the Resident Engineer, or Construction Inspector.

B. During the progress of the Work, remove from the Site all discarded materials, rubbish, cans, and rags at the end of each day.

C. Upon completion of painting, clean all paint spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

D. At the completion of the Work of other trades, touch up and restore all damaged or defaced painted surfaces as determined by the Resident Engineer, or Construction Inspector.

E. Re-paint surfaces if damaged during commissioning prior to Substantial Completion.

3.08 MANUFACTURER'S PRODUCT LITERATURE

CONTRACTOR to obtain from the Manufacturer.

A. Sherwin Williams Product Literature:

Corothane 1 Galvapac 1K Zinc Primer

Polyamide Epoxy Macropoxy 846 PW

B. Tnemec Product Literature:

Hydro-Zinc Series 91-H20 with Urethane Accelerator 44-710

Pot-a-Pox Plus Series N140F

C. PPG Product Literature:

Amercoat 2/Sigmacover 2

D. Sherwin Williams Product Literature:

Corothane 1 Galvapac 1K Zinc

Corothane I Ironox B

Corothane I HS

E. Tnemec Product Literature:

Hydro-Zinc Series 91-H20 with Urethane Accelerator 44-710

Pot-a-Pox Plus Series N140 or N140F

F. Wasser Product Literature:

MC Zinc 100

MC Ferrox B 100

MC Luster 100

- END OF SECTION -

SECTION 26 05 00 – BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 -- GENERAL

1.01 SUMMARY

A. This section includes basic electrical requirements for materials and methods applicable to electrical equipment specified under this section and other related sections.

1. Conduit
2. Boxes
3. Wire and Cable
4. Grounding Materials

B. Related Sections:

1. Section XX XX XX – Shop Drawings and Product Data

1.02 REFERENCES

A. UL – All applicable standards

B. ANSI/NFPA 70 – National Electrical Code

C. ANSI C2 – National Electrical Safety Code

D. ANSI/NEMA FB 1 – Fittings and Supports for Conduit and Cable Assemblies

E. ANSI/NEMA OS 1 – Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports

F. ANSI/NEMA OS 2 – Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports

1.03 SUBMITTALS

A. Information covering all material that is to be used on this project shall be submitted.

B. Each sheet of descriptive literature shall be clearly marked to identify the material or equipment for which it pertains.

C. Equipment on submitted sheets that is not for this project shall be crossed out.

1.04 QUALITY ASSURANCE

A. Supplier's qualifications

1. The entire system shall be designed, coordinated, and supplied by a qualified Electrical Contractor who is regularly engaged in the business of building electrical systems for water and wastewater projects.

B. Coordination

1. The electrical equipment shall be designed and coordinated for proper operation with related equipment and materials furnished by other suppliers under other sections of these specifications. All devices shall be applied in full conformity with the drawings, specifications, engineering

data, instructions, and recommendations of the instrument or device manufacturer and the manufacturer of related equipment.

2. The Contractor shall provide coordination with other contractors and supervision of installation as required during construction.

3. Accurately record actual locations of conduit, duct banks, panels, and accessories.

1.05 REGULATORY REQUIREMENTS

A. Conform to applicable Building Code.

B. Electrical: Conform to latest version of NFPA 70.

C. Coordinate, obtain and pay for all permits, inspections and approvals of authority having jurisdiction.

D. Comply with local electrical codes in force or in the absence of local electrical code, the latest edition of the National Electrical Code, ANSI C1.

1.06 WARRANTY

A. The electrical contractor shall warrant the supplied equipment and labor for a period of one year from the date of system acceptance.

PART 2 -- PRODUCTS

2.01 GENERAL REQUIREMENTS

A. The work for this project is near a functioning potable water storage tank. All new work shall be done in a way that allows the existing tank to maintain its operation.

B. All equipment furnished under this Section shall be selected by the Contractor for its superior quality and intended performance. Unless indicated otherwise, all equipment and material shall be new, undamaged, and meet the requirements of UL. Where UL requirements are not applicable, equipment and material shall be identified as such by the supplier and approved by the Engineer before purchase and installation. Equipment and materials used shall be subject to review and shall comply with the following requirements.

1. Conduit

a. Minimum Size: 3/4-inch unless otherwise specified.

b. Underground Installations:

1) Over 100V: More than five feet from foundation wall: Use thick wall nonmetallic conduit.

2) Within five feet from foundation wall: Use rigid steel conduit

3) Under 100V: Use rigid steel conduit

4) Minimum size: 1-inch.

c. Outdoor Locations, Above Grade: Use rigid steel conduit.

d. Rigid Steel Conduit.

1) Rigid steel conduit shall be heavy wall, hot-dipped galvanized, and shall conform to Fed Spec WW-C-581, ANSI C80.1, and manufactured in accordance with UL 6.

e. Flexible connections

1) Conduit: Moisture proof vinyl jacketed, liquid-tight, hot-dipped galvanized flexible steel and shall be UL labeled.

2) Connectors: Watertight, Appleton Type ST or STB, Crouse-Hinds Type LT or LTC, or equal.

2. Pull and Junction

a. Sheet Metal Boxes: NEMA OS 1, Galvanized Steel.

b. Surface-Mounted Cast Metal Box: NEMA 250, Type 4 flat-flanged, surface-mounted junction box.

1) Material: Galvanized cast iron Cast aluminum in corrosive areas.

2) Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

3) Model: WCB as manufactured by Crouse-Hinds.

c. In-Ground Cast Metal Box: NEMA 250, Type 6, outside flanged, recessed cover box for flush mounting.

1) Material: Galvanized cast iron.

2) Cover: Nonskid cover with neoprene gasket and stainless steel cover screws.

3) Cover Legend: ELECTRIC.

4) Model: WPD as manufactured by Crouse-Hinds.

3. Expansion Fittings

a. Locations:

1) In long conduit runs, to permit linear movement caused by thermal expansion and contraction.

2) In long conduit runs to prevent conduit from buckling.

3) Indoors and outdoors, where conduit expansion occurs or where there is a wide temperature range.

4) At structural expansion joints.

b. Material:

1) End fittings: Ferroalloy.

2) Body: Steel conduit.

c. Provide Bonding Strap When Used Outdoors.

d. Model XJ, as Manufactured by Appleton and Crouse-Hinds.

4. Wire and Cable

a. 600 Volt Power Cable

1) General Use:

a) Conductors: Single, copper, 12 AWG minimum.

b) All conductors shall be stranded.

c) Insulation: 600V thermoplastic, UL Type THWN/THHN.

d) Suitability: Wet or dry locations at 75° C and 90° C copper temperature.

e) Or as specified for service entrances.

2) Terminations

a) Lugs, cup washers or pressure type; do not use wire nuts on stranded cable or wrap standard cable around screw type terminals

b. Control circuits

1) Millivolt or Milliampere Instrumentation and Control.

a) Conductors: 18 AWG stranded copper, 2 or 3 as required.

b) Insulation: 15 mils, minimum, 90°C PVC.

c) Shield: Mylar aluminum tape with 20 AWG copper drain wire, fully covering conductors.

d) Jacket: 20 mils, minimum, 80°C PVC.

e) Suitability: Wet or dry steel conduit.

2) Manufacturers: Belden “UL Instrumentation Cable – 1032A”, Samuel Moore “Dekoron ICMX” No. 1852-686 and 1862-686, or equal.

5. Grounding and Bonding

a. Provide rod electrodes, exothermic connections and mechanical connections.

b. Building perimeter ground cable shall be minimum of 4/0 AWG bare copper.

c. Other ground cable shall be as noted on the drawings.

PART 3 -- **EXECUTION**

3.01 **INSTALLATION REQUIREMENTS**

A. General Requirements

1. The instrumentation equipment shall be installed by the Contractor or his subcontractors in accordance with the manufacturers’ instructions. The services of the system supplier’s technical representative shall be provided as necessary to calibrate, test, and advise others of procedures for adjustment and operation.

B. Inspection

1. Inspect materials and equipment for signs of damage, deterioration or other deleterious effects of storage, transportation, handling, or defects in manufacture or assembly.

   a. Replace with identical new materials or equipment or repair to like new condition any materials or equipment showing such effects to the satisfaction of the Engineer and Owner.

C. Equipment Installation

1. Handle, install, connect, clean, condition, align and adjust products and equipment in strict accordance with manufacturer's instructions and in conformity with specification requirements.

   a. Separate sheet metal junction boxes, equipment enclosures, sheet metal raceways, etc., mounted on water or earth-bearing walls or wall-mounted outdoors 1/4-inch from wall be corrosion resistant spacer.

   b. Screen or seal with flexible sealing compound all openings into outdoor equipment to prevent the entrance of rodents, wasps, and mud-daubers.

   c. Electrical work shall conform to the construction schedule and progress of other trades.

   d. Perform all work in accordance with manufacturer's instructions.

   e. Field Wiring. Field wiring materials and installation shall conform to the requirements of the electrical section.

D. Identification:

1. Conduit. All conduits shall be provided with identification tags. Tags shall be brass nameplates with 3/8-inch high lettering and attached to the conduits by means of stainless steel wire. Conduits shall be identified at both ends with the same identification number.

2. Cable. Each individual wire in power, control, indication, and instrumentation circuits shall be provided with identification markers at the point of termination. The wire markers shall be of the heat-shrinkable tube type.

E. Raceways:

1. General:

   a. Except as otherwise indicated on drawings, conduit shall be concealed in finished areas and exposed in unfinished areas.

   b. Rigid steel conduit connections and terminations shall be reamed, de-burred, threaded and provided with bushings.

   c. Securely fasten conduit connections to sheet metal enclosures with locknuts inside and out. Conduit hubs outdoors and in wet locations.

   d. Provide deflection fittings across structural joints where structural

movement is allowed.

e. Keep conduit clear of structural openings and indicated future openings.

f. Cap or plug conduits during construction to prevent the entrance of trash, dirt and water.

g. Minimum conduit size shall be 3/4-inch or as noted on drawings.

h. Seal conduits with flexible sealing compound forced to a minimum depth equal to the conduit diameter after cable is installed.

i. Provide flexible conduit where flexible connections are necessary, including each motor without flexible cord.

1) Keep length to a minimum, not to exceed 6’ maximum.

2) No sharp bends.

j. Provide suitable pull string in each empty or spare conduit.

2. Underground:

a. One inch minimum.

b. All conduit shall be direct buried.

c. Two-foot minimum bend radius at vertical risers, 3-foot elsewhere.

d. Install underground conduit so that it does not drain to cable pulling access in buildings; where necessary, provide a handhole or manhole near or adjacent to building.

e. Provide 3-foot minimum earth cover.

f. Isolate intercommunication and milliampere level instrumentation circuits from all power wiring raceways, conduits, boxes, vaults, manhole and handhole.

3. Junction boxes and wiring gutters:

a. Install electrical boxes as shown on drawings and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.

b. Install pull boxes and junction boxes to maintain headroom and to present neat mechanical appearance.

c. Install level and plumb.

d. Where indicated, provide a removable side opposite underground duct banks.

e. At least code size including space for full size continuation of any conduit not originally continued.

f. Arrange conduit for maximum space for future conduits.

g. Support boxes independently of conduit except cast box that is connected to rigid metal conduits both supported within 12-inches of box.

F. Wire and Cable

1. General:

a. Protect the cable and avoid kinking conductors, cutting or puncturing jackets, contaminating by oil or grease or damaging in any manner.

b. Terminate stranded cable with lugs, cup washers, or pressure type connectors; do not wrap stranded cable around screw type terminals.

c. Splice stranded cable with pressure type connectors; do not use wire nut type connectors on stranded cable.

d. Splice cables only at readily accessible locations.

e. Do not pull cable tight against bushings or press heavily against enclosures.

f. Use cable pulling lubricants as recommended by the cable manufacturer.

g. Use swab to clean conduits and ducts before pulling cables.

h. Install cable and accessories in accordance with manufacturer's instructions.

i. Where necessary to prevent heavy loading of cable connectors due to cable weight, support cables in vertical risers with woven cable grips.

j. Coil and tape spare cable ends.

k. Use Stranded conductor for feeders and branch circuits.

l. Use stranded conductors for control circuits.

m. Use conductor not smaller than 12 AWG for power and lighting circuits.

n. Use conductor not smaller than 16 AWG for control circuits.

o. Pull all conductors into raceway at same time.

p. Use suitable wire pulling lubricant for building wire 8 AWG and larger.

q. Protect exposed cable from damage.

r. Neatly train and lace wiring inside boxes, equipment, and panel boards.

s. Clean conductor surfaces before installing lugs and connectors.

t. Make splices, taps, and terminations to carry full ampacity of conductors.

G. Grounding Materials:

1. Coordinate installation with other disciplines.

2. Verify that final backfill and compaction has been completed before

driving rod electrodes.

3. Install Products in accordance with manufacturer's instructions.
4. Install rod electrodes at locations indicated. Install additional rod electrodes as required to achieve specified resistance to ground.
5. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing.
6. Provide bonding to meet Regulatory Requirements.
7. Install ground cable through building walls within 3-feet below finish grade and prepare a water stop.
8. Install ground rods and cables as deep in earth as possible and as far from structure as possible, not closer than 6-inches.
9. All branch circuit and feeder circuits to include a copper ground conductor in addition to the conduit ground connection.
10. Connect ground conductors to equipment by ground lugs or clamps.
    a. If no ground bus or terminal is provided and enclosure is not explosion-proof or submersible provide a clamp type lug under a permanent assembly bolt or by grounding locknuts or bushings.
    b. If an explosion-proof or submersible enclosure is not provided with grounding means, provide an adjacent junction box with a ground lug.
    c. Bond grounding system to station piping by connection to the first flange inside the building on either a suction or discharge pipe which will form a good ground connection:
    d. Drill and tap the flange.
    e. Provide a bolted connection.
    f. Bond with a copper bar or strap.
    g. Form ground conductors on equipment to the contours of the equipment.
    h. Install main ground cables with encased underground conduit banks in earth at least 3-inches below one corner of the duct bank.

- END OF SECTION -

SECTION 26 09 00 – INSTRUMENTATION AND CONTROLS

PART 1 -- GENERAL

1.01 SUMMARY

A. This section covers the furnishing and installation of metering and control equipment which shall include the following principal items:

1. Metering and Control Systems. Principal components of the metering and control systems shall be as listed on the “Instrument List” at the end of this section.

2. Supplementing this section, the drawings indicate locations and arrangement of panels and instruments.

B. Related Sections

1. Section 26 05 00 – Basic Electrical Materials and Methods

1.02 REFERENCES

A. Codes & Permits

1. All work and materials shall comply with the National Electrical Code, the National Electrical Safety Code, and applicable local regulations and ordinances. All panels shall be listed by Underwriters Laboratories or other testing organizations acceptable to the governing authority. The Contractor shall, at his own expense, arrange for and obtain all necessary permits, inspections, and approval by the proper authorities in local jurisdiction of such work.

1.03 SUBMITTALS

A. Complete fabrication, assembly, and installation drawings: wiring and schematic diagrams: and details, specifications, and data covering the materials used and the parts, devices, and accessories forming a part of the equipment furnished shall be submitted in accordance with the submittals section. Submittal data shall be grouped and submitted in two separate stages. The submittal for each stage shall be substantially complete. Individual drawings and data sheets submitted at random intervals will not be accepted for review. Instrument tag numbers indicated on the contract drawings shall be referenced where applicable. Submittal data for multifunctional instruments shall include complete descriptions of the intended functions and configurations of the instruments.

1. First-stage Submittal. The first-stage submittal shall include the following items.

a. Product catalog cut sheets clearly marked to show the applicable model number, operational features, and intended service of the device.

b. A detailed list of any exceptions, functional differences, or discrepancies between the Supplier’s proposed system and the contract requirements.

c. Complete panel fabrication drawings and details of panel wiring, piping, and painting. Panel and subpanel drawings shall include

overall dimensions, metal thickness, door swing, mounting details, and front of panel arrangement to show general appearance, with spacing and mounting height of instruments and control devices.

d. System wiring and installation drawings for all interconnecting wiring between components of the systems furnished and for all interconnecting wiring between the related equipment and the equipment furnished under this section. Wiring diagrams shall show complete circuits and indicate all connections.

e. If panel terminal designations, inter-device connections, device features and options, or other features are modified as a result of the fabrication process or factory testing, revised drawings shall be resubmitted.

f. The submittal shall be provided in PDF electronic format.

1.04 QUALITY ASSURANCE

A. Supplier's qualifications

1. The entire system shall be designed, coordinated, and supplied by a qualified system integrator (Integrator) who is regularly engaged in the business of designing and building instrument and control systems for water and wastewater projects. The Contractor's intended Integrator shall meet the following qualifications.

a. The Integrator shall be:

1) Browns Hill Engineering &Controls LLC.

B. Coordination.

1. Instrument and control systems shall be designed and coordinated for proper operation with related equipment and materials furnished by other suppliers under other sections of these specifications. All instruments and control devices shall be applied in full conformity with the drawings, specifications, engineering data, instructions, and recommendations of the instrument or device manufactured and the manufacturer of related equipment.

2. Instrument and control systems shall be designed and coordinated for proper operation with other sections of these specifications.

1.05 WARRANTY

A. All suppliers shall warrant their hardware for a period of one year from the date of system acceptance.

PART 2 -- PRODUCTS

2.01 GENERAL REQUIREMENTS

A. All equipment furnished under this section shall be selected by the system supplier for its superior quality and intended performance. Unless indicated otherwise, all equipment and material shall be new, undamaged and meet the requirements of UL. Where UL requirements are not applicable, equipment and material shall be identified as such by the supplier and approved by the Engineer

before purchase and installation. Equipment and materials used shall be subject to review and shall comply with the following requirements.

1. Power and Instrument Signals. Unless specified otherwise, electrical power supply to the instrumentation equipment will be unregulated 120 VAC at the locations noted on the one-line and functional diagrams. All transmitted electronic analog instrument signals shall be 4-20 mA DC and shall be linear with the measured variable.

2. Metering Accuracy. System metering accuracy, as compared to the actual process value, shall be determined from the value read at the principal readout device such as the recorder or totalizer. System requirements shall not preclude any requirements specified herein for individual devices.

   a. For systems where the primary measuring device, transmitter, and receiver are furnished under this section, the accuracies shall be within the following limits:

      1) Level: 1.0% percent of measured span.

2.02 PANEL FABRICATION

A. General Fabrication Requirements. All panels furnished hereunder shall conform to the requirements of NEMA ICS-6-1988. The following paragraphs describe general fabrication requirements for the instrument panels, consoles, enclosures, and subpanels:

1. Wiring.

   a. All internal instrument and component device wiring shall be as normally furnished by the manufacturer. With the exception of electronic circuits, all interconnecting wiring and wiring to terminals for external connection shall be stranded tinned copper, insulated for not less than 600 volts, with a moisture-resistant and flame-retardant covering rated for not less than 90°C.

   b. Terminal blocks for external connections shall be suitable for 12 AWG wire and shall be rated 30 amperes at not less than 300 volts. Terminal blocks shall be fabricated complete with a marking strip, covers, and pressure connectors. Terminals shall be labeled to agree with identification shown on the supplier’s submittal circuits, plus one ground for each shielded cable. Not less than 8 inches of clearance shall be provided between the terminal strips and the base of vertical panels for conduit and wiring space. Not less than 20% percent spare terminals shall be provided. Each control loop or system shall be individually fused, and all fused or circuit breakers shall be clearly labeled and located for easy maintenance. Terminal block shall be Phoenix Contact UT 4-MTD series.

   c. All wiring shall be grouped and firmly supported inside the panel. Wiring shall be routed in nonmetallic slotted wire duct or similar. Ducts shall be readily accessible within the panel with removable covers and shall have a space of at least 40 percent of the depth of the duct available for future use after installation is complete

and all field wiring installed. Sufficient space shall be provided between cable groups or ducts and terminal blocks for easy installation or removal of cables. Wire duct shall be Thomas & Betts Ty Duct or approved equal.

d. Where signal or loop wiring must be routed to more than one panel or device, the required circuit routing shall be as indicated on the one-line diagrams.

e. All wires in the panel shall be identified at both ends of the wire. These labels shall agree with the labels shown on the wiring diagrams. The wire labels shall be of the heat-shrink tube type of wire marker as manufactured by Brady thermal labels.

2.03 METERING & CONTROL SYSTEMS

A. Principal components for the metering and control systems are indicted on the "Instrument List" at the end of this specification.

2.04 MATERIALS & EQUIPMENT

1. Pressure and Level Instrumentation

a. Hydrostatic Level Transducers

1) Each transducer shall be a hydrostatic pressure sensor for level measurement of fresh water and wastewater applications. The sensor shall be a permanently sealed submersible probe and cable combination. The transducer shall be a of the two-wire type which requires no direct power connection to the transducer. Transducer output shall be 4-20mA DC. The transducer shall be capable of the ranges and pressures for which the application will require. The sensor shall be mounted as shown on drawings or as required for application. The transducer shall be an Endress-Hauser "WaterpilotFMX21".

PART 3 -- EXECUTION

3.01 INSTALLATION REQUIREMENTS

A. General Requirements

1. The instrumentation equipment shall be installed by the Contractor or his subcontractors in accordance with the manufacturers' instructions. The services of the system Supplier's technical representative shall be provided as necessary to calibrate, test, and advise others of procedures for adjustment and operation.

B. Inspection.

1. Inspect materials and equipment for signs of damage, deterioration or other deleterious effects of storage, transportation, handling, or defects in manufacture or assembly.

a. Replace with identical new materials or equipment or repair to like new condition any materials or equipment showing such effects to the satisfaction of the Engineer and Owner.

C. Equipment Installation.

1. Handle, install, connect, clean, condition, align and adjust products and equipment in strict accordance with manufacturer's instructions and in conformity with specification requirements.

a. Perform all work in accordance with manufacturer's instructions.

b. Field Wiring. Field wiring materials and installation shall conform to the requirements of the electrical section.

c. Field-Mounted Instruments. Instruments shall be mounted so they may be easily read and serviced and all appurtenant devices are easily operated.

D. Field Calibration. A technical representative of the system supplier shall calibrate each instrument.

E. Systems Check. A technical representative of the system supplier shall participate in the checkout of metering and control systems.

3.02 CUSTOMER TRAINING

A. The coordinating supplier shall provide a qualified representative at the job site to train the Owner's personnel in operating and maintenance of the equipment. The training session shall consist of one 1-hour session, and the schedule shall be arranged and coordinated with the Owner.

3.03 INSTRUMENT LIST

Tag #	Description	Service	Scale	Provided Under Specification
LIT #2	Airport Tank #2 Level	Hydrostatic Level Transducer		26 09 00

- END OF SECTION -

SECTION 40 61 96 – PROCESS CONTROL DESCRIPTIONS

PART 1 -- GENERAL

1.01 SUMMARY

A. This section includes the items listed below and all other components necessary for a complete system as noted herein and indicated on the drawings

1. General Programming Requirements
2. PLC Programming
3. HMI Programming

B. Related Sections

1. Section 26 09 00
2. Section 40 63 43 with I/O list

C. PLC & HMI programming shall be completed by the system integrator (SI).

D. Scope of work shall include, but is not limited to:

1. Programming of the PLC at the North East Tank to receive the new tank level.
2. Programming any PLCs in the system so the new Airport Tank #2 level is communicated to the Airport Booster Station and to the Rifle SCADA System.
3. All programming to accomplish the controls noted below.
4. Loop test all PLC input and output points for proper operation.

1.02 SYSTEM DESCRIPTION

A. All the programming performed under this section shall be done in full conformity with the drawings, specifications, engineering data, instructions, and recommendations of the software manufacturer, unless exceptions are noted by engineer.

1.03 SUBMITTALS

A. Submittals shall be required as noted in Section 26 09 00.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 GENERAL PROGRAMMING REQUIREMENTS

A. PLC Programming standards.

1. General Considerations

a. Program Documentation

1) Documentation for all PLC programs shall include comments, tag/register descriptions, or any other programming tags. All PLC programs shall be

documented with comments provided for each subroutine, function and/or section. Use of abbreviations in comments and subroutine/section titles should be avoided. At the completion of the project, copies of programming, I/O list, memory map and communications map shall be provided in both printed and electronic format.

b. Analog signals

1) All analog inputs shall be scaled in Engineering units to be used in the logic.

2) A low-level and high-level alarm shall be generated for each analog signal. Each alarm shall have separate alarm and reset set points that shall be operator programmable from the HMI screen.

B. Human Machine Interface (HMI) standards.

1. General Considerations

a. In general, when the term HMI is used it indicates the SCADA computer.

b. All alarms will be displayed and logged on the HMI.

c. All analog signals will be trended and logged and displayed on the HMI in engineering units.

d. Alarming

1) All alarms shall be displayed and logged on the HIM screens.

2) Selected alarms shall have a visual and audible alarm.

3.02 SPECIFIC DEVICE CONTROL CRITERIA

A. Airport Booster Station Controls:

1. The existing Airport Booster station is controlled by the level of the Airport Tank #1.

2. With the addition of the Airport Tank #2, there will be a second tank level.

3. The system shall be reprogrammed so an operator can manually select which tank's level will be used to control the Airport Booster Pump Station.

4. The rest of the existing programming at the Airport Booster Pump Station shall remain the same.

B. Airport Tank #2 Level:

1. A low-level alarm shall be generated for the tank level. The low-level alarm setpoint shall be operator entered from the HMI screen.

2. A high-level alarm shall be generated for the tank level. The high-level alarm setpoint shall be operator entered from the HMI screen.

- END OF SECTION -

SECTION 40 63 43 – PROGRAMMABLE LOGIC CONTROLLERS

PART 1 -- GENERAL

1.01 SUMMARY

A. This section includes the items listed below and all other components necessary for a complete system as noted herein and indicated on the drawings

1. Programmable Logic Controllers (PLCs)

B. Related Sections

1. Section 26 05 00 – Electrical
2. Section 26 09 00 – Instrumentation & Controls

1.02 REFERENCES

A. ISA 5.1 – Instrumentation Symbols and Identification

B. NEMA ICS 1 – General Requirements for Industrial Control and Systems

1.03 DESIGN REQUIREMENTS

A. Analog input/output signals shall all be 4-20mA

1.04 SYSTEM DESCRIPTION

A. Equipment furnished and installed under this section shall be fabricated, assembled, erected, and placed in proper operating condition in full conformity with the drawings, specifications, engineering data, instructions, and recommendations of the equipment manufacturer, unless exceptions are noted by Engineer.

1. I/O List. An I/O list is attached at the end of this section

1.05 SUBMITTALS

A. Submittals shall be required as noted in Section 26 09 00.

1.06 QUALITY ASSURANCE

A. Supplier's qualifications

1. The entire system shall be designed, coordinated, and supplied by the system integrator supplier.

1.07 WARRANTY

A. The Supplier shall warrant the hardware, software, and configuration related to the operational performance of the facility for a period of one year from the date of system acceptance.

PART 2 -- PRODUCTS

2.01 PROJECT WORK

A. The PLCs are all existing and no new parts are needed

B. Work on the PLCs for this project:

1. A new analog input signal shall be added to the control panel at the Airport #1 tank that wires into the existing I/O radio.
2. There is an existing spare analog input on this radio.
3. The output from the corresponding I/O radio at the North East Tank shall be wired from the radio to the PLC at this site that is in the same panel as the I/O Radio.
4. The PLC has a spare analog input channel that can be used for this signal.
5. The PLC and HMI shall be programed as noted in Section 40 61 96.

PART 3 -- EXECUTION

3.01 INSTALLATION REQUIREMENTS

A. General Requirements

1. It shall be the Supplier's responsibility to ensure that the entire PLC system and HMI system is installed in a satisfactory condition per these specifications.

B. PLC and HMI Programming.

1. The Contractor shall be responsible for all PLC and HMI programming.

3.02 CUSTOMER TRAINING

1. The system supplier shall provide a qualified representative at the job site to train the Owner's personnel in operating and maintenance of the equipment. The training session shall consist of one 1-hour session and the schedule shall be arranged and coordinated with the Owner.

3.03 I/O LIST

Tag #							Notes
LIT #2	Rifle Airport 0.5 MG Tank - Level			1			

- END OF SECTION -

SECTION 46 40 10 – RESERVOIR HYDRODYNAMIC MIXING SYSTEM (HMS)

PART 1 -- General

1.01 DESCRIPTION

A. The Hydrodynamic Mixing System (HMS) is defined as a supplemental system installed within a potable water storage reservoir which passively utilizes the energy provided by the inlet water supply (via pumped or gravity head) and generates a sufficient inlet momentum to achieve a complete homogeneous blending of the water volume within the reservoir with the inlet supply flow. Determination of Complete Homogeneous Blending shall be defined by the modeling requirements and supporting hydraulic analysis as conducted by each individual manufacturer for their specific system configuration as defined within these specifications. System submittals not providing this validation shall not be considered as a viable Hydrodynamic Mixing System (HMS) and shall not be accepted as an equivalent to this system specification.

B. The specifications in this section include all components of the Reservoir Hydrodynamic Mixing System (HMS) consisting of a bi-directional flow manifold equipped with variable orifice duckbill inlet nozzles and outlet flow check valves that are NSF61 certified. The HMS manufacturer shall be responsible for designing the system in accordance with the hydrodynamic criteria defined within these specifications and submit design calculations verifying compliance in accordance with the submittal requirements. The following is a description of the Hydrodynamic Mixing System.

C. All modeling and hydraulic and mixing calculations pertaining to the HMS shall originate from the duckbill valve manufacturer. Modeling and calculations provided by parties other than the duckbill valve manufacturer are not allowed.

D. The complete Hydrodynamic Mixing System shall be supplied by the variable orifice nozzle manufacturer to maintain single source responsibility for the system. The complete system shall be defined as all piping and appurtenances within the tank downstream of the tank penetration. Appurtenances include pipe, fittings, horizontal and vertical pipe supports, expansion joints, variable orifice duckbill check valves, and any other equipment specified within this section of the specifications. The approved manufacturer for this system to be included within the Base Bid shall be manufactured by Red Valve Company/Tideflex Technologies, Pittsburgh, PA 15220. Local Equipment Supplier is PTI/ICS Sales at (303) 978-9100.

E. Manufacturer's and/or contractors submitting an alternative to the named Red Valve/Tideflex Technologies mixing system shall be responsible for obtaining any and all proprietary rights, license fees, royalties, technology licenses, and/or permissions required to provide such a system. The Manufacturer shall indemnify and hold harmless the Owner and Engineer against all claims, damages, losses, and expenses arising out of any infringement of patent rights or copyright incident relating to this system. Alternate mixing systems, even if listed by name, shall comply with the performance specifications in this section.

F. Material Sourcing (Domestic / International)

1. The steel material sourcing shall be at the discretion of the equipment

supplier; sourcing can be either local domestic or foreign import.

1.02 REFERENCED STANDARDS

A. American National Standards Institute (ANSI)

B16.1 – Cast Iron Pipe Flanges and Flanged Fittings

B16.5 – Pipe Flanges and Flanged Fittings

B36.10 – American National Standard Weights and Dimensions of Welded and Seamless Wrought Steel Pipe

B. American Society for Testing and Materials (ASTM)

A53 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

A234 – Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service

A240 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

A351 – Standard Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts

A536 – Standard Specification for Ductile Iron Castings

C110 – Ductile Iron and Gray-Iron Fittings, 3-inch through 48-inch for Water

D1330 – Standard Specification for Rubber-Sheet Gaskets

D1784 – PVC/CPVC Pipe Compounds

D1785 – PVC Pipe, Schedules 40, 80 & 120

D2466 – PVC Solvent Cement

D2855 – PVC Solvent Joints

D3261 – Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Fittings

D3915 – PVC Pipe Fitting Compounds

C. American Iron and Steel Institute (AISI)

AISI 304 – 304 Stainless Steel Plate

AISI 316 – 316 Stainless Steel Plate

AISI 1040 – Carbon Steel Plate

D. American Water Works Association (AWWA)

C104 – Cement-Mortar Lining of Ductile Iron Pipe and fittings for Water

C110 – Ductile-Iron and Gray-Iron Fittings, 3 In. through 48 In. for Water

C115 – Flange Ductile Iron Pipe with Ductile Iron or Gray Iron Threaded Flanges

C200 - AWWA Standard for Steel Water Pipe 6-inch and Larger

C207 – Standard for Steel Pipe Flanges for Waterworks Service – Size 4 in. to

144 in.

C220 – AWWA Standard for Stainless Steel Pipe, 4-inch and Larger

C900 – AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4-inch Through 12-inch. for Water Distribution

C905 – AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14-inch Through 48-inch for Water Transmission and Distribution

C906 – AWWA Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4-inch Through 63-inch for Water Distribution

E. American Water Works Association Research Foundation (AWWARF)

Project No. E20-J08 – Physical Modeling of Mixing in Water Storage Tanks (Forthcoming)

F. National Sanitation Foundation (NSF)

NSF Standard 14 – Plastic Piping System Components and Related Materials

NSF Standard 61 – Drinking Water System Components – Health Effects

PART 2 -- PRODUCTS

2.01 TIDEFLEX VARIABLE ORIFICE DUCKBILL INLET NOZZLES

A. Inlet ports/nozzles shall be duckbill-style check valves that allow fluid to enter the reservoir during fill cycles and prevent flow in the reverse direction through the nozzle during draw periods. Inlet ports/nozzles may not be fixed-diameter ports or pipes.

B. The flange drilling shall conform to ANSI B16.1 Class 125/ANSI B16.5, Class 150 standards. The duckbill valve shall be furnished with stainless steel 316 back-up rings for installation.

C. The duckbill valves shall be NSF61 Certified. NSF61 approved/Certified materials will not be accepted in lieu of valve certification.

D. Inlet ports/nozzles shall have a variable diameter vs. flow hydraulic profile that provides a non-linear jet velocity vs. flow characteristic and a linear headloss vs. flow characteristic. The hydraulic characteristics of the duckbill valves shall be defined by “Hydraulic Code”.

E. The inlet ports/nozzles shall discharge an elliptically shaped jet. The nozzle must have been modeled by an independent laboratory using Laser Induced Fluorescence (LIF).

F. Manufacturer shall have conducted independent hydraulic testing to determine headloss and jet velocity characteristics on a minimum of eight (8) sizes of duckbill valves ranging from 2-inch through 48-inch. The testing must include multiple constructions (stiffness) within each size and must have been conducted for free discharge (discharge to atmosphere) and submerged conditions.

G. Manufacturer shall have conducted an independent hydraulic test where multiple valves (at least four) of the same size and construction (stiffness) were tested to validate the submitted headloss characteristics and to prove the repeatability of

the manufacturing process to produce the same hydraulic characteristics.

H. Manufacturer shall have conducted independent hydraulic testing to study the flow distribution characteristics of duckbill valves installed on multiport manifolds.

I. Manufacturer to have conducted Finite Element Analysis (FEA) on various duckbill valves to determine deflection, stress, and strain characteristics under various load conditions. Modeling must have been done for flowing conditions (positive differential pressure) and reverse differential pressure.

J. Manufacturer must have conducted in-house backpressure testing on duckbill valves ranging from 3/4-inch to 48-inch.

K. Manufacturer shall have at least ten (10) years experience in the manufacturing of “duckbill” style elastomeric valves.

L. Manufacturer must have duckbill valves installed on manifold piping systems in at least 100 distribution system reservoirs.

M. Manufacturer must have representative inspection videos showing the duckbill valves discharging water into the reservoir during an initial fill (unsubmerged). Manufacturer must also have representative underwater inspection videos showing the operation of the valves when submerged. Representative videos can be submitted upon request from the engineer.

N. The duckbill style nozzles shall be one-piece elastomer matrix with internal fabric reinforcing designed to produce the required discharge velocity and minimum headloss requirements as stipulated in the Submittals section. The flange portion shall be an integral portion of the nozzle with fabric reinforcing spanning across the joint between the flange and nozzle body.

O. The elastomer used in construction of the duckbill valves must have been tested by an accredited independent laboratory that confirmed there is no degradation in the elastomer when exposed to chlorine and chloramine per the ASTM D471-98 “Standard Test Method for Rubber Property – Effect of Liquids.”

P. The manufacturer’s name, plant location, serial number and product part number which designates nozzle size, material and construction specifications shall be bonded onto the surface of the nozzle.

2.02 WATERFLEX OUTLET CHECK VALVES

A. The outlet flow valves shall be perforated disc type with elastomeric membrane.

B. The valves shall be NSF61 Certified. NSF61 approved/Certified materials will not be accepted in lieu of valve certification.

C. The perforated disc shall be fabricated of stainless steel 304 plate with or without welded support gussets depending on maximum backpressure. The disc shall be flanged and drilled to mate with ANSI B16.1, Class 125/ANSI B16.5 Class 150 flanges. The disc shall have three (3) tapped holes used for fastening the membrane and support rod to the disc with stainless steel 304 bolts, nuts, and lock washers. The top of the disc shall be tapped and supplied with lifting eyebolt for installation.

D. The membrane shall be circular, one piece rubber construction with fabric reinforcement. The diameter of the membrane shall allow adequate clearance between the membrane O.D. and the pipe I.D. The membrane shall be

vulcanized with a specified convex radius to produce a compression set to allow the membrane to seal against the perforated disc at low reverse differential pressure.

E. The support rod shall be stainless steel 304 and drilled with three (3) longitudinal holes to allow fastening of rod to membrane and perforated disc.

F. When line pressure inside the valve exceeds the backpressure outside the valve, the line pressure forces the membrane to open, allowing flow to pass through the perforations in the disc. When backpressure exceeds the line pressure, the membrane seats on the perforated disc preventing backflow.

G. The valve allows flow out of the reservoir during draw cycles and prevents flow into the reservoir during fill cycles.

H. The elastomer used in construction of the membrane must have been tested by an accredited independent laboratory that confirmed there is no degradation in the elastomer when exposed to chlorine and chloramine per the ASTM D471-98 “Standard Test Method for Rubber Property – Effect of Liquids.”

I. The manufacturer’s name, plant location, serial number and product part number which designates membrane size, material and construction specifications shall be bonded onto the surface of the membrane.

2.03 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

A. All PVC pipe and PVC fittings shall be a minimum Schedule 80 in accordance with ASTM D1785-83.

B. PVC pipe and fittings shall be NSF61 approved for potable water.

C. PVC pipe compounds shall be in accordance with the standards listed in Section 1.02: Referenced Standards.

D. PVC solvent and solvent joints shall be in accordance with the standards listed in Section 1.02: Referenced Standards.

E. Field solvent welding will not be allowed unless approved by the Engineer.

F. All pipe joints that are to be field connected shall be PVC Van Stone-type flanges. Flange drilling to be in accordance with ANSI B16.1/B16.5.

G. All fittings shall have the same pressure rating as the pipe unless otherwise noted.

2.04 HIGH DENSITY POLYETHYLENE (HDPE) PIPE AND FITTINGS

A. Two (2) Inches and Smaller – Pipe shall be manufactured from a PE4710 resin listed with the Plastic Pipe Institute (PPI) as TR-4. The resin material will meet the specifications of ASTM D3350-99 with a cell classification of PE345464C. Pipe shall have a manufacturing standard of ASTM D2737 (CTS). Pipe shall be DR 9 (200psi WPR) unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, and per AWWA C901, have nominal burst values of three (3) times the Working Pressure Rating (WPR) of the pipe. Pipe shall also have the following agency listing of NSF 14.

B. Four (4) Inches and Larger - Pipe shall be manufactured from a PE4710 resin

listed with the Plastic Pipe Institute (PPI) as TR-4. The resin material will meet the specifications of ASTM D3350-99 with a cell classification of PE345464C. Pipe shall have a manufacturing standard of ASTM F714. Pipe O.D. sizes 4-inch to 24-inch shall be available in steel pipe sizes (IPS) and ductile iron pipe sizes (DIPS). Pipe O.D. sizes 26-inch to 54-inch shall be available in steel pipe sizes (IPS). Pipe shall be DR 17 (100psi WPR) for pipe sizes up to 36-inch unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, listed as NSF 14, and per AWWA C906 Pressure Class (PC) 100 have a nominal burst value of three and one-half (3 ½) times the Working Pressure Rating (WPR) of the pipe.

C. Pipe fittings and flanged connections, to be joined by thermal butt-fusion, shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.

D. Sidewall fusions for connections to outlet piping shall be performed in accordance with HDPE pipe and fitting manufacturer’s specifications. The heating irons used for sidewall fusion shall have an inside diameter equal to the outside diameter of the HDPE pipe being fused. The size of the heating iron shall be ¼ inch larger than the size of the outlet branch being fused.

E. Field fusion welding will not be allowed unless specified or approved by the Engineer.

F. Socket fusion, hot gas fusion, threading, solvents, and epoxies will not be used to join HDPE pipe.

G. Butt Fusion Fittings - Fittings shall be PE4710 HDPE, Cell Classification of PE345464C as determined by ASTM D3350-99, and approved for AWWA use. Butt Fusion Fittings shall have a manufacturing standard of ASTM D3261. Molded & fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified in the plans. Fabricated fittings are to be manufactured using Data Loggers. Temperature, fusion pressure and a graphic representation of the fusion cycle shall be part of the quality control records. All fittings shall be suitable for use as pressure conduits, and per AWWA C906, have nominal burst values of three and one-half (3 ½) times the Working Pressure Rating (WPR) of the fitting.

H. Electrofusion Fittings - Fittings shall be PE4710 HDPE, Cell Classification of PE345464C as determined by ASTM D3350-99. Electrofusion Fittings shall have a manufacturing standard of ASTM F1055. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans. All electrofusion fittings shall be suitable for use as pressure conduits, and per AWWA C906, have nominal burst values of three and one-half (3 ½) times the Working Pressure Rating (WPR) of the fitting.

I. Flanged pipe sections for mechanical joining shall be comprised of HDPE flange adapters and Stainless Steel 304 slip-on backup rings. Flange adapters shall conform to PE4710 HDPE, Cell Classification PE345464C as determined by ASTM D3350-99.

2.05 DUCTILE IRON PIPE AND FITTINGS

1.1. Flanged ductile iron pipe shall be Class 53 and conform to AWWA C115 / ANSI A21.15.
1.2. Flanges shall be faced and drilled after being screwed onto the pipe and be 90 degrees with the longitudinal axis of the pipe.
1.3. Flanged ductile iron fittings shall conform to AWWA C110 / ANSI A21.10.
1.4. Pipe and fitting flanges shall be drilled to ANSI B16.1 Class 125 standards.
1.5. All flanged pipe and fittings shall be cement-mortar lined conforming to AWWA C104 / ANSI A21.4.
1.6. All flange pipe and fittings shall be shop-coated with an NSF61 Certified primer, 3-5 mils DFT. Paint shall be Tnemec 20 Pota-Pox or Tnemec N140 Pota-Pox Plus unless otherwise specified. Coating shall be in accordance with coating manufacturer's specifications.

2.06 CARBON STEEL PIPE AND FITTINGS

1.7. Carbon steel pipe and fittings shall conform to the associated standards listed in Section 2.0: Reference Standards.
1.8. Dimensions for carbon steel fittings shall conform to AWWA C110, unless otherwise specified.
1.9. Pipe and fittings shall be Schedule Standard wall thickness conforming to ANSI B36.10-1985.
1.10. All flanges shall be carbon steel ring flanges conforming to AWWA C207 Class D, unless otherwise specified on the drawings. Flange drilling pattern shall be in accordance with ANSI B16.1/B16.5 standards.
1.11. Ring flanges shall be continuously welded on both sides.
1.12. Welding of carbon steel pipe and fittings shall be in accordance with the Reference standards.
1.13. All butt welds shall be fully penetrated with gas shielding to the interior and exterior of the joint.
1.14. Welded cross-sections shall have a thickness equal to or greater than the welded material.
1.15. Field welding of carbon steel pipe and fittings will not be allowed unless approved by the Engineer.
1.16. All welded joints shall be free of sharp edges and burrs.
1.17. Coating of the inside of carbon steel pipe and fittings is not required, unless otherwise specified.
1.18. Coating of the outside of carbon steel pipe and fittings shall be performed in the field, by the contractor, following installation of the manifold piping system. Surface preparation and coating procedures shall be in accordance with standards listed in Coatings specification.

2.07 STAINLESS STEEL PIPE AND FITTINGS

A. Stainless steel pipe and fittings shall conform to the associated standards listed in Section 3.0: Reference Standards.

B. Dimensions for stainless steel fittings shall conform to AWWA C110, unless otherwise specified.

C. Piping shall be Schedule 10s stainless steel 304L fabricated from material per ASTM-A240.

D. All flanges shall be plate ring flanges, unless otherwise specified on the drawings. Flange drilling pattern shall be in accordance with ANSI B16.1/B16.5 standards.

E. Ring flanges shall be continuously welded on both sides.

F. All welded joints shall be free of sharp edges and burrs.

G. All shop welds shall be manually scrubbed or brushed with non-metallic pads or stainless steel wire brushes to remove weld discoloration. Welds to be chemically passivated with nitric or citric acid.

H. Field welding of stainless steel pipe and fittings will not be allowed unless approved by the Engineer.

2.08 FLANGE GASKETS

A. Flange gaskets shall be full-faced and shall be in accordance with ASTM D1330.

B. Flange gasket drilling pattern shall conform to ANSI B16.1/B16.5.

C. Flange gaskets shall be 1/8-inch thick.

D. Gasket material shall be EPDM.

2.09 FASTENERS

A. Hex head bolts and nuts shall be stainless steel 304 conforming to ANSI/ASME B18.2.1 and ANSI/ASME B18.2.2.

B. Plastic insulating sleeve/washers shall be utilized to isolate dissimilar bolt and flange metals where required.

2.10 PIPE SUPPORTS

A. For field welded, plain end, carbon steel pipe, the pipe supports shall be carbon steel in accordance with the associated standards and be welded directly between the tank floor, shell, access tube, or wet riser and the carbon steel piping. The pipe supports shall be flat plates, structural angle iron or channel.

B. The pipe supports shall consist of four components:

1. A top-works weldment that consists of structural channel and angle iron. The angle iron has predrilled holes for the U-bolt. The TMS piping shall rest on the angle iron and the U-bolt is used to retain the TMS pipe.

2. U-bolt with four hex nuts.

3. An 1/8-inch thick EPDM strip with a length equivalent to the circumference of the pipe. The strip shall be placed between the pipe and the angle iron and U-bolt.

C. The channel of the top-works weldment shall be field fit and modified to the required length. The channel shall then be field welded to the base plate.

D. The base plate shall be field welded to the tank floor or shell. The location of the base plate shall avoid welded joints in the floor/shell plates.

E. Plastic insulating sleeve/washers shall be utilized to isolate dissimilar metals where required.

2.11 COATINGS

A. Following installation of the manifold system, all carbon steel and ductile iron pipe, fittings, bolted connections, pipe supports, and appurtenances shall be coated according to the interior tank paint specification as specified by the Engineer.

B. Surface preparation and coating procedures shall be provided by the Engineer and the coating supplier.

C. **Tideflex and Waterflex Valves shall not be coated**. The valves shall either be masked or be mounted after coating of the tank and piping. Contractor to ensure masking materials are removed after coating.

PART 3 -- EXECUTION

3.01 DELIVERY, STORAGE, AND MATERIAL HANDLING

A. Individual nozzles and outlet valves shall be packaged separately from the piping equipment.

B. All flanges shall be protected by using plastic inserts or plank wood, pipe sections are to be fully supported to prevent pipe deflection or damage to fittings or connections.

C. All equipment shall be shipped on pallets capable of fully supporting the pipe sections across their entire length. Pallets should be accessible for fork lift transport or strap and hoist means without causing any load to the pipe equipment.

D. All stainless steel components shall be stored separately away from any carbon steel components or other materials that could stain or deface the stainless steel finish from run-off of oxidized ferrous materials.

E. All pipe equipment should be covered and stored in areas free from contact with construction site sediment erosion to prevent accumulation of materials within the pipe and fittings.

F. Duckbill nozzles should be protected from contact with rigid objects during handling and storage. The contractor shall be responsible for replacing any duckbill nozzles or elastomeric components that are damaged after arrival on the site through installation and start-up of the system.

3.02 SUBMITTALS

A. Independent CFD Modeling Validation

1. The mixing system designer/supplier must supply data or report from at least one project where an independent company conducted CFD modeling on their mixing system design and the modeling results verified the design achieved complete mixing.

B. Full Scale Tracer Study Validation

1. The mixing system designer/supplier must supply data or report from at least one project where a full-scale tracer study using calcium chloride was conducted on a circular reservoir and the tracer study results verified the mixing system design achieved complete mixing.

2. The mixing system designer/supplier must supply data or report from at least one project where a full-scale tracer study using calcium chloride was conducted on an elevated tank and the tracer study results verified the mixing system design achieved complete mixing.

C. Tideflex Inlet Nozzle and Waterflex Outlet Valve Testing and Validation

1. Verification of independent hydraulic testing to determine headloss and jet velocity characteristics on a minimum of eight (8) sizes of duckbill valves ranging from 2-inch through 48-inch. The testing must include multiple constructions (stiffness) within each size and must have been conducted for free discharge (discharge to atmosphere) and submerged conditions.
2. Verification of Independent Laboratory Testing for Manufacturing Consistency - the duckbill valve manufacturer shall provide summary documentation of a report conducted by an Independent Laboratory for hydraulic testing where multiple duckbill valves (at least four) of the same size and construction (stiffness) were tested to validate the submitted headloss characteristics and to prove the repeatability and consistency of the manufacturing process to produce the same hydraulic characteristics.
3. Report of independent testing that studied the flow distribution characteristics of duckbill valves installed on multiport manifolds. The manufacturer must have been in the business of manufacturing duckbill valves at the time the report was published.
4. Verification of Finite Element Analysis (FEA) of duckbill valves. The duckbill valve manufacturer shall provide summary documentation of Finite Element Analysis modeling on representative duckbill nozzle sizes to determine deflection, stress and strain characteristics under various load conditions. Modeling must have been done for flowing conditions (positive differential pressure) and reverse differential pressure.
5. Verification of independent hydraulic testing to determine headloss characteristics on a minimum of three (3) sizes of perforated disc/elastomeric membrane check valves ranging from 6-inch through 36-inch. Testing must have been conducted with and without the membrane installed. At least two (2) sizes shall have tested two (2) different membrane thicknesses.
6. Verification of Finite Element Analysis (FEA) modeling on a perforated disc/elastomeric membrane check valve to determine stress and deflection characteristics under reverse differential pressure.

D. Validation of Long-term performance

1. The mixing system designer/supplier must supply at least one inspection report showing proper operation of, and no deterioration of, the duckbill valves after being in service in a water storage tank mixing application for a minimum of 10 years.

E. NSF61 Certification

1. Copy of the NSF61 Certified listing for the valves used in the Hydraulic Mixing System (HMS).
2. The valves themselves must be NSF61 certified, not just the elastomer used in construction of the valves. NSF61 approved/certified materials will not be accepted in lieu of valve certification.
3. The NSF61 Certification for the valves must be for a minimum volume of 2,000 gallons. Valves with NSF61 Certification for minimum volume of greater than 2,000 gallons are not acceptable.

F. Test Report on Elastomer Exposure to Chlorine and Chloramine

1. Copy of test report from an accredited independent laboratory that confirmed there is no degradation in the elastomer when exposed to chlorine and chloramine per the ASTM D471-98 “Standard Test Method for Rubber Property – Effect of Liquids.”

G. System Installation Drawings

1. The duckbill valve manufacturer shall be responsible for providing engineering installation drawings of the complete manifold piping system as supplied by the manufacturer. These drawings shall include plan view piping arrangement, sections and elevations as required, support bracket installation details, duckbill nozzle orientation details, and all dimensions required for locating the system within the specified dimensions of the tank.

2. Six (6) sets of plans shall be provided to the Engineer for review and approval.

3. Drawings shall be a minimum of 11-inches x 17-inches and provided in digital PDF format.

4. Two (2) sets of final fabrication and installation drawings shall be included with the shipment of the manifold piping equipment.

H. Design Calculations

1. All Design Calculations, curves, and reference information listed below must originate and be submitted by the duckbill valve manufacturer. **Calculations, curves, and reference information provided by contractors relating to the HMS are not allowed.** The duckbill valve manufacturer MUST include within the submittal package the following design calculations, curves, and reference information:

a. Calculations showing the fill time required, under isothermal conditions, for the HMS system to achieve complete mix of the reservoir volume at minimum, average and peak fill rates. Complete mixing defined as 95% homogenous solution. The theory and equations used in calculating the mixing times must be from a published AWWA reference manual or paper. The reference document(s) must be submitted with the equations and calculations.

b. Calculations showing the water level drawdown required to achieve complete mixing on the fill cycles at minimum, average, and peak flow rates.

c. Calculations of average storage tank water age for both fill-then-draw, and simultaneous fill and draw scenarios. Theory used in calculating water age must be submitted with the calculations.

d. A representative Computational Fluid Dynamics (CFD) model evaluation of the proposed HMS system configuration applied within a reservoir of similar geometry. Model output documentation shall include all design variables applied for the simulation, plot of the 3-D geometry showing the mesh definition,

velocity magnitude vector and contour plots at different cross-sections throughout the water volume, simulated tracer animations showing the spatial and temporal distribution of inlet water in real time during the fill cycle.

e. Hydraulic calculations showing the resulting jet velocities of each inlet nozzle at minimum, average, and peak fill rates.

f. Hydraulic calculations showing the flow distribution among all inlet ports at minimum, average, and peak fill rates.

g. Manifold hydraulic calculations showing the total headloss of the HMS at minimum, average, and peak fill and draw rates. Headloss shall include all minor losses and headloss of nozzles and outlet check valves.

h. Hydraulic curves showing thrust vs. flow for the inlet nozzles.

i. Hydraulic curves for each outlet check valves showing headloss vs. flow.

j. Calculations showing the terminal rise height of the jets that discharge at an angle above horizontal. The terminal rise height shall be calculated assuming 10°F and 20°F colder inlet water and calculated at minimum, average and peak fill rates. The theory and equations used to calculate the terminal rise height shall be included.

k. Hydraulic curves for each inlet nozzle of Densimetric Froude number vs. flow

l. If the calculations and supporting data provided do not show compliance with the hydrodynamic requirements of the system as interpreted by the Engineer or Owner then the submittal shall be rejected.

I. Installation, Operation and Maintenance Manuals

1. After final approval of the submittals by the Engineer, the HMS valve manufacturer shall provide one (1) Digital copy of the Installation, Operation and Maintenance (IOM) Manual for the mixing system. Hard copies of the IOM manual can be requested and will be made available at a fee.

2. The IOM manual shall include the following information as a minimum:

a. A cover cage listing project specifics.

b. Table of contents.

c. Completed sections for the following: equipment list, shipment and storage instructions, assembly and installation instructions, safety notice, operating instructions, troubleshooting guide, and spare parts list.

d. Copy of hydraulic, mixing, and water age design calculations for the mixing system and all associates supporting curves and calculations.

e. Copy of complete set of the installation plans.

f. Copies of valve IOMs, NSF61 Certification listing, chlorine/chloramine exposure test report.

g. All validation documentation.

h. Component specification sheets for any specialized items supplied with the system.

3.03 INSTALLATION

A. Installation of the manifold system shall be in accordance with the installation plans and guidelines provided by the HMS manufacturer, and as specified in the installation section of the IOM manual, and the requirements defined in these specifications.

3.04 INSTALLATION INSPECTION AND START-UP TESTING PROCEDURES

A. The HMS manufacturer's authorized representative shall provide one (1) day inspection to verify that the system has been installed in accordance with the design specifications and installation drawings. It is recommended the flow testing described below is conducted the same day once the representative confirms proper installation of the system.

B. The inspection representative shall provide signed inspection documents confirming the date of the inspection and approval of the installation.

C. Start-Up Flow Testing

1. Following installation of the complete manifold piping system, the contractor shall open the upstream isolation valve to allow flow into the tank through the manifold system. The isolation valve must be opened slowly to prevent surge or over-pressurization of the manifold system. The isolation valve must be fully opened to inspect the flow characteristics of the manifold system.

2. The contractor shall take videos and photos during the filling operation and submit them to the HMS manufacturer. Videos and photos are to confirm:

a. There is no leakage in the piping system.

b. That all of the duckbill inlet nozzles are discharging flow into the tank. The only exception is for a system where the duckbill nozzles are at different elevations. If the water level is not at the elevation of higher duckbill nozzles, those may not discharge flow until the water level approaches those nozzles.

3.05 WARRANTY

A. All piping, pipe supports, expansion joints, and anchors shall be warranted by the HMS manufacturer against failure under design conditions for a period of one (1) year from the date of final installation certification.

B. Duckbill inlet nozzles and perforated disc/elastomeric membrane outlet check valves shall be warranted by the manufacturer against failure under design operating conditions for a period of one (1) year from the date of final installation certification. Elastomer components damaged as a result of maintenance

activities, foreign debris, or excessive exposure to direct ultraviolet and thermal radiation shall be excluded warranted coverage.

- END OF SECTION -

VELOCITY CONSTRUCTORS INC.

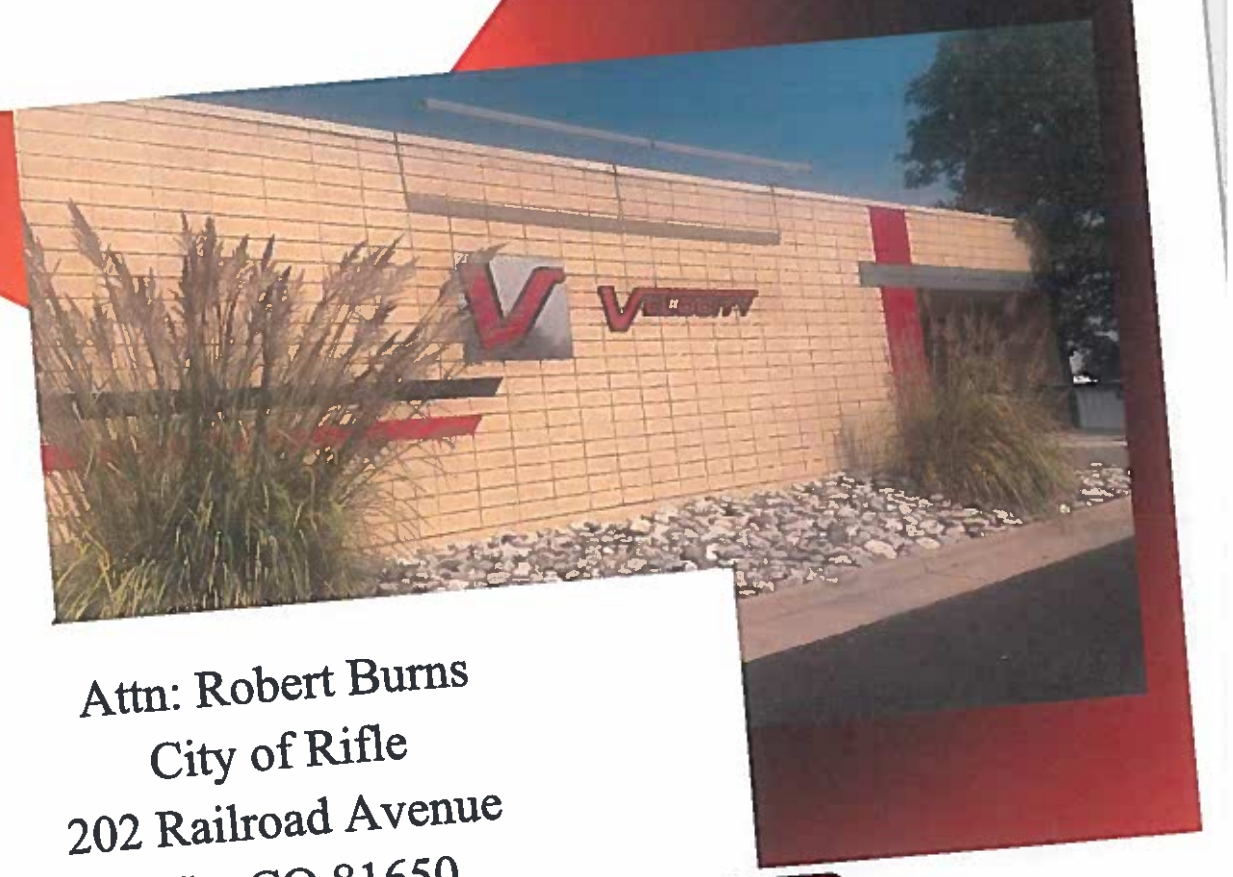
Project No. 2022-02

Bid Enclosed

Request for Proposal

Rifle Airport 0.5 MG Water Tank

Rifle, CO



Attn: Robert Burns
City of Rifle
202 Railroad Avenue
Rifle, CO 81650
May 20, 2022 @ 2:00PM

Velocity Constructors, Inc.
2107 W. College Ave, Englewood, CO 80110
Phone: 303-984-7800 Fax: 303-984-7802
www.velocityci.com

COVER LETTER

City of Rifle
202 Railroad Avenue
Rifle, CO 81650

Project Number: 2022-02
Project Name: Rifle Airport 0.5 MG Water Tank Project

Velocity Constructors, Inc. (VCI) has received and reviewed the Request for Proposal for the Rifle Airport 0.5 MG Water Tank Project located in Rifle, CO and are pleased to provide this attached Proposal. Our extensive knowledge of Water and Wastewater Treatment Pants, Lift and Booster Pump Stations, Water Tanks, Wells, PRV Vaults, Water Vaults, and Pump/Utility Infrastructure Projects allows us to understand and anticipate the challenges you face. The VCI team is focused on delivering tangible value to your projects. Through comprehensive project analysis techniques, we target those areas that are most pressing, develop custom solutions and deliver quantifiable results.

We take pride in delivering cost-effective construction projects while providing the highest level of support and quality. The following proposal will demonstrate many of the attributes we believe you will find invaluable on your upcoming project. Some of these attributes include:

- Colorado-based firm of twenty years VCI is based in Englewood; we are a local firm with local personnel and other established relationships in Colorado that will assist in the success of the proposed project.
- An in-depth knowledge of the industry and current technology VCI is a firm that specializes in the construction and upgrades of water and wastewater treatment facilities, lift and booster pump stations, water tanks, wells, PRV vaults, water vaults and pump/utility infrastructure projects; primarily in Colorado and often at plants that need to remain operational. This knowledge provides our project partners with experience specifically related to process facilities. We understand how and why these facilities need to function and what it takes to construct each element to deliver quality and longevity to the owner while maintaining operation of the plant.
- Focused team, with the proven ability to deliver quality, innovative and cost-effective solutions. The members of our proposed key staff have the highest level of integrity and a demonstrated history of proactively addressing constructability issues, providing cost-effective and efficient solutions from design to start-up and commissioning.

We trust you will find the enclosed documents demonstrate that our team has the experience and ability to successfully complete your project. We thank you for this opportunity and are excited for the possibilities.

Sincerely,
Velocity Constructors, Inc.

Robert Rogstad
Vice President

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SECTION 00 41 13 – GMP PROPOSAL

This GMP Proposal is for the construction of the Rifle Airport 0.5 MG Water Tank. As indicated in the Contract Documents, the GMP may relate to the entire scope of the Project or to a portion of the Project, if the Project is being completed in multiple construction packages

1.01 GMP RECIPIENT

A. This GMP Proposal is submitted to:

City of Rifle
202 Railroad Avenue
Rifle, CO 81650
Attention: Robert Burns, Utility Director

B. The undersigned Contractor (CM/GC) proposes and agrees, if the GMP Proposal is accepted, to execute the Agreement in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the GMP and within the Contract Times indicated in the GMP Proposal and in accordance with the other terms and conditions of the Contract Documents and acknowledges the following.

1.02 CONTRACTOR'S ACKNOWLEDGEMENTS

Contractor accepts all of the terms and conditions of the Contract Documents. The GMP Proposal will remain subject to acceptance for 14 calendar days after it is received by the Owner, or for such longer period of time that Contractor may agree to in writing upon request of Owner. Contractor will sign and deliver the required number of counterparts of the Construction Services Agreement with the bonds and other documents required by the Construction Services Agreement within the time periods set forth in the Contract Documents.

1.03 CONTRACTOR'S REPRESENTATIONS

A. In submitting this proposal, Contractor represents, as more fully set forth in the Construction Services Agreement, that:

1. Contractor has examined and carefully studied the Contract Documents, other related data identified in the Contract Documents, if any, and the following Addenda, receipt of all of which is hereby acknowledged:

   (List Addenda by Addendum Number and date received).

ADDENDA	DATE
Addendum #1	04/13/2022
Addendum #2	04/27/2022

2. Contractor has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance of the Work.

3. Contractor is familiar with and is satisfied as to all Laws and Regulations

that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied all:

   a. Reports of explorations and tests of subsurface conditions at or contiguous to the Site and drawings of physical conditions relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities), if any, that have been identified in the Supplementary Conditions in SC-4.02 as containing reliable "technical data."

   b. Permits to construct the work and applicability of any other permits necessary to complete the Work.

   c. Grant funding accounting requirements associated with the welded steel tank.

B. Contractor has considered the information known to Contractor, information commonly known to contractors doing business in the locality of the Site, information and observations obtained from visits to the Site, the Contract Documents, and the Site- related reports and drawings identified in the Contract Documents with respect to the effect of such information, observations, and documents on:

   a. The cost, progress and performance of the Work.

   b. The means, methods, techniques, sequences and procedures of construction to be employed by Contractor, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents to be employed by Contractor; and

   c. Contractor's safety precautions and programs.

2. Based on the information and observations referred to herein, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this GMP for performance of the Work within the times required and in accordance with the other terms and conditions of the Contract Documents.

3. Contractor is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which the GMP Proposal is submitted as indicated in the Contract Documents.

4. Contractor has given Resident Engineer, or Construction Inspector, written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Resident Engineer, Construction Inspector, or Engineer as the case may be, is acceptable to Contractor, and those documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which the GMP Proposal is submitted.

5. The Contract Documents are sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this GMP Proposal is submitted.

6. Contractor has reviewed and shall meet all Grant Funding Agency

requirements for this Work.

7. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

1.04 CONTRACTOR'S CERTIFICATION

A. Contractor certifies that:

1. This proposal is genuine and is not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
2. Contractor has not directly or indirectly induced or solicited any other Contractor to submit a false or sham Proposal;
3. Contractor has not solicited or induced any individual or entity to refrain from proposing; and
4. Contractor has not engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract. For the purposes of the Paragraph 1.04.A.4;
   a. "Corrupt practice" means the offering, giving, or soliciting of anything of value likely to influence the action of a public official in the procurement process.
   b. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the Contractor proposal process to the detriment of Owner, (b) to establish GMP at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
   c. "Collusive practice" means to scheme or arrangement between two or more Proposers, with or without the knowledge of Owner, a purpose of which is to establish GMP at artificial, non-competitive levels.
   d. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the proposal process or affect the execution of the Contract.

1.05 GMP PROPOSAL FORM

A. Contractor (CM/GC) will complete the Work in accordance with the Contract Documents and accept in full payment for the Work items listed in the attached detailed estimate. The blanks indicated in the GMP Proposal form below must be fully and properly filled out by the CM/GC. The CM/GC shall obtain any clarifications regarding the use of the proposal from the City's Resident Engineer, or Construction Inspector, prior to submitting the GMP.

GMP Proposal Form				AMOUNT
A.	Cost of the Work – Self Performed			$997,714
INDIRECT COSTS			RATE	
B.	Construction Fee		6.5%	$72,634
C.	Subtotal (Self-Performed)			$1,070,348

D.	Cost of the Work – Subcontracted			$1,240,484
INDIRECT COSTS			RATE	
E.	Construction Fee		5.0%	$ 69,467
F.			Subtotal (Subcontracted)	$1,309,951
G.			Sum of Items (C & F)	$ 2,380,299
H.	General Conditions Fee (applied to items A and D)		7.57%	$ 185,717
H1	Payment and Performance Bonds	$30,026		
H2	Insurance	$11,312		

I.	Applicable Taxes		$109,476
J.	CM/GC Contractor's Contingency		$150,000
K.	Proposal Request PR-1		$ 0.00
K1.	(Future Proposal Request)		$ 0.00
K2.	(Future Proposal Request)		$ 0.00
		L. GMP (Sum of Items G-J and approved Proposal Requests)	$2,866,830
OTHER COSTS			
M.	Owner Contingency (Optional)		$150,000
		N. CONTRACT PRICE	$ 3,016,830

1.06 TIME OF COMPLETION

A. Contractor will achieve Substantial Completion, as defined in the Contract Documents, within (150) calendar days from the Notice to Proceed, as stated in the Construction Services Agreement.

B. Contractor agrees to apply for Final Payment, as defined by the Contract Documents, within (60) calendar days from achieving Substantial Completion, as stated in the Construction Services Agreement.

C. Contractor accepts the provisions of the Construction Services Agreement as to liquidated and additional delay damages in the event of failure to achieve milestones or to substantially complete the Work within the Contract Times.

D. In addition, Contractor agrees to meet the specified interim Milestones as defined in the Contract Documents.

1.07 ATTACHMENTS TO THIS GMP PROPOSAL

A. The following documents are attached to and made a condition of this GMP Proposal:

1. When requested, Contractor shall submit evidence of authority and qualification to do business within the State of Colorado, or agreement, in writing to obtain such authority and qualification prior to the Notice to Proceed, when requested by the Owner.
2. Contractor shall submit a forecasted cash flow for the duration of construction displaying by month the total amounts of anticipated pay application amount for evaluation by Owner.
3. Contractor shall submit brief qualification statements and resumes of staff to be committed by specialty subcontractors, or design-build contractors to the project when requested. For example, welded steel tank erector.

B. The following documents shall be submitted to the Owner with the submittal of the GMP Proposal.

1. Cover
2. Table of Contents
3. Name of Project and Description of the Construction Package if applicable, and its components.
4. GMP Proposal and the following attachments:
   a. Detailed Estimate upon which GMP is based
   b. Schedule of Work to be Self-Performed, if any, as stipulated by Owner.
   c. Schedule of Subcontractors and Suppliers (part of construction services agreement)
   d. Statement of MBE/WBE and Female participation in each Trade and letter(s) of Intent, if applicable.
5. Schedule of Values (SOV)
6. GMP Proposal clarifications and assumptions

7. Project Schedule
8. GMP Documents (1 set with face marked as the basis of the GMP Proposal)

1.08 DEFINED TERMS

A. The terms used in the GMP Proposal with initial capital letters have the meanings stated in the General Conditions and Supplementary Conditions.

1.09 GMP PROPOSAL

This GMP Proposal is submitted on: 05/20/2020

Complete the appropriate section regarding the CONTRACTOR'S business affiliation:

A. An Individual

Name (Typed or Printed):_____

By _____

(Individual's Signature)

Doing business as _____

License or Registration Number:_____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

B. A Partnership

Partnership Name:_____

By:_____

(Signature of General Partner - Attach evidence of authority to sign)

(Name (Typed or Printed):_____

License or Registration Number: _____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

C. A Corporation

Corporation Name: Velocity Constructors, Inc.

Colorado
(State of Incorporation)

By: _____
(Signature - Attach evidence of authority to sign)

Name and Title (Typed or Printed): Robert Rogstad - Vice President

(CORPORATE SEAL)

Attest: _____
(Secretary) Tim Wilcox - Corporate Secretary

License or Registration Number: LIC237322

Business Address: 2107 W. College Ave.
Englewood, CO 80110

Phone No.: 303-984-7800

Fax No: 303-984-7802

E-mail Address: rrogstad@velocityci.com

D. Limited Liability Company

Firm Name:_____

_____

(State of Formation)

By:_____

(Signature of Member/Authorized to Sign)

_____

(Printed or Typed Name and Title of Member Authorized to Sign)

(Attach evidence of authority to sign.)

License or Registration Number:_____

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

E. A Joint Venture

Name of Joint Venture:_____

First Joint Venturer Name:_____

By:_____

(Signature of First Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed):_____

Title:_____

Second Joint Venturer Name:_____

By_____

(Signature of Second Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed):_____

Title:_____

(Each Joint Venturer must sign. The manner of signing for each individual, partnership, corporation or limited liability company that is a party to the joint venture shall be in the manner indicated above).

Business Address:_____

_____

Phone No.:_____

Fax No:_____

E-mail Address:_____

1.10 LIST OF SCHEDULES

1. SCHEDULE OF WORK TO BE SELF PERFORMED AS STIPULATED BY THE PARTIES
2. SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

Document A310 TM – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:
(Name, legal status and address)

Velocity Constructors, Inc.
2107 West College Avenue
Englewood, CO 80110

SURETY:
(Name, legal status and principal place of business)
Western Surety Company
151 N. Franklin Street
Chicago, IL 60606
Mailing Address for Notices
151 North Franklin Street
Chicago, IL 60606

OWNER:
(Name, legal status and address)

City of Rifle
202 Railroad Avenue
Rifle, CO 81650

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

BOND AMOUNT: 5% Five Percent of Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)

Rifle Airport 0.5 MG Water Tank

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of May, 2022.

(Witness)

Nicholas Lattarulo
(Witness) Nicholas Lattarulo

Velocity Constructors, Inc.
(Principal) *(Seal)*
By: V.P.
(Title)

Western Surety Company
(Surety) *(Seal)*
By:
(Title) Susan J. Lattarulo, Attorney-in-Fact

S-0054/AS 8/10

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Susan J Lattarulo, Sheila J Montoya, Tanna G Prince, Kelli E Housworth, Thomas McCoy, Justin Tomlin, John Browning, Individually

of Denver, CO, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 23rd day of June, 2021.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 23rd day of June, 2021, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
March 2, 2026

M. BENT
NOTARY PUBLIC
SOUTH DAKOTA

M. Bent, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 20th day of May, 2022

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

VELOCITY CONSTRUCTORS INC.

EVIDENCE OF AUTHORITY TO SIGN

The following information is provided to you as Evidence of Authority to Sign on behalf of Velocity Constructors, Inc.

Company Data:

Legal Name: Velocity Constructors, Inc.

Address: 2107 W. College Avenue Englewood, CO 80110

Type of Organization: Corporation

Type of Business: Contractor

Phone: 303-984-7800 Fax: 303-984-7802

Year of Incorporation: 2002

Corporate Officers: Grant Dunkle, President

Signature: _____ Date: 05/16/2022

Robert Rogstad, Vice-President

Signature: _____ Date: 05/16/2022

Tim Wilcox, Secretary

Signature: _____ Date: 05/16/2022

Corporate Address: 2107 W College Avenue, Englewood, CO 80110

State of Incorporation: Colorado

Corporate Seal:

Attest:

Tim Wilcox

➢ NAME OF PROJECT AND DESCRIPTION OF THE CONSTRUCTION PACKAGE

PROJECT NAME:
Rifle Airport 0.5 MG Water Tank Project
Rifle, Colorado

PROJECT LOCATION:
The Work associated with the construction of a 0.5 MG (0.5 MG) potable welded steel water storage tank will occur primarily adjacent to the existing Rifle Airport 1.0 MG water storage tank accessed from County Road #333 (aka Hunter Mesa Road).

DESCRIPTION OF WORK:
The Work to be performed under this Contract generally includes, but is not limited to, constructing the Work described below and all related appurtenances. The Work shall be as follows:

1. Erosion and sediment control.
2. Earthwork, drainage, grading, fencing, and paving.
3. Over-excavation and soil replacement.
4. Concrete ring foundation.
5. Erection of welded-steel storage tank and accessories.
6. Installation of associated piping and valves.
7. Installation of instrumentation and SCADA system modifications.
8. Cathodic protection.
9. Painting and Coatings.

WORK BY OWNER:
OWNER will perform the following in connection with the Work:

1. Operate all existing valves, gates, pumps, equipment, and appurtenances that will affect OWNER's operation, unless otherwise specified or indicated. CONTRACTOR shall drain/fill all lines with approval of OWNER.

ESTIMATE FOR: E22037 Rifle 0.5MG Water Tank
DIVISION: Concrete
PREPARED BY : ARF
ADDENDA: 2

Velocity Constructors, Inc.
1330 S. Cherokee Street
Denver, CO 80223
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	WORKSHEET CREW CODE	DESCRIPTION	UNIT	QTY
# Bulkheads >		**CIRCULAR RING FOOTING ASSEMBLY**	**Each**	1
	175	**< Reinforcing LBS/CY**	**I.D.**	52.3
	4%	**< Concrete Waste Factor**	**O.D.**	53.8
	4000	**< Concrete Strength**	**Depth**	3.5
FINEGRD	Formwork	Fine Grade	SF	125
FWEDG4	Formwork	Formwork - Mat/SOG/Ftg Edge > 2', ≤ 4'	SF	1,166
RBINSTSUB	Formwork	Sub - Rebar Installation	TN	1.9
RBSUPPLY	Formwork	Supply Epoxy Rebar	TN	1.9
RBSUPPORT	Formwork	Rebar Support - Bricks	EA	31
FSSBULK	Formwork	Slab Bulkheads	SF	-
SOFORM	Formwork	Strip & Oil Formwork	SF	1,166
CIPSOG	Placing - Slabs	CIP Pumped Concrete - SOG - All	CY	21.6
PMPTRUCKHR	Pump Truck	Pump Truck Hourly	HR	8
PMPTRUCKCY	Placing - Slabs	Pump Truck Price Per CY	CY	22
C4000	Placing - Slabs	Purchase Concrete - 4,000 psi	CY	21.6
C4000W	Placing - Slabs	Purchase Concrete - 4,000 psi (Waste)	CY	0.9
FLSCHG	Placing - Slabs	Fuel Surcharge/ Truck	EA	1
SHRTLD	Placing - Slabs	Short Load Fee	EA	-
FCHCONC	Placing - Slabs	Finish Horizontal Concrete	SF	125
FCCURE	Placing - Slabs	Cure Concrete - Liquid Compound	SF	125
	222.67	**<< MANHOURS MANHOURS/CY >>**	**10.32**	
		Construction Footer for Ring Beam		
# Bulkheads >		**CIRCULAR RING FOOTING ASSEMBLY**	**Each**	1
	175	**< Reinforcing LBS/CY**	**I.D.**	51.8
	4%	**< Concrete Waste Factor**	**O.D.**	54.3
	4000	**< Concrete Strength**	**Depth**	0.3
FINEGRD	Formwork	Fine Grade	SF	208
FWEDG2	Formwork	Formwork - Mat/SOG/Ftg Edge > 1', ≤ 2'	SF	83

ESTIMATE FOR: E22037 Rifle Airport 0.5MG Water Tank
DIVISION: Paint/Finishes
PREPARED BY : ARF
ADDENDA: 2

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
		DIV 9, Finishes		
	LINE 001	**Paint/Coatings New Tank**	**Unit**	**Qty**
BPSPCM	CC	Blast & Prep Surface for Paint/Coatings (low level clean)	SF	6,132
ECLR	CC	Epoxy Coating Inside of Tank	SF	6,132
ECLR	CC	Epoxy Coating Outside of Tank	SF	6,132
	LINE 001	**Paint/Coatings Existing Tank**	**Unit**	**Qty**
BPSPCM	CC	Blast & Prep Surface for Paint/Coatings (low level clean)	SF	10,886
ECLR	CC	Epoxy Coating Inside of Tank	SF	10,886
X	CC	cut tank opening		24
X	CC	Grind and bevel edges		24
X	CC	Reset shell plate		24
X	CC	Welding		48
X	CC	Xray testing	LS	1.0
X	CC	chlorine	EA	1
X	CC	hand labor		8
X	CC	fill tank		24
X	CC	observation period for leaks		24
X	CC	bac-t test	EA	1
	129.00	**<< MANHOURS 3 MAN CREW DAYS >>**	**5.38**	
		Hoisting	HR	43.0

ESTIMATE FOR: E22037 Rifle 0.5MG Water Tank
DIVISION: Concrete
PREPARED BY : ARF
ADDENDA: 2

Velocity Constructors, Inc.
1330 S. Cherokee Street
Denver, CO 80223
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	WORKSHEET CREW CODE	DESCRIPTION	UNIT	QTY
FSSBULK	Formwork	Slab Bulkheads	SF	-
FCSCJPREP	Labor Crew	Sandblast Prep / Const Jt Prep	SF	
SOFORM	Formwork	Strip & Oil Formwork	SF	83
CIPSOG	Placing - Slabs	CIP Pumped Concrete - SOG - All	CY	1.5
PMPTRUCKHR	Pump Truck	Pump Truck Hourly	HR	4
PMPTRUCKCY	Placing - Slabs	Pump Truck Price Per CY	CY	2
C4000	Placing - Slabs	Purchase Concrete - 4,000 psi	CY	1.5
C4000W	Placing - Slabs	Purchase Concrete - 4,000 psi (Waste)	CY	0.1
FLSCHG	Placing - Slabs	Fuel Surcharge/ Truck	EA	1
SHRTLD	Placing - Slabs	Short Load Fee	EA	1
FCHCONC	Placing - Slabs	Finish Horizontal Concrete	SF	208
FCCURE	Placing - Slabs	Cure Concrete - Liquid Compound	SF	208
	21.84	**<< MANHOURS MANHOURS/CY >>**	**14.17**	

Insert assemblies above this line.

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
Line Items				
X		Steel Pipe Package	LS	1
Earthwork				
		Temporary Construction Yard		
		Not Used		
		Potholing	**EA**	
		Sheet C3		
X		Pothole Tank Drain Connection	EA	1
X		Pothole Tank Intake/Outflow Connection	EA	1
		Traffic Control	**Days**	**30**
TRAF1		Traffic Arrow Board Solar *	Day	30
TRAF3		Traffic Sign TRANSITION UNIVERSAL (SYM), W4-2 48X48 *	Day	30
TRAF9		Traffic Plan	EA	1
		Dewatering	**LF**	
		Surface Water		
X		Surface Water Allowance	LS	1

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
		Clear and Grub		
X		Clear and Grub (4-days)	CY	800
		Trucking	CY	800
		Erosion Control	**LS**	
		Sheet C2		
X		Erosion Control Plan	EA	1
X		Erosion Control Mobilization	EA	1
X		Silt Fence (Installed)	LF	275
X		Erosion Log	LF	230
X		Concrete Washout	EA	1
X		Maintain Concrete Washout	WK	4
X		Vehicle Tracking Control	EA	1
X		Maintain Vehicle Tracking Control	WK	10
X		Remove Erosion Control	LS	1
		Mass Excavation	**CY**	**8,773**
		Sheet C2		
X		Mass Excavation (50 CY/Crew Hour)	CY	8,800
		Trucking	CY	8,800
		Tank Overexcavation Fill	**CY**	**956**
X		Subgrade Preparation (30 CY/ Crew Hour)	CY	960
		SUPPLY CDOT Class 2, 5, or 6 Base	TN	1,440
		COMPACTION WATER	GAL	3
		Trucking	CY	32

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
		Foundation Ring Excavation	**CY**	**133**
X		Excavation (20 CY/Crew Hour)	CY	133
		Foundation Ring Structural Backfill	**CY**	**105**
X		Structural Backfill (20 CY/Crew Hour)	CY	105
		Tank Subgrade Preparation	**CY**	**26**
X		Structural Backfill (10 CY/Crew Hour)	CY	26
		SUPPLY Course Sand	TN	39
		Asphalt (Place)	**SF**	**2,240**
		Sheet C4 per Detail C5		
		Place Base 8" Base	CY	55
		SUPPLY Class 6 Road Base	TN	83
X		Place Asphalt (3" Thickness)	SY	249
X		Mobilization of Asphalt Contractor	EA	1
		Class 6 ABC Paving (Place)	**SF**	**2,700**
		Sheet C4		
		Place Base 8"	CY	67
		SUPPLY Class 6 Road Base	TN	100
		Remediation		
		Sheet C2		
X		Hydromulch (Native Dryland Seed)	SF	10,530
X		Permanent Control Fabric	SF	10,530

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
X		Fine Grade (250 sf/mh)	SF	10,530
		Fencing	**LF**	
		See Public Works Manual Section 36		
X		Salvage Existing Fencing	LF	175
X		New Security Fence 8'-0 w/3 lines Barbed wire, 9 ga	LF	372
		Trucking	Load	1

Demolition

Demolition Description

Not Used

Yard Pipe

Line 01 4" Underdrain

Sheet C2

PVC4PP	PVC S40 4" PIPE SOC	LF	100
PVC4PP	PVC S40 4" Perforated PIPE SOC	LF	260
PVC4CRS	PVC S80 4" CROSS SOC	EA	6
PVC4CAP	PVC S40 4" CAP SOC	EA	12
PVC4CPL	PVC S40 4" COUP SOC	EA	12
X	Marify Fabric	SY	500
RCP12FES	Mitered Drain 8" Det. Sht C7	EA	1

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
PVCPQ		PVC S80 PRIMER P70-P	QT	2
PVCCQ		PVC S80 CEMENT 717 P	QT	2
		EXCAVATE 8" Flared End Section	EA	1
		BACKFILL 8" Flared End Section	EA	1
		EXCAVATE TO 14.5' - 4.5' WIDE	LF	360
		BACKFILL FROM 14.5' - 4.5' WIDE	LF	360
		SUPPLY BEDDING - SQUEEGEE	TN	180
		Trucking	CY	58

Line 02 12" Storm Drain

Sheet C2

RCP12PP		N-12-WT 12" ADS	LF	80
RCP12FES		Mitered Drain 12" Det. Sht C7	EA	2
X		Tracer Wire	LF	80
X		Marker Tape	LF	80
MH60	See Sht. C6	18" Nyoplast Basin w/H20 Loading	VF	15
FP12Pipe		PIPE INSULATION 12" 1" Buried	LF	20
		EXCAVATE Basin	EA	1
		BACKFILL Basin	EA	1
		EXCAVATE 12" Flared End Section	EA	2
		BACKFILL 12" Flared End Section	EA	2
		EXCAVATE TO 14.5' - 4.5' WIDE	LF	80
		BACKFILL FROM 14.5' - 4.5' WIDE	LF	80
		SUPPLY BEDDING - Crushed Stone	TN	41
		COMPACTION WATER	GAL	2
		Trucking	CY	51

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
	Line 03	**8" Tank Drain Including Underslab**		
		Sheet C3 and C5		
		Underslab		
FS8PP		STL FAB 8" PIPE	LF	20
FS8L90		STL FAB 8" 90 ELL	EA	1
FS8CPL		STL FAB 8" Restrained MECH CPL PVC/Sch 40 Steel	EA	2
X		Thrust Block @8" 90	EA	1
		Yard		
VG8MN		VLV GATE R/S 8" MJ w/NUT OPER	EA	1
DCM8L90		DIP CML 8" MJ 90 BEND	EA	1
CNP8PP		C900 DR18 PVC 8" PIPE	LF	20
DCM8ACC		DIP CML 8" MJ ACCESSORIES	EA	4
DCM8ML		DIP CML 8" MEGA LUGS	EA	4
FP8Pipe		PIPE INSULATION 8" 1" Buried	LF	40
X		Tracer Wire	LF	20
X		Thrust Block @8" 90	EA	1
X		Thrust Block @8" Valve	EA	1
		Gate Operators		
VBRCP		CONCRETE VALVE BOX RISER PAD 2'x2'x6"	EA	1
VBR40		VALVE BOX RISER ASSY 33"-43" w/ LOCKING LID	EA	1
RSESTL		VLV STEM EXTENSION 1.25" x 8.0' CSTL	EA	1
RSN		VLV STEM NUT	EA	1
RSC		VLV STEM BOTTOM CPL	EA	1
		EXCAVATE TO 14.5' - 4.5' WIDE	LF	30
		BACKFILL FROM 14.5' - 4.5' WIDE	LF	30
		SUPPLY Class 6 Road Base	TN	40
		SUPPLY BEDDING - SQUEEGEE	TN	16

VELOCITY CONSTRUCTORS INC.

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
		COMPACTION WATER	GAL	2
		Trucking	CY	14
	Line 04	**12" Tank Overflow Including Underslab**		
		Sheet C3 and C5		
		Underslab		
FS12PP		STL FAB 12" PIPE	LF	20
FS12L90		STL FAB 12" Long Radius 90 ELL	EA	1
FS12F		STL FAB 12" FLANGE	EA	1
FS12CPL		STL FAB 12" Restrained MECH CPL PVC/Sch 40 Steel	EA	2
X		Thrust Block @12" 90	EA	1
		Yard		
VG12MN		VLV GATE R/S 12" MJ w/NUT OPER	EA	1
DCM12X8RT		DIP CML 12" x 8" MJ RED TEE	EA	1
DCM12L45		DIP CML 12" MJ 45 BEND	EA	1
DCM12T		DIP CML 12" MJ TEE	EA	1
DCM12SS		DIP CML 12" MJ SOLID SLEEVE	EA	1
DCM12ACC		DIP CML 12" MJ ACCESSORIES	EA	11
DCM12ML		DIP CML 12" MEGA LUGS	EA	11
DCM8ACC		DIP CML 8" MJ ACCESSORIES	EA	1
DCM8ML		DIP CML 8" MEGA LUGS	EA	1
CNP12PP		C900 DR18 PVC 12" PIPE	LF	80
X		Joint Restraint 12" PVC C900 SST Hardware	EA	3
FP12Pipe		PIPE INSULATION 12" 1" Buried	LF	100
X		Tracer Wire	LF	100
X		Thrust Block @12"x8" Tee	EA	1
X		Thrust Block @12" 45	EA	1
X		Thrust Block @12" TEE	EA	1

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
X		Thrust Block @12" Valve	EA	1
		Gate Operators		
VBRCP		CONCRETE VALVE BOX RISER PAD 2'x2'x6"	EA	1
VBR40		VALVE BOX RISER ASSY 33"-43" w/ LOCKING LID	EA	1
RSESTL		VLV STEM EXTENSION 1.25" x 8.0' CSTL	EA	1
RSN		VLV STEM NUT	EA	1
RSC		VLV STEM BOTTOM CPL	EA	1
		EXCAVATE TO 14.5' - 4.5' WIDE	LF	120
		BACKFILL FROM 14.5' - 4.5' WIDE	LF	120
		SUPPLY Class 6 Road Base	TN	59
		SUPPLY BEDDING - SQUEEGEE	TN	79
		COMPACTION WATER	GAL	2
		Trucking	CY	64
Line 05		**12" Tank Intake/Outflow Including Underslab**		
		Sheet C3 and C5		
		Underslab		
FS12PP		STL FAB 12" PIPE	LF	20
FS12L90		STL FAB 12" Long Radius 90 ELL	EA	1
FS12L90		STL FAB 12" 90 ELL	EA	1
FS12F		STL FAB 12" FLANGE	EA	1
FS12CPL		STL FAB 12" Restrained MECH CPL PVC/Sch 40 Steel	EA	2
X		Thrust Block @12" 90	EA	1
		Yard		
VG12MN		VLV GATE R/S 12" MJ w/NUT OPER	EA	1
DCM12L45		DIP CML 12" MJ 45 BEND	EA	1
DCM12T		DIP CML 12" MJ TEE	EA	1
DCM12SS		DIP CML 12" MJ SOLID SLEEVE	EA	1

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
DCM12ACC		DIP CML 12" MJ ACCESSORIES	EA	8
DCM12ML		DIP CML 12" MEGA LUGS	EA	8
CNP12PP		C900 DR18 PVC 12" PIPE	LF	80
X		Joint Restraint 12" PVC C900 SST Hardware	EA	3
X		Tracer Wire	LF	100
X		Thrust Block @12" 45	EA	1
X		Thrust Block @12" TEE	EA	1
X		Thrust Block @12" Valve	EA	1
		Gate Operators		
VBRCP		CONCRETE VALVE BOX RISER PAD 2'x2'x6"	EA	1
VBR40		VALVE BOX RISER ASSY 33"-43" w/ LOCKING LID	EA	1
RSESTL		VLV STEM EXTENSION 1.25" x 8.0' CSTL	EA	1
RSN		VLV STEM NUT	EA	1
RSC		VLV STEM BOTTOM CPL	EA	1
		EXCAVATE TO 14.5' - 4.5' WIDE	LF	100
		BACKFILL FROM 14.5' - 4.5' WIDE	LF	100
		SUPPLY Class 6 Road Base	TN	53
		SUPPLY BEDDING - SQUEEGEE	TN	46
		COMPACTION WATER	GAL	2
		Trucking	CY	54

Process Piping - Interior

Not Used **LF**

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
		Process Equipment		
		0.5M Gallon Welded Steel Tank		
		Sheet C5		
X		1/2" Asphalt Impregnated Fiberboard Under Tank	SF	2,291
X		0.5 Million Gallon Welded Steel Tank F&I	EA	1
X		Lifting/Crane	LS	1
X		12" Interior Supply/Outlet Piping	EA	1
X		12" Interior Overflow Standpipe w/Square Intake	EA	1
X		8"Ø TANK DRAIN CONNECTION	EA	1
X		36"Ø HINGED SHELL MANHOLE	EA	2
X		24"Ø MANWAY	EA	3
X		36"Ø MANWAY	EA	1
X		HANDRAIL, SAFETY CAGE AND TOE KICK	EA	1
X		STEEL LADDER & STEEL GRATED PLATFORM	EA	1
X		TANK VENT	EA	1
X		ANCHOR BRACKET	EA	10
X		Interior Piping	LS	1
X		Foundation Design	LS	1
X		Freight	LS	1
X		Field Testing	EA	1
X		Assist Factory Representative	EA	1
X		Material Unloading	LS	1
		46 40 10 Reservoir Hydrodynamic Mixing System (HMS)		

ESTIMATE FOR: E22037 - RIFLE 0.5 MG WATER TANK
DIVISION: YARD & PROCESS PIPING
PREPARED BY : John Swain
ADDENDA: two

Velocity Constructors, Inc.
2107 W College Avenue
Englewood, CO 80110
Phone: (303) 984-7800 Fax: (303) 984-7802

DATA CODE	LINE NUMBER CREW CODE	DESCRIPTION	UNIT	QTY
X		Hydrodynamic Mixing System consisting of a bi-directional flow manifold equipped with variable orifice duckbill inlet nozzles and outlet flow check valves that are NSF61 certified.	EA	1
X		Warranty - 1 year	LS	1
X		Factory Certification of Installation	Days	1
X		Freight	LS	1
X		Material Unloading	LS	1
X		Assist Factory Representative	EA	1
X		Filling Tank For Startup	LS	1
X		Protection from coatings as applicable	LS	1
X		Videos and photos during the filling operation and submit them to the HMS manufacturer.	LS	1

SCHEDULE OF WORK TO BE SELF PERFORMED AS STIPULATED BY THE PARTIES

To enable the City to evaluate the Contractor's GMP Proposal, the Contractor shall identify by list all portions or aspects of the work that will be self-performed by the Parties that may include earthwork, process mechanical, aspects of concrete work, and yard piping. Payment for self-performed work will be paid on the basis agreed to in the GMP Proposal. The following information shall be provided:

A. Description of Work

B. Value

Information Provided on Next Page

➢ SCHEDULE OF WORK TO BE SELF-PERFORMED

Description of Work	Earthwork
Value	$437,900.00

Description of Work	Erosion Control
Value	$16,200

Description of Work	Concrete
Value	$36,300.00

Description of Work	Process Equipment / Piping
Value	$407,100.00

Description of Work	
Value	

Description of Work	
Value	

SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

To enable City to evaluate the Contractor's GMP Proposal, the Contractor shall nominate all Subcontractors, persons, firms and corporations (including those who are to furnish items of material and equipment) to whom the Contractor may award a Subagreement valued at greater than $10,000. If Contractor has not determined the Subcontractors to whom contracts will be awarded, all Subcontractors who have been, or will be, contacted to submit a proposal should be listed. Payment for subcontracted work will be paid on the basis agreed to in the GMP Proposal. For each nominated Subcontractor, person, firm, or corporation, the following information shall be provided:

A. Subcontractor's or Supplier's Name
B. Description of Work or Materials
C. Value
D. Contact Person's Name
E. Contact Person's E-mail
F. Contact Person's Phone Number
G. Disadvantage Business Status (i.e., MBE, WBE, Status, when applicable)
H. Female Participation (in each trade, when applicable)

Information Provided on Next Page

- END OF SECTION -

➢ SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

Subcontractor's or Supplier's Name	Frontier Paving Inc.
Description of Work or Materials	Water Tank Paving
Value	$12,800.00
Contact Person's Name	Dave Heiberger
Contact Person's E-mail	frontierpaving@frontierpavinginc.com
Contact Person's Phone Number	970-625-2224
Disadvantage Business Status	No
Female Participation	No

Subcontractor's or Supplier's Name	Process Technology Inc.
Description of Work or Materials	Piping Equipment
Value	$59,571.00
Contact Person's Name	Buddy Alford
Contact Person's E-mail	BuddyA@process-tech.com
Contact Person's Phone Number	303-635-9888
Disadvantage Business Status	No
Female Participation	No

Subcontractor's or Supplier's Name	Taylor Fence Company
Description of Work or Materials	Site Fencing
Value	$27,300.00
Contact Person's Name	Samuel Hasberry
Contact Person's E-mail	shasberry@taylorfenceco.com
Contact Person's Phone Number	719-576-1626
Disadvantage Business Status	No
Female Participation	No

Subcontractor's or Supplier's Name	Pittsburg Tank & Tower Group
Description of Work or Materials	Ground Storage Tank
Value	$665,075
Contact Person's Name	Dennis Davis
Contact Person's E-mail	ddavis@pttg.com
Contact Person's Phone Number	270-826-900
Disadvantage Business Status	No
Female Participation	No

Subcontractor's or Supplier's Name	Goldenwest Specialties
Description of Work or Materials	Tank Painting
Value	$276,720
Contact Person's Name	Shawn Bridges
Contact Person's E-mail	Shawn@goldenwestptg.com
Contact Person's Phone Number	801-837-1969
Disadvantage Business Status	No
Female Participation	No

➢ SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

Subcontractor's or Supplier's Name	Triangle Electric
Description of Work or Materials	Electrical
Value	$30,800.00
Contact Person's Name	Frank Bowman
Contact Person's E-mail	mail@triangleelect.com
Contact Person's Phone Number	970.453.5424
Disadvantage Business Status	No
Female Participation	No

Subcontractor's or Supplier's Name	
Description of Work or Materials	
Value	
Contact Person's Name	
Contact Person's E-mail	
Contact Person's Phone Number	
Disadvantage Business Status	
Female Participation	

Subcontractor's or Supplier's Name	
Description of Work or Materials	
Value	
Contact Person's Name	
Contact Person's E-mail	
Contact Person's Phone Number	
Disadvantage Business Status	
Female Participation	

Subcontractor's or Supplier's Name	
Description of Work or Materials	
Value	
Contact Person's Name	
Contact Person's E-mail	
Contact Person's Phone Number	
Disadvantage Business Status	
Female Participation	

Subcontractor's or Supplier's Name	
Description of Work or Materials	
Value	
Contact Person's Name	
Contact Person's E-mail	
Contact Person's Phone Number	
Disadvantage Business Status	
Female Participation	

➢ STATEMENT OF MBE/WBE AND FEMALE PARTICIPATION

VCI Constructors, Inc. (VCI) EEO, M/WBE, and DBE programs were developed to ensure that subcontractors, material suppliers, vendors and consultants are not discriminate in employment based upon race, color, religion, sex, national origin, age, or disability; and, where the need has been identified, provide equal employment opportunity through affirmative action. VCI makes every effort to utilization M/WBE and DBE subcontractors and suppliers on each of our projects.

M/WBE AND DBE OUTREACH EFFORTS

VCI notifies minority and women contractors of their intention to solicit bids from M/WBE and DBE firms by utilizes iSqFt, a software as a service (SaaS). iSqFt is used primarily during the design, pre-construction, and procurement stages of construction, and is designed to help identify project leads and product sales opportunities, network with other construction professionals, manage bid solicitation process, and view and share digital drawings and specifications. Other notifications made to solicit bids from M/WBE, and DBE firms are Advertising in trade association publications and other publications; Mailings; Contacts with M/WBE, and DBE contractor organizations; and Phone contacts with M/WBE's and DBE's.

M/WBE AND DBE EVALUATION

Prior to Bid Dates VCI receives and reviews subcontractor quotations from M/WBE, DBE and non-M/WBE, DBE companies. During the review process VCI looks at all information provided within submitted quotations (specification, drawings, addendums, and final cost). VCI makes every effort to contact (Email or Phone) each subcontractor to review there quote, if any information is missing or if subcontractor can reduce their quotation cost. After reviewing each quote VCI will utilize best cost proposed, in some cases best cost proposed is not from a M/WBE, DBE company. VCI makes every effort to utilize M/WBE, DBE companies in all Proposals, if M/WBE and DBE are not utilized then VCI will provide Good Faith Effort documentation.

GOOD FAITH EFFORTS

Adequate good faith efforts means that VCI took all necessary and reasonable steps to achieve the goal which, by their scope, intensity, and appropriateness, could reasonably be expected to obtain sufficient M/WBE and DBE participation. Adequate good faith efforts also mean that VCI actively and aggressively sought M/WBE and DBE participation.

VCI applied with all required project specifications requesting M/WBE and DBE participation, emails were sent to interested M/WBE and DBE subcontractors and access was given to all Project Plans, Specifications and Addendums located on iSqFt. Please see attached "Good Faith Effort" emails and spreadsheet showing M/WBE and DBE Subcontractor Notification and Participation.

Subject: Invitation to Bid - Rifle, CO_Rifle Airport 0.5 MG Water Tank : civil and process
To: Glen Carter (gcarter@pikespeaksteel.com)
From: John Swain (Transmittals@isqftmail.com)
Sent Date: April 27, 2022 02:08 PM ET

INVITATION TO BID

VELOCITY CONSTRUCTORS INC.

From: Velocity Constructors, Inc.
Sent: Wednesday, April 27, 2022 2:08 PM ET
Email: jswain@velocityci.com
Phone: (303) 974-3859
Fax:

Let us know your bid intention here:
Will Bid | Under Review | Won't Bid

Attention: Glen Carter - gcarter@pikespeaksteel.com
Company: Pikes Peak Steel (V)

You have been invited to bid:
Rifle, CO_Rifle Airport 0.5 MG Water Tank

Bid Due Date: Wednesday, May 18, 2022 2:00 PM MT
Project Location: 202 Railroad Avenue, Rifle, CO 81650
Project Start Date:
Contact: John Swain

Description:
The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: 1. Sediment and Erosion Control measures. 2. Earthwork, Over-excavation, Structural Fill, Hauling, Grading, Drainage, Fencing, Paving, Restoration. 3. Concrete Ring-wall Foundation. 4. Welded-Steel Tank and Accessories - Procurement and Erection. 5. Associated Piping and Instrumentation. 6. Reservoir Hydrodynamic Mixing System. 7. Painting of Exterior and Interior of Tank. 8. Solar Powered Cathodic Protection

Message to Bidders:
My direct e-mail is jswain@velocityci.com
Direct phone number is 303-974-3859

Click here to view the project
Access Number: Y04L-NPLC

Let us know your bid intention here:
Will Bid | Under Review | Won't Bid

"Velocity Constructors, Inc. (VCI) is an Equal Opportunity Employer (EOE) and encourages Disadvantaged Business Enterprise (DBE) participation."

For help, visit http://www.isqft.com/start/pages/contact-support/ or call us at (877) 4CC-TOOL (422-8665).

iSqFt a ConstructConnect company

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VELOCITY CONSTRUCTORS INC.

Rifle, CO_Rifle Airport 0.5 MG Water Tank

Company Name	First Name	Last Name	Email Address	City	State	Phone	Invite Status	MBE
AMI Mechanical	AMI	Mechanical	estimating@amimechanical.com	Thornton	CO	(303) 280-1401	Invited	Federal - MBE Hispanic - National Minority Supplier Development Council
Cornerstone Coatings (V)	Kevin	Hecht	khecht@cornerstonepainting.com	Commerce City	CO	(443) 223-6662	Invited	CO - City and County of Denver - SBE,CO - Regional Transportation District - SBE,CO - City of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE
Creative Hardscape Co Inc	Gino	Bardelli	gino@creativehardscape.com	Lakewood	CO	(303) 914-8525	Invited	CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE
Cruz Construction, Inc. (V)	Joe	Cruz	crzconstruction@aol.com	Colorado Springs	CO	(719) 596-9226	Invited	NM - New Mexico DOT - DBE ,WY - Wyoming DOT - DBE,CO - Colorado DOT / Colorado UCP - DBE
Die Hard Inc	Guy	Jordan	gjordan@diehardinc.com	Colorado Springs	CO	(719) 499-5962	Invited	Federal - SDVOSB - Service Disabled Veteran Owned Business
Gary Leimer Inc	Timothy	Covillo	tim@garyleimer.com	DENVER	CO	(303) 297-9261	Invited	Federal - HUBZone - HUB Zone Certification,Federal - MBE Hispanic - National Minority Supplier Development Council,Federal - 8 - a - Section 8 - a Certified,Federal - SDB - Small Disadvantaged Business,Federal - SB - Small Business Enterprise,CO - City and County of Denver - SBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE
Green Electric, Inc.	John	Green	green@pcisys.net	Colorado Springs	CO	(719) 630-3352	Invited	Federal - SDB - Small Disadvantaged Business,Federal - SB - Small Business Enterprise
High Country Fence, LLC (V)	DeAnna	Power	info@highcountryfence.com	Rye	CO	(719) 489-2346	Invited	CO - CODOT - ESB,NM - New Mexico DOT - DBE ,WY - Wyoming DOT - DBE,CO - Colorado DOT / Colorado UCP - DBE
Horizon Environmental Services	Levi	Mead	levim@horizonenvservices.com	Durango	CO	(970) 259-4346	Invited	CO - CODOT - ESB,CO - Colorado DOT / Colorado UCP - DBE,NM - New Mexico DOT - DBE ,AZ - Arizona DOT - ACDBE,AZ - Arizona DOT - DBE,AZ - Arizona DOT - SB
Hydro-Turf	Drew	Chancelor	estimating@hydroturf.com	Colorado Springs	CO	(719) 591-8151	Invited	CO - City and County of Denver - EBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - DBE,CO - City of Denver - SBE,CO - City of Denver - WBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE / Colorado UCP - DBE
Hydro-Turf	Leon	Mazanec	leon@hydroturfinc.com	colorado springs	CO	(719) 591-8151	Invited	Federal - MBE Asian-Indian - National Minority Supplier Development Council,Federal - MBE Native American - National Minority Supplier Development Council,Federal - SDVOSB - Service Disabled Veteran Owned Business,Federal - VOSB - Veteran Owned Small Business,Federal - MBE Black - National Minority Supplier Development Council,Federal - 8 - a - Section 8 - a Certified,Federal - SB - Small Business Enterprise,Federal - SDB - Small Disadvantaged Business,Federal - MBE Hispanic - National Minority Supplier Development Council,Federal - WOSB - Women-Owned Small Business,Federal - MBE Asian-Pacific - National Minority Supplier Development Council,Federal - HUBZone - HUB Zone Certification,MBE - Other - Legacy,Other - Other - Legacy,CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City and County of Denver - EBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE,CO - City of Denver - WBE
J-2 Contracting Co.	Chris	Leone	chrisleone@j2contracting.com	Greeley	CO	(970) 392-0694	Invited	Federal - SB - Small Business Enterprise,Federal - SDB - Small Disadvantaged Business
JAGs Enterprises Inc	don	garner	jags1@jagsent.com	Greeley	CO	(970) 339-9971	Invited	CO - CODOT - ESB
JCOR Mechanical Inc.	Cody	Overstreet	cody@jcormech.com	Golden	CO	(303) 271-9787	Invited	CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - Regional Transportation District - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - DBE,CO - City of Denver - SBE,CO - City of Denver - WBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE / Colorado UCP - DBE
KECI Colorado, Inc.	Steve	O'hanlon	steve.ohanlon@kecico.com	Sedalia	CO	(303) 791-3759	Invited	CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City and County of Denver - EBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE,CO - Regional Transportation District - SBE
KenKo Co., Inc. (V)	Kenji	Thomas	kenjuthomas@kenkovcompamy.com	Aurora	CO	(303) 751-4100	Invited	CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - Regional Transportation District - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - DBE,CO - City of Denver - SBE,CO - City of Denver - WBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE / Colorado UCP - DBE
Ken's Landscape & Irrigation, Inc	Susan	Robison	admin@kililandscape.com	Pueblo	CO	(719) 545-8189	Invited	CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE
Krule Construction, LLC (V)	Kim	Rule	kim@krule.us	Meeker	CO	(970) 878-3473	Invited	CO - City and County of Denver - EBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - CODOT - ESB,WY - Wyoming DOT - DBE,CO - City of Denver - SBE,CO - City of Denver - WBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE,CO - Colorado DOT / Colorado UCP - DBE,Federal - WOSB - Women-Owned Small Business,Federal - U. S. Department of Veteran Affairs - SDVOSB
Maximum Painting	Jenny	Rendfrey	jenny@maximumpaintingllc.com	Fort Collins	CO	(970) 472-4079	Invited	CO - City and County of Denver - SBE
Metro Fence Company	Ben	Pike	benp@metrofence.net	Commerce City	CO	(303) 469-1317	Invited	CO - City and County of Denver - SBE,CO - Regional Transportation District - SBE,CO - City of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE
Mr Lightning	Renee	Johnson	renee@mrlightning.com	Colorado Springs	CO	(719) 488-2315	Invited	Federal - SB - Small Business Enterprise,Federal - SDB - Small Disadvantaged Business,CO - City and County of Denver - SBE,CO - City and County of Denver - EBE,CO - City of Denver - SBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB
Murphy Industrial Coatings	Steve	Moore	smoore@murphy.ac	Signal Hill	CA	(562) 427-7720	Invited	CA - State of California, DGS - SB
Pikes Peak Steel (V)	Glen	Carter	gcarter@pikespeaksteel.com	Colorado Springs	CO	(719) 471-8811	Invited	CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - DBE,WY - Wyoming DOT - DBE,CO - City of Denver - SBE,CO - City of Denver - WBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE / Colorado UCP - DBE

Good Faith Effort

VELOCITY CONSTRUCTORS INC.

Rifle, CO_Rifle Airport 0.5 MG Water Tank

Prolan Solutions	Paratheesh	Ambileriveedil	apratheesh@burndy.com	Shelton	CT	(203) 799-4264	Invited	PA - Pennsylvania Department of General Services - SBE
Purgatoire Valley Construction	Robert	Schultz	robertschultz@pvc1inc.com	Trinidad	CO	(719) 846-8449	Invited	Federal - HUBZone - HUB Zone Certification
Quality Linings and Painting, Inc.	Kunal	Mehra	estimating@qlapi.com	Denver	CO	(303) 307-1313	Invited	Federal - SDB - Small Disadvantaged Business,Federal - WOSB - Women-Owned Small Business,Federal - SB - Small Business Enterprise,Federal - MBE Asian-Indian - National Minority Supplier Development Council
Rice and Rice Inc	Troy	Trimble	troy@riceandriceinc.com	Fountain	CO	(719) 392-5311	Invited	Federal - SB - Small Business Enterprise
RMTS / Rocky Mountain Turf Solutions	Lacey	Hartman	lacey@rmtsconst.com	Pueblo	CO	(719) 289-7458	Invited	CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City and County of Denver - EBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - DBE,CO - City of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE
Rocky Mountain Telecom and Data	Damian	Difeo	ddifeo@rmtd.net	Golden	CO	(303) 531-6022	Invited	CO - City and County of Denver - EBE,CO - City and County of Denver - SBE,CO - City of Denver - SBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB
Smith Environmental and Engineering (V)	Colin	Marshall	colinmarshall@smithdelivers.com	Dacono	CO	(270) 564-1263	Invited	CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - CODOT - ESB,CO - Regional Transportation District - SBE,CO - City of Denver - WBE,CO - City and County of Denver - SB,CO - City of Denver - SBE,CO - City and County of Denver - SBE
South-Side Lawn & Landscape LLC	Steve	Schroeder	steveschroeder@comcast.net	Pueblo	CO	(719) 564-0858	Invited	Federal - HUBZone - HUB Zone Certification
Stanton Engineering Solutions, Inc.	Craig	Madsen	craig@estanton.com	Grand Junction	CO	(970) 549-7592	Invited	National Radon Proficiency Program
Steelock (V)	Ian	Sandoval	ians@steelock.com	Denver	CO	(303) 295-1915	Invited	CO - City and County of Denver - SBE,CO - Regional Transportation District - SBE,CO - City of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE
Total Terrain Inc	Marty	Garcia	marty@totalterrain.com	Pueblo	CO	(719) 542-8080	Invited	CO - Colorado DOT / Colorado UCP - DBE
Tri-M Electric	Matt	Martinez	matt.martinez@tri-melectrical.com	Thornton	CO	(720) 203-2644	Invited	CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City and County of Denver - EBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE
Trujillo Special Coatings	Felicia	Trujillo	Felicia@teamtrujillo.com	Lakewood	CO	(303) 988-3326	Invited	Federal - MBE Hispanic - National Minority Supplier Development Council,Federal - SDB - Small Disadvantaged Business,Federal - SB - Small Business Enterprise,CO - City and County of Denver - DBE / Colorado UCP - DBE,CO - City and County of Denver - M/WBE,CO - City and County of Denver - SBE,CO - City of Denver - SBE,CO - City and County of Denver - DBE,CO - City and County of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - DBE
Wolff & Son Electric, Inc.	Wolff	Estimator	cwolff4592@comcast.net	Charleston	SC	(843) 763-0376	Invited	SC - Charleston County - SBE
Cornerstone Coatings (V)	Kevin	Hecht	khecht@cornerstonepainting.com	Commerce City	CO	(443) 223-6662	Invited	CO - City and County of Denver - SBE,CO - Regional Transportation District - SBE,CO - City of Denver - SBE,CO - City and County of Denver - SB,CO - City and County of Denver - SBE

➢ SCHEDULE OF VALUES (SOV)

CONTINUATION SHEET

AIA DOCUMENT G703

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing
Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply

APPLICATION NO: Schedule of Values
APPLICATION DATE:
PERIOD TO:
PROJECT NO: Rifle Airport 0.5 MGD Water Tank

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED: FROM PREVIOUS APPLICATION (D + E)	WORK COMPLETED: THIS PERIOD	MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)	BALANCE TO FINISH (C - G)	RETAINAGE 10%
1	Mob Demob	48,160.00							
2	Erosion & Sediment Control	16,134.00							
3	Earthwork, Drainage, Grading, Fencing, Paving	437,863.00							
4	Over Ex Soil Replacement	69,657.00							
5	Concrete Ring Foundation	34,901.00							
6	Process Piping	390,999.00							
7	Tank Install	596,232.00							
8	Site Work	65,500.00							
9	Painter	410,636.00							
10	Cathodic Protection	127,323.00							
11	Electrical	40,793.00							
12	Owner Contingency	150,000.00							
13	Contractors Contingency	150,000.00							
14	General Conditions	185,717.00							
15	Bonds	30,026.00							
16	Insurance	11,312.00							
17	Construction Fee	142,101.00							
18	Taxes	109,476.00							
19									
20									
21									
22									
23									
24									
	GRAND TOTALS:	3,016,830	0	0	0	0	0.0%	0	0

AIA DOCUMENT G703 APPLICATION AND CERTIFICATION FOR PAYMENT 1992 EDITION AIA® © 1992 THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVE., N.W., WASHINGTON, DC 20006-5292

➢ GMP PROPOSAL CLARIFICATIONS AND ASSUMPTIONS

1. Section 01 11 13 – Summary of Work, Part 2 Section 2.02 - OWNER will perform the following in connection with the Work; Operate all existing valves, gates, pumps, equipment, and appurtenances that will affect OWNER's operation, unless otherwise specified or indicated. CONTRACTOR shall drain/fill all lines with approval of OWNER.
2. Section 00 41 13 – GMP Proposal Form; Indirect Costs Items K, K1 and K2. A value of zero was added to the form due to no additional information was given within the Project Specifications.

TANK ASSUMPTIONS CLARIFICATIONS AND ASSUMPTIONS

1. The tank will be designed, erected, painted, and tested in accordance with AWWA D100 Section 14 and the project specifications.
2. The tank bottom will be 1/4" and lap welded on the top side only. The tank shell will be 1/4" minimum full penetration butt welded construction. The tank will be furnished with a 3/16" cone roof supported by a center column and radial rafters and lap welded on the top side only.
3. All materials will be A36 Carbon Steel.
4. Price is based on open shop non prevailing wage labor.
5. Our price is based on standards as set forth by the applicable codes. We have not included for AISC, ISO, QP or any other certifications. We have not included for dedicated onsite QC personnel such as NACE, CWI or other.
6. All pricing and schedules offered are subject to prior sale. Quotes on steel material (both Carbon and Stainless) and consumables are based on the mill price at time of quote. Due to the volatility of the market at this time, material price will be revised upon placement of the steel order. Schedule and pricing are based on material availability.

PROJECT SCHEDULE ASSUMPTIONS CLARIFICATIONS AND ASSUMPTIONS

1. Painting of the existing tank is subject to weather restraints so is not reflected ins schedule
2. NOA was assumed to be 3 weeks after bid date (06/10/22)
3. NTP was assumed to be 2 weeks following NOA (06/24/22)
4. No snow days were assumed
5. All submittals would be submitted within 3 weeks following the NOA
6. All submittals will be reviewed within 2 weeks
7. All procurement excluding tank will be on-site within 3 weeks of final review approval
8. Tank will take 8 weeks to procure after approved submittal
9. Tank will take 8 weeks to construct and coat without weather delays
10. Hydrostatic Mixer can be procured in three weeks

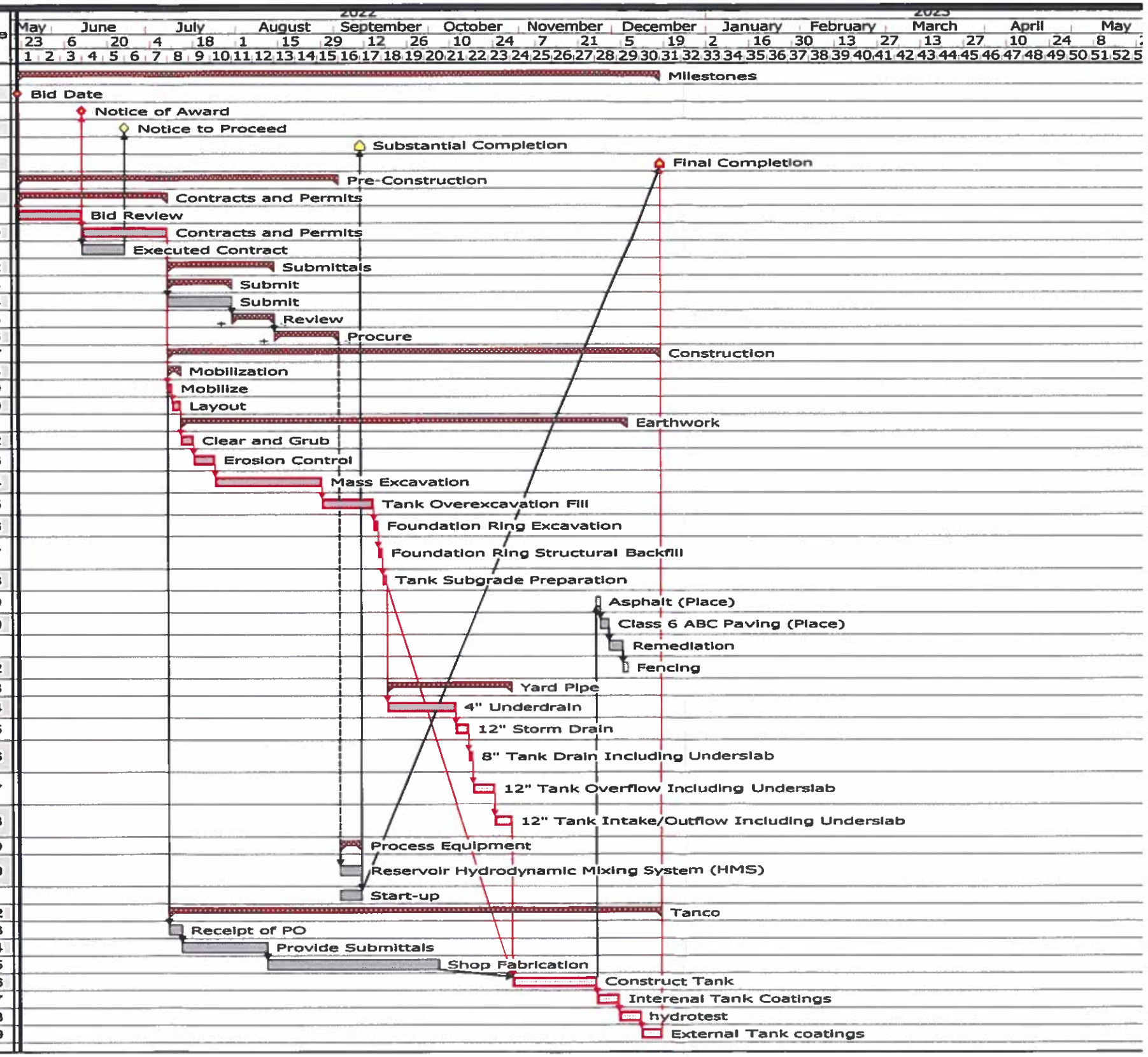
VELOCITY PLANT SERVICES

RIFLE AIRPORT 0.5 MG WATER TANK

5/19/2022

Nolan Luecke

Unique task ID	Name	Duration	Start	Finish	Total float	Line
	Milestones	150d	5/20/2022	12/15/2022		1
1450	Bid Date		5/20/2022	5/20/2022		2
1460	Notice of Award		6/10/2022	6/10/2022		3
1470	Notice to Proceed		6/24/2022	6/24/2022	125d	4
1480	Substantial Completion		9/8/2022	9/8/2022	70d	5
1490	Final Completion		12/15/2022	12/15/2022		6
	Pre-Construction	75d	5/20/2022	9/1/2022	75d	7
	Contracts and Permits	35d	5/20/2022	7/7/2022	115d	8
001	Bid Review	15d	5/20/2022	6/9/2022		9
1670	Contracts and Permits	20d	6/10/2022	7/7/2022		10
1690	Executed Contract	10d	6/10/2022	6/23/2022	125d	11
	Submittals	25d	7/8/2022	8/11/2022	70d	12
	Submit	15d	7/8/2022	7/28/2022	70d	13
010	Submit	15d	7/8/2022	7/28/2022	70d	14
	Review	10d	7/29/2022	8/11/2022	70d	15
	Procure	15d	8/12/2022	9/1/2022	70d	16
	Construction	115d	7/8/2022	12/15/2022		17
	Mobilization	3d	7/8/2022	7/12/2022		18
1510	Mobilize	1d	7/8/2022	7/8/2022		19
1520	Layout	2d	7/11/2022	7/12/2022		20
	Earthwork	104d	7/13/2022	12/5/2022	8d	21
1540	Clear and Grub	3d	7/13/2022	7/15/2022		22
1550	Erosion Control	5d	7/18/2022	7/22/2022		23
1760	Mass Excavation	25d	7/25/2022	8/26/2022		24
1770	Tank Overexcavation Fill	12d	8/29/2022	9/13/2022		25
1780	Foundation Ring Excavation	1d	9/14/2022	9/14/2022		26
1790	Foundation Ring Structural Backfill	1d	9/15/2022	9/15/2022		27
1800	Tank Subgrade Preparation	1d	9/16/2022	9/16/2022		28
1810	Asphalt (Place)	1d	11/25/2022	11/25/2022	8d	29
1820	Class 6 ABC Paving (Place)	2d	11/28/2022	11/29/2022	8d	30
1830	Remediation	3d	11/30/2022	12/2/2022	8d	31
1840	Fencing	1d	12/5/2022	12/5/2022	8d	32
	Yard Pipe	29d	9/19/2022	10/27/2022		33
1560	4" Underdrain	16d	9/19/2022	10/10/2022		34
1850	12" Storm Drain	3d	10/11/2022	10/13/2022		35
1860	8" Tank Drain Including Underslab	1d	10/14/2022	10/14/2022		36
1561	12" Tank Overflow Including Underslab	5d	10/17/2022	10/21/2022		37
1570	12" Tank Intake/Outflow Including Underslab	4d	10/24/2022	10/27/2022		38
1750	Process Equipment	5d	9/2/2022	9/8/2022	70d	39
1870	Reservoir Hydrodynamic Mixing System (HMS)	5d	9/2/2022	9/8/2022	70d	40
1880	Start-up	5d	9/2/2022	9/8/2022	70d	41
1890	Tanco	115d	7/8/2022	12/15/2022		42
1900	Receipt of PO	3d	7/8/2022	7/12/2022	17d	43
1910	Provide Submittals	20d	7/13/2022	8/9/2022	17d	44
1950	Shop Fabrication	40d	8/10/2022	10/4/2022	17d	45
1990	Construct Tank	20d	10/28/2022	11/24/2022		46
2000	Interenal Tank Coatings	5d	11/25/2022	12/1/2022		47
2010	hydrotest	5d	12/2/2022	12/8/2022		48
2020	External Tank coatings	5d	12/9/2022	12/15/2022		49



Milestone Appearances

◇ Start Milestone △ Finish Milestone

Drawn by: Nolan A. Luecke

Revision No. A

30w 5/20/2022 12/15/2022

ABBREVIATIONS

APPROX	APPROXIMATE	GA	GAUGE	QTY	QUANTITY
ARCH	ARCHITECT	GAL	GALLON		
AVG	AVERAGE	GALV	GALVANIZED	R	RADIUS
		GB	GRADE BREAK	RE	REFERENCE
B&B	BALLED AND BURLAPPED	GC	GENERAL CONTRACTOR(S)	REINF	REINFORCE(D), (ING)
BLDG	BUILDING	GPM	GALLON PER MINUTE	REQ'D	REQUIRED
BM	BENCHMARK			REV	REVISION(S), REVISED
BOC	BACK OF CURB	HORIZ	HORIZONTAL	RIM	RIM ELEVATION
BOV	BLOW OFF VALVE	HP	HIGH POINT	ROW	RIGHT-OF-WAY
BR	BOTTOM OF RAMP	HT	HEIGHT	RP	RADIUS POINT
BS	BOTTOM OF STEP				
BW	BOTTOM OF WALL	ID	INSIDE DIAMETER	SAN	SANITARY
		INV	INVERT ELEVATION	SCH	SCHEDULE
CAL	CALIPER	IN	INCHES	SD	STORM DRAIN
CF	CUBIC FEET	INCL	INCLUDE(D)	SEC	SECTION
CIP	CAST-IN-PLACE	IRR	IRRIGATION	SF	SQUARE FOOT (FEET)
CJ	CONTROL JOINT			SHT	SHEET
CL	CENTERLINE	JT	JOINT(S)	SIM	SIMILAR
CLR	CLEAR(ANCE)			SPECS	SPECIFICATIONS
C/O	CLEANOUT	LIN	LINEAR	SQ	SQUARE
COMP	COMPACTED	LP	LOW POINT	STA	STATION
CONC	CONCRETE	LT	LIGHT	STD	STANDARD
CONT	CONTINUOUS			STL	STEEL
CONTR	CONTRACTOR	MATL	MATERIAL	STRUCT	STRUCTURAL
CU	CUBIC	MAX	MAXIMUM	SYM	SYMMETRICAL
		MECH	MECHANICAL		
DBL	DOUBLE	MH	MANHOLE	TBC	TOP OF BACK OF CURB
DEG	DEGREE	MIN	MINIMUM	TC	TOP OF CURB
DEMO	DEMOLISH, DEMOLITION	MISC	MISCELLANEOUS	THK	THICK
DIA	DIAMETER			TLF	TOP OF LIGHT FOOTING
DIM	DIMENSION	NIC	NOT IN CONTRACT	TO	TOP OF
DN	DOWN	NOM	NOMINAL	TOPO	TOPOGRAPHY
DTL	DETAIL	NTS	NOT TO SCALE	TR	TOP OF RAMP
DWG	DRAWING			TRANS	TRANSFORMER
		OC	ON CENTER(S)	TS	TOP OF STEP
EA	EACH	OD	OUTSIDE DIAMETER	TW	TOP OF WALL
EF	EACH FACE	OPP	OPPOSITE	TYP	TYPICAL
EJ	EXPANSION JOINT				
ELEV	ELEVATION	PA	PLANTING AREA	UNFIN	UNFINISHED
ELECT	ELECTRICAL	PC	POINT OF CURVATURE		
ENG	ENGINEER	PERF	PERFORATE(D)	VAR	VARIES
EOP	CURB UP	PED	PEDESTRIAN	VERT	VERTICAL
EQ	EQUAL	PERIM	PERIMETER	VEH	VEHICLE
EST	ESTIMATE	PI	POINT OF INTERSECTION	VOL	VOLUME
EW	EACH WAY	PL	PROPERTY LINE		
EXIST	EXISTING	POB	POINT OF BEGINNING	W/	WITH
		PSF	POUNDS PER SQUARE FOOT	W/O	WITHOUT
FG	FINISHED GRADE	PSI	POUNDS PER SQUARE INCH	WT	WEIGHT
FIN	FINISH	PT	POINT, POINT OF TANGENCY	WWF	WELDED WIRE FABRIC
FL	FLOW LINE	PVC	POLYVINYL CHLORIDE		
FOB	FACE OF BUILDING	PVMT	PAVEMENT	YD	YARD
FOW	FACE OF WALL	PVR	PAVER(S)		
FS	FINISH SURFACE				
FT	FOOT (FEET)				
FTG	FOOTING				

BID SET

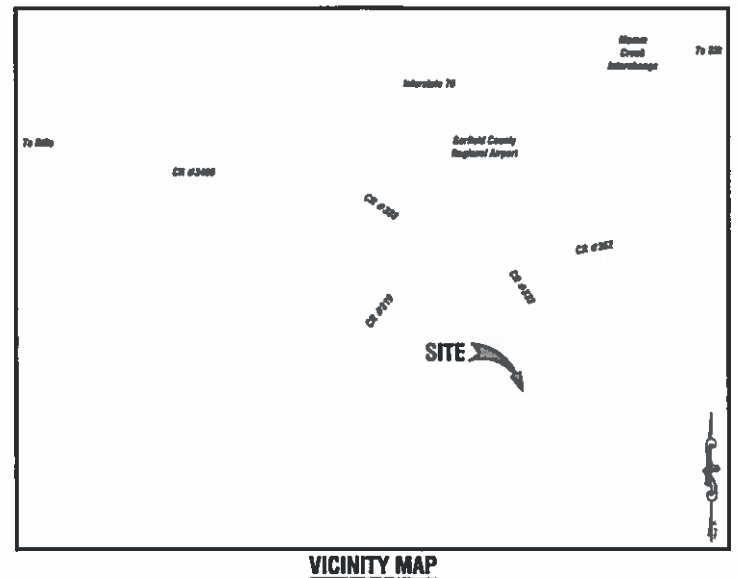
Rifle Airport 0.5 MG Water Storage Tank

RIFLE, COLORADO

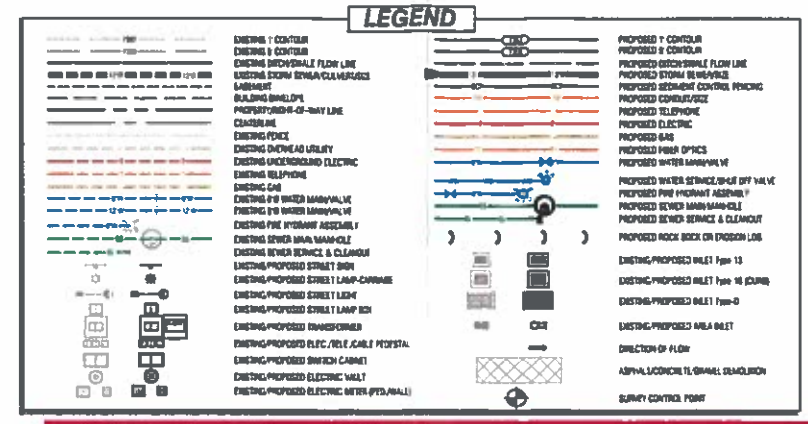
NOTE:
THIS PLAN SET IS INTENDED TO BE PLOTTED IN COLOR. FAILURE TO DO SO MAY RESULT IN MISSING DATA & INFORMATION CRITICAL TO THE PROJECT.

INDEX OF SHEETS

SHEET NO.	SHEET LIST
C.1	Cover Sheet
C.2	Grading & Earthwork
C.3	Utility & Underground Piping Plan
C.4	Site Plan
C.5	Tank Details
C.6	Civil Details
C.7	Civil Details
S.1	Structural Details (TBD)
E.1	Electrical Notes & Legend
E.2	Electrical Site Plan and 1-Line Diagram



VICINITY MAP
1" = 2000'



Preliminary Drawings - Concrete

923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.8252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: No
If "Yes": SUE Certification by
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.625.5554

NORTH
0 2000 4000
Scale: 1" = 2000'

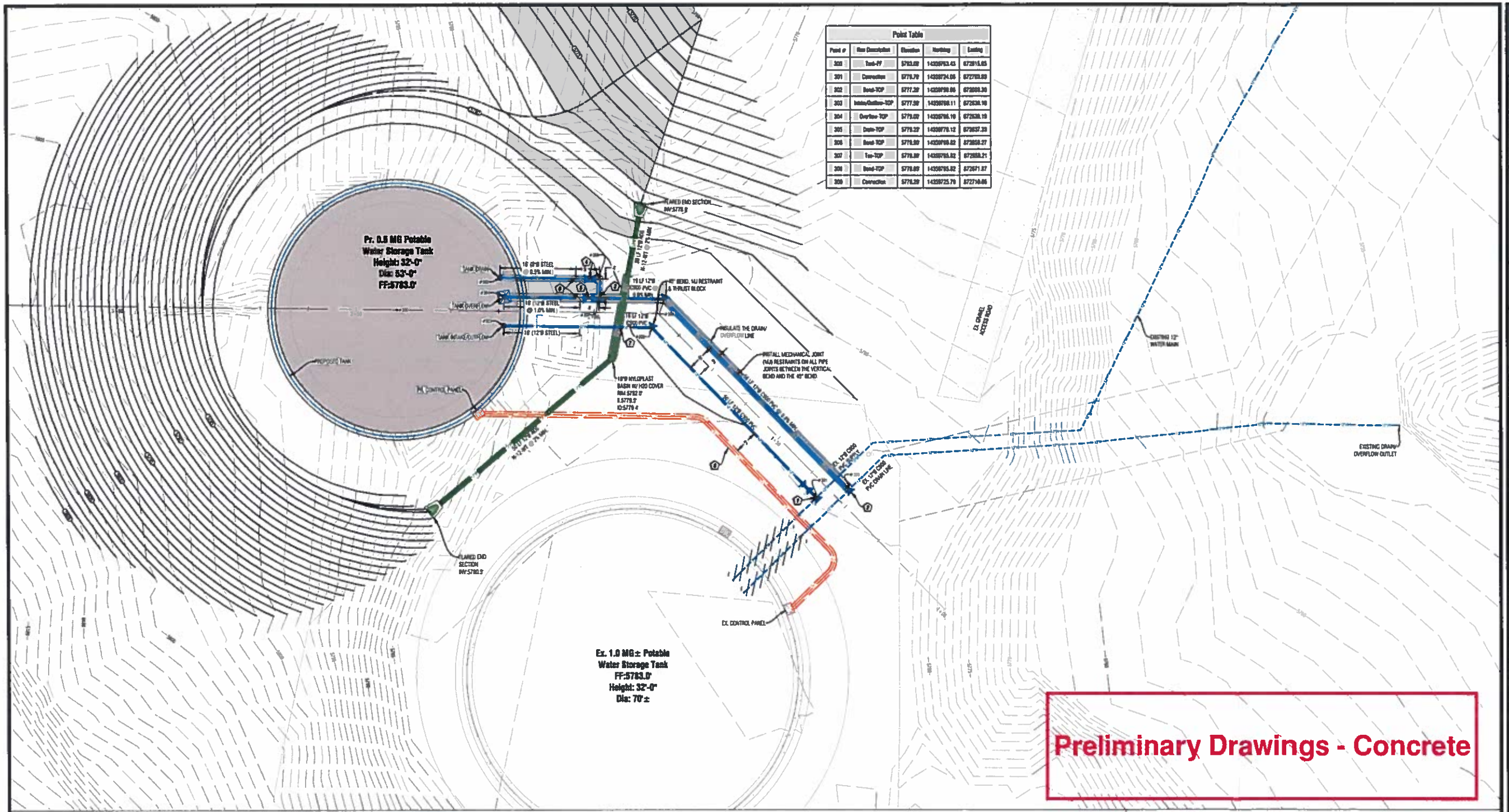
GENERAL NOTES

1. THE WARRANTY PERIOD SHALL BE TWO (2) YEARS FROM THE DATE OF ACCEPTANCE.
2. CONSTRUCTION WORK: ANY NOISE CREATED BY OPERATING OR CALIBRING TO BE OPERATED ANY EQUIPMENT (MECHANICAL OR NON-MECHANICAL, SELF PROPELLED OR MANUALLY MANIPULATED) USED IN CONSTRUCTION, REPAIR, ALTERATION OR DEMOLITION WORK ON BUILDINGS, STRUCTURES, STREETS, ALLEYS OR APPURTENANCES AT ANY TIME OTHER THAN BETWEEN THE HOURS OF 7:00 A.M. AND 7:00 P.M. ON MONDAY THROUGH FRIDAY UNLESS OTHERWISE SPECIFIED IN THE PROJECT SUPPLEMENTARY GENERAL CONDITIONS. THE TOWN/CITY MANAGER IS HEREBY AUTHORIZED TO ISSUE A CONSTRUCTION NOISE PERMIT ALLOWING CONSTRUCTION WORK NOISE TO OCCUR AT A TIME OTHER THAN THE TIME SET FORTH HEREIN BASED ON CIRCUMSTANCES WHICH NECESSITATE SUCH CONSTRUCTION WORK. IN THE EVENT THE TOWN/CITY MANAGER ISSUES SUCH A PERMIT, THE TOWN/CITY COUNCIL SHALL BE ADVISED OF SUCH ISSUANCE AT THE NEXT REGULAR TOWN/CITY COUNCIL MEETING.
3. IN ORDER OF PRECEDENCE, ALL CONSTRUCTION SHALL MEET OR EXCEED THE PROJECT PLANS AND TECHNICAL SPECIFICATIONS, STANDARDS ESTABLISHED IN THE LATEST EDITIONS OF THE TOWN/CITY PUBLIC WORKS MANUAL AND/OR ENGINEERING STANDARDS, AND COST SPECIFICATIONS, AS REFERENCED HEREIN, AND BE SUBJECT TO OBSERVATION BY THE PROJECT ENGINEER, TOWN/CITY AND COST, AS APPLICABLE.
4. IN CASE OF A CONFLICT BETWEEN VARYING SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LATEST STANDARD SPECIFICATIONS AND DETAILS OF ALL AGENCIES UNDERGOING A JURISDICTION OVER THIS PROJECT. A COPY OF THESE SPECIFICATIONS AND DETAILS SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES.
6. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES TWO (2) SIGNED COPIES OF THE LATEST PLANS, STANDARDS, AND SPECIFICATIONS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY AND PROJECT ENGINEER. THE CONTRACTOR SHALL NOT CONCEIVE OR DERIVE FROM THESE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER, PROJECT ENGINEER, AND GOVERNING AGENCY.
7. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL APPLICABLE LAWS AND REGULATIONS.
8. CONSTRUCTION SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A BASE DESIGN COMPUTER AIDED OPTIMIZED (CAD) FILE WILL BE PROVIDED TO THE CONTRACTOR UPON SIGNING THE PROJECT ENGINEER'S ELECTRONIC FILE INDEMNITY AGREEMENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE SAFETY ON THE PROJECT. THIS SHALL INCLUDE THE SAFETY OF HIS OWN PERSONNEL, SUBCONTRACTORS, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC. ALL JOB SITE SAFETY SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, AND ENGINE COMPLIANCE INCLUDING, BUT NOT LIMITED TO, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
10. THE CONTRACTOR SHALL CONTACT ONE CALL OF COLORADO AT (811) (1-800-922-1987, FOR THE MARKING OF NATIVE UNDERGROUND UTILITIES. (www.uniocl.com) A MINIMUM OF SEVENTY TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) IN ADVANCE OF ANY EXCAVATION.
11. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE INDICATED IN THE PLANS, AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER, PROJECT ENGINEER, TOWN/CITY AND COST, AS APPLICABLE.
12. LOCATIONS AND DEPTHS OF EXISTING IMPROVEMENTS TO BE MET OR ENCOUNTERED ON THE PROPOSED WORK SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO EXPLORATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT TO THE PROJECT ENGINEER ANY DISCREPANCIES BETWEEN THE MEASUREMENTS AND THOSE PLANS.
13. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES SHOWN IN THE PLANS AND/OR SPECIFICATIONS. THE CONTRACTOR SHALL NOT BUILD DRAWINGS FOR CONSTRUCTION PURPOSES. ANY MISSING DIMENSIONS OR DISCREPANCIES IN PLANS, FIELD STAKING, OR PHYSICAL FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER, IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT NOTIFYING THE PROJECT ENGINEER, HE DOES SO AT HIS OWN RISK.
14. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES, AND SHALL PROVIDE ALL WORK AND MATERIALS NECESSARY TO CONSTRUCT THE PROJECT IN ITS ENTIRETY.
15. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT DESIGNED FOR REMOVAL AND THOSE IMPROVEMENTS THAT ARE OUTSIDE THE LIMITS OF THE PROPOSED CONSTRUCTION. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE THERETO AND SHALL PROVIDE TEMPORARY FENCING, BARRICADES, SUPPORTS, RESTRAINTS, AND/OR SIMILAR MEASURES THAT ARE REQUIRED TO PROTECT EXISTING IMPROVEMENTS. DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPAIRED AND/OR REPLACED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
16. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE OWNER'S PROPERTY, PUBLIC RIGHT-OF-WAY, PERMANENT EASEMENTS, AND TEMPORARY CONSTRUCTION EASEMENTS. THE CONTRACTOR SHALL NOT OPERATE OUTSIDE THE AREA WITHOUT THE PRIOR CONSENT OF THE PROPERTY OWNER INVOLVED. ANY DAMAGE TO PRIVATE PROPERTY BY THE CONTRACTOR OUTSIDE THESE LIMITS WITHOUT THE PERMISSION OF THE PRIVATE PROPERTY OWNER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NOT OBTAINED BY THE OWNER OR OWNER'S REPRESENTATIVES, AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION CONTRACT IN THESE PLANS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE GOVERNING AGENCIES AND LOCAL FIRE DEPARTMENT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANT/FIRE SUPPRESSION FLOW OUT OF SERVICE AT LEAST SEVENTY TWO (72) HOURS PRIOR TO CONSTRUCTION.
19. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE SECURITY AND SHALL PERPETUALLY PROTECT AND BARRICADE THE CONSTRUCTION SITE UNTIL CONSTRUCTION IS COMPLETE. EXPENSE, LOSS DUE TO THEFT, OR VANDALISM OF MATERIALS AND EQUIPMENT DESIGNED OR CONSTRUCTED WILL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
20. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY WRITTEN AGREEMENTS FOR EASEMENTS AND ACCESS TO THE WORK FROM ADJACENT PRIVATE PROPERTY OWNERS. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. DURING ALL HOURS OF OPERATION FOR THE BUSINESS LOCATED ON THOSE PARCELS.
21. FOR ANY CHANGES OR DEVIATIONS FROM THESE PLANS PROPOSED BY THE CONTRACTOR, SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF MATERIAL.
22. CONSTRUCTION MUST COORDINATE ALL CONSTRUCTION WITH THE OWNER'S DESIGNATED CONSTRUCTION PROJECT MANAGER OR THE PROJECT MANAGER.
23. CONTRACTOR SHALL PROTECT AND PRESERVE ALL SURVEY CONTROL AND PROPERTY MONUMENTATION. ANY DAMAGED MONUMENTS SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE PROJECT'S STATE AT THE CONTRACTOR'S EXPENSE.
24. PRIOR TO MOVING OFF THE JOB SITE THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR THE OWNER'S CONSTRUCTION PROJECT MANAGER TO PERFORM THE FINAL WALK THROUGH OF THE CONSTRUCTION SITE.
25. TEMPORARY POWER, TELEPHONE, WATER, SANITARY SEWER AND WASTE DISPOSAL SERVICE FOR THE SITE IS THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.
26. NO BELOW GRADE WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL, MORE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION WAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE APPROPRIATE GOVERNING AGENCY. PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER. INSPECTIONS SHALL BE SCHEDULED AT LEAST FORTY EIGHT (48) HOURS PRIOR.
27. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL NECESSARY TO COMPLETE THE WORK. ALL TRAFFIC CONTROL DEVICES AND METHODS OF CONTROLLING TRAFFIC THROUGH CONSTRUCTION ZONES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ALL REVISIONS THERETO INCLUDING LOCAL AND STATE SUPPLEMENTS. ADDITIONAL WORK IN THE RIGHT OF WAY OR TRAFFIC CONTROL PERMITS MAY BE NECESSARY AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
28. FOR ANY CONSTRUCTION ACTIVITY WITHIN A ROAD RIGHT OF WAY CONTRACTOR SHALL PROVIDE ALL WARNING LIGHTS, SIGNS, BARRICADES, FLAG MEN OR OTHER DEVICES NECESSARY TO PROMOTE PUBLIC SAFETY IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION ZONE TRAFFIC CONTROL. A CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STATE'S CONSTRUCTION COORDINATOR 7 DAYS PRIOR TO COMMENCING CONSTRUCTION WITHIN A PUBLIC RIGHT-OF-WAY.
29. CONTRACTOR SHALL DESIGNATE A CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) TO MANAGE CONSTRUCTION SIGNAGE AND SAFETY OF OPERATIONS DURING ACTIVITIES WITHIN THE RIGHT OF WAY. A TRAFFIC CONTROL SUPERVISOR SHALL BE AVAILABLE WHENEVER WORK IS IN PROGRESS.
30. IF UNANTICIPATED HAZARDOUS MATERIALS OF ANY KIND ARE ENCOUNTERED IN THE WORK, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL CONSTRUCTION OPERATIONS AND NOTIFY THE PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER FOR FURTHER DIRECTION.
31. ALL BURNING REBUTTING FROM CONSTRUCTION AND DEMOLITION SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY AND LEGALLY AND SHALL BE CONSIDERED PART OF THE WORK.
32. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES IN ALL DIRECTIONS. DRAINAGE FACILITIES MAY NEED TO BE CONSTRUCTED & MAINTAINED AS NECESSARY TO PROTECT PUBLIC & PRIVATE PROPERTY.
33. ALL CONSTRUCTION SHALL BE SUBJECT TO OBSERVATION AND REVIEW BY THE TOWN/CITY AND THE PROJECT ENGINEER. THE CONSTRUCTION SCHEDULE MUST ALLOW FOR THE OCCURRENCE OF OBSERVATIONS AND REVIEW OF ALL INSTALLATIONS. OBSERVATIONS AND REVIEW OF CONSTRUCTION WORK IN PROGRESS ARE NOT TO BE CONSTRUED AS A GUARANTEE OR WARRANTY BY THE OBSERVER OF THE COMPLETED WORK. ALL GUARANTEES OR WARRANTIES REMAIN WITH THE CONTRACTOR.
34. ALL DISTURBED AREAS MUST BE REVEGETATED PER SECTION 46.4 OF THE TOWN/CITY MUNICIPAL CODE. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL AFFECTED OR DAMAGED LANDSCAPING, INCLUDING IRRIGATION WITH SIMILAR MATERIALS AND PLANTS. GOOD SHALL BE USED TO ACHIEVE THIS.
35. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE POTENTIAL POLLUTION FROM CONSTRUCTION ACTIVITIES, INCLUDING VEHICLE FUELING & MAINTENANCE, AND STORAGE AND USE OF CHEMICALS & PARTICLEBOARD. THE CONTRACTOR SHALL EXERCISE BEST MANAGEMENT PROCEDURES FOR HANDLING PERTAINING POLLUTANTS AND SUBMIT SPILL PREVENTION AND RESPONSE PROCEDURES TO THE TOWN/CITY AND PROJECT ENGINEER PRIOR TO ANY ACTIVITY AT THE PROJECT SITE.
36. THE CONTRACTOR SHALL VERIFY EXISTING PIPE OR MANHOLE INVERTS/SIZES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
37. THE TOWN/CITY SHALL PROVIDE THE CONTRACTOR WITH A TAX EXEMPT FORM FOR USE IN PURCHASING OF MATERIALS AND SUPPLIES.
38. ALL PRODUCT INFORMATION SHOWN IS AS PROVIDED BY THE MANUFACTURER. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COMPLYING WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS FOR THE INSTALLATION OF ALL MATERIALS WITH SPECIAL ATTENTION TO PROPER SEALING OF MATING SURFACES. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE DESIGNED PRODUCTS AND THOSE SHOWN ON THE PLAN.
39. ALL DRAIN REMOVED FROM THE RIGHT-OF-WAY WILL BE RETURNED TO THE TOWN/CITY OR SIGNED SINITE. CONTRACTOR TO RECORD PHOTOS OF THE DRAIN AND AND REINSTALL DRAIN PART ARE REMOVED DURING CONSTRUCTION.
40. ANY MUD OR OTHER MATERIAL TRACKED OR OTHERWISE DEPOSITED ON THE ROADWAY SHALL BE REMOVED DAILY OR AS ORDERED BY THE DEPARTMENT INSPECTOR.
41. THE CONTRACTOR SHALL PROVIDE ON-SITE SANITARY FACILITIES UNLESS FACILITIES ARE ALREADY PROVIDED THAT ARE REASONABLY CLOSE TO THE CONSTRUCTION SITE.
42. THE CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS TO AFFECTED PROPERTY OWNERS AT ALL TIMES DURING CONSTRUCTION AT NO ADDITIONAL COST.
43. THE CONTRACTOR SHALL COMPLY WITH ALL AGREEMENTS BETWEEN THE TOWN/CITY AND PRIVATE PROPERTY OWNERS.
44. ADDITIONAL NOTES ARE LOCATED THROUGHOUT THE CONSTRUCTION DOCUMENTS.

STORMWATER MANAGEMENT AND EROSION/SEDIMENT CONTROL NOTES

1. THE PREPARATION OF STORMWATER MANAGEMENT PLANS, PERMITTING AND COMPLIANCE ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS PROJECT MAY ALSO REQUIRE A PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE STATE OF COLORADO. THE CONTRACTOR IS TO COMMENCE WORK ON THIS SITE ONLY AFTER AN ACTIVE PERMIT NUMBER HAS BEEN OBTAINED FROM THE STATE OF COLORADO. THE STORMWATER MANAGEMENT PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO APPLYING FOR THE PERMIT. THE CONTRACTOR IS TO PROVIDE EROSION CONTROL IN ACCORDANCE WITH STATE OF COLORADO GUIDELINES.
2. THE CONTRACTOR SHALL CONTINUOUSLY PROVIDE ADEQUATE STORMWATER MANAGEMENT IN ACCORDANCE WITH AN APPROVED STORMWATER MANAGEMENT PLAN (SWMP) FROM THE STATE OF COLORADO.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS, ACCESS ROUTES, AND WATERWAYS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS.
4. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROL "BEST MANAGEMENT PRACTICES" (BMPS) PRIOR TO ANY SITE PREPARATION WORK (E.G. CLEARING, GRUBBING, DEMOLITION, OR EXCAVATION).
5. A GROUNDWATER DISCHARGE PERMIT MAY BE REQUIRED FROM THE STATE GOVERNING AUTHORITY PRIOR TO DISCHARGE. GROUNDWATER SHALL BE SAMPLED AND SENT TO AN APPROVED LABORATORY FOR TESTING PRIOR TO BEING DISCHARGED. TESTING SHALL BE IN ACCORDANCE WITH THE PERMIT FOR STORMWATER DISCHARGE.
6. A WATER SOURCE MUST BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UPLIFTS AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
7. ALL DITCHES & EROSION CONTROL SHOULD BE COMPLETED TO THE RECEIVING STREAM.
8. THE PLACEMENT OF EROSION AND SEDIMENT CONTROL BMPS SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN IF IS HAS PREPARED FOR THE PROJECT. CONTRACTOR TO ADJUST QUANTITY, LOCATION, AND TYPE OF EROSION AND SEDIMENT CONTROL BMPS AS NECESSARY FOR THE VARIOUS PHASES OF THE WORK AND AS ACTUAL CONDITIONS WARRANT. CONTRACTOR SHALL CONSIDER SHALL CONSIDERABLY MODIFY THE EROSION AND SEDIMENT CONTROL PLAN WITH CLEAR BMPS IN ACCORDANCE WITH THE EROSION CONTROL MANUAL AND REVISED PARTS REQUIREMENTS. ADDITIONAL EROSION AND SEDIMENT CONTROL BMPS EMPLOYED BY THE CONTRACTOR AT HIS DISCRETION WILL NOT BE REIMBURSED OR PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
9. APPROVED EROSION AND SEDIMENT CONTROL BMPS SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE REQUIRED BY THE STATE'S CONSTRUCTION STORMWATER PERMIT. AT A MINIMUM THE CONTRACTOR SHALL INSPECT ALL BMPS EVERY 14 DAYS, AND AFTER ALL SIGNIFICANT PRECIPITATION EVENTS (I.E. ONE INCH). SIGNIFICANT ALL NECESSARY MAINTENANCE AND REPAIR ACTIVITIES SHALL BE COMPLETED WITHIN TWENTY-FOUR (24) HOURS AFTER INSPECTION BY THE INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED HEREBY FROM ALL BMPS, OR AT ANY TIME THAT SEDIMENT OR CONSTRUCTION DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMPS.
10. TOPSOIL AND SUITABLE EARTHEN MATERIALS SHALL BE STOCKPILED AND STOCKPILED WITHIN THE LIMITS OF CONSTRUCTION. THE FOUR SIDE OF THE STOCKPILE AREAS MUST BE STABILIZED AND ALL STOCKPILES SHALL BE PLACED IN AN APPROVED LOCATION AND PROTECTED FROM ENGINE ELEMENTS USING MEASURES SPECIFIED IN THE EROSION/SEDIMENT CONTROL PLAN AND APPROVED STORMWATER MANAGEMENT PLAN (SWMP) FROM THE STATE OF COLORADO.
11. SOILS THAT SHALL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE MULCHED AND SEEDED WITH A TEMPORARY OR PERMANENT GRASS COVER WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION.
12. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING ON EROSION SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
13. THE CONTRACTOR MUST HELP ALL POLLUTANTS, INCLUDING SEDIMENT, CONSTRUCTION DEBRIS, AND TRENCH BACKFILL MATERIALS FROM ENTERING THE STORM SEWER SYSTEM.
14. ALL SPILLS INCLUDING, BUT NOT LIMITED TO, PETROLEUM PRODUCTS, BOX VENTS, AND CEMENT SHALL BE CLEANED UP IMMEDIATELY. THE LOCAL TOWN/CITY/COUNTY AND STATE'S GOVERNING AUTHORITY SHALL BE NOTIFIED IMMEDIATELY.
15. THE CONTRACTOR SHALL ENSURE THAT ALL LOADS OF DIRT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC ROAD OF WAY. ALL MATERIAL EXPORTED FROM THE SITE SHALL BE DISPOSED OF AT A SITE PERMITTED TO ACCEPT SUCH MATERIAL.
16. THE USE OF HERBIC STEEL STAKES OR STEEL TUBE POSTS FOR STAKING SIGNS OTHER THAN HAY BALES, OR TO SUPPORT SILT FENCING USED AS AN EROSION CONTROL MEASURE, IS PROHIBITED.
17. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED OF AT AN APPROPRIATE LOCATION.
18. CONTRACTOR SHALL PROVIDE A COMPLETED NOTICE OF TERMINATION TO OWNER FOR OWNERS SUBMITTAL TO THE STATE'S GOVERNING AUTHORITY ONCE THE PROJECT IS COMPLETE, ALL DISTURBED AREAS HAVE BEEN STABILIZED AND TEMPORARY BMPS HAVE BEEN REMOVED.
19. THE CONTRACTOR SHALL CLEAN OUT ALL DITCHES AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF DITCHING. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER AND LOCAL AUTHORITIES. ANY CONSTRUCTION DEBRIS OR SAND DEPOSITED INTO MANHOLES, BUTTS, PIPES OR TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ENCAMPMENT OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION.
20. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE AND POTENTIAL POLLUTION CAUSED BY HIS ACTIVITIES, INCLUDING VEHICLE FUEL ING, STORAGE OF FRESH CEMENT OR CHEMICALS, ETC. THE CONTRACTOR SHALL HAVE DEVELOPED PROCEDURES FOR HANDLING POTENTIAL POLLUTANTS AND HAVE DEVELOPED SPILL PREVENTION AND RESPONSE PROCEDURES PRIOR TO ANY ACTIVITIES AT THE PROJECT SITE.
21. ALL EROSION CONTROL FABRIC SHALL BE NORTH AMERICAN GREEN SC250 OR ENGINEER APPROVED EQUAL UNLESS SPECIFIED OTHERWISE.

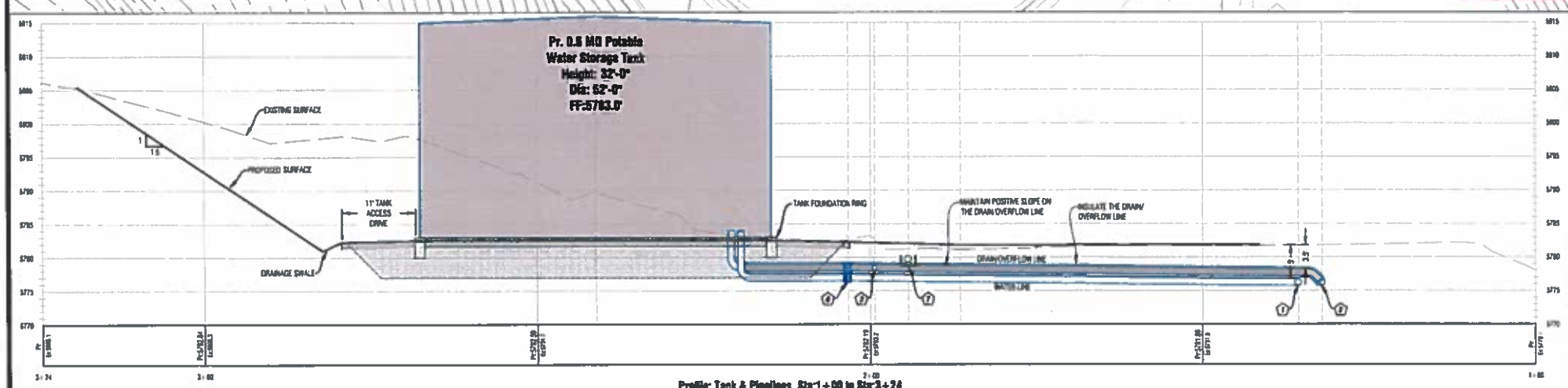
SIT



Point Table

Point #	Raw Description	Elevation	Northing	Easting
300	Tank-FF	5783.00	1435953.43	672815.65
301	Connection	5776.70	1435924.06	672769.69
302	Bend-TOP	5777.39	1435918.86	672808.30
303	Insin/Outflow-TOP	5777.59	1435898.11	672838.10
304	Overflow-TOP	5779.00	1435878.10	672838.10
305	Drain-TOP	5779.23	1435878.12	672837.33
306	Bend-TOP	5779.50	1435878.82	672858.27
307	Tee-TOP	5779.50	1435878.82	672858.21
308	Bend-TOP	5778.69	1435878.82	672871.87
309	Connection	5776.29	1435925.76	672710.66

Preliminary Drawings - Concrete



Profile: Tank & Pipelines, Sta:1+00 to Sta:3+24
Scale: Vert.=10', Horiz.=10'

FLASHNOTES:

1. CONTRACTOR TO POTHOLE AND REPORT PIPELINE ELEVATION TO THE ENGINEER PRIOR TO CONSTRUCTION. CUT IN CONNECTION TO EXISTING 12"B C900 PVC PIPE, INSTALL TEE, 12"B GATE VALVE, MECHANICAL JOINT (MJ) RESTRAINTS AND THRUST BLOCK.
2. CONTRACTOR TO POTHOLE AND REPORT PIPELINE ELEVATION TO THE ENGINEER PRIOR TO CONSTRUCTION. CUT IN CONNECTION TO EXISTING 12"B C900 PVC PIPE, INSTALL TEE AT 45°, 45° VERT. BEND, MJ RESTRAINTS AND THRUST BLOCK.
3. INSTALL 12"x8" TEE, MJ RESTRAINTS AND THRUST BLOCK.
4. INSTALL 8"B 90° LR BEND, MJ RESTRAINTS, THRUST BLOCK AND 8"B GATE VALVE.
5. INSTALL 12" GATE VALVE AND MJ RESTRAINTS.
6. TRANSITION FROM 12"B C900 PVC TO 12"B STEEL PIPE.
7. INSULATE THE STORM SEWER TO 3' EACH SIDE OF THE CROSSING (INVERTED 1').
8. INSTALL THREE 2" ELECTRICAL CONDUITS FOR CATHODIC PROTECTION SYSTEM, ANTENNA AND SPARE

NOTES:

1. UNLESS OTHERWISE STATED ON THESE PLANS, ALL MATERIALS FOR WATER LINES SHALL CONFORM TO THE CITY PUBLIC WORKS MANUAL "PART 9 CONSTRUCTION MATERIALS AND METHODS, SECTION 30, WATER TRANSMISSION, DISTRIBUTION AND SERVICE LINES".
2. HARDWARE FOR PIPE FITTINGS & CONNECTIONS SHALL BE 316 STAINLESS STEEL (ABOVE GROUND) AND COR-BLUE (BELOW GROUND).

Civil Engineering
Surveying
& Beyond
Water Unlimited Inc.
523 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: No
If "Yes" SUE Certification by:
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.665.6554

NORTH

811
Know what's below.
Call before you dig.

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank

Utility & Underground Piping
Bid Set - Not For Construction

No.	Date	Revision
1		
2		
3		
4		
5		
6		
7		
8		

PROJECT NO.
Designer
Drawn
Editor
Date

Sheet
C.3

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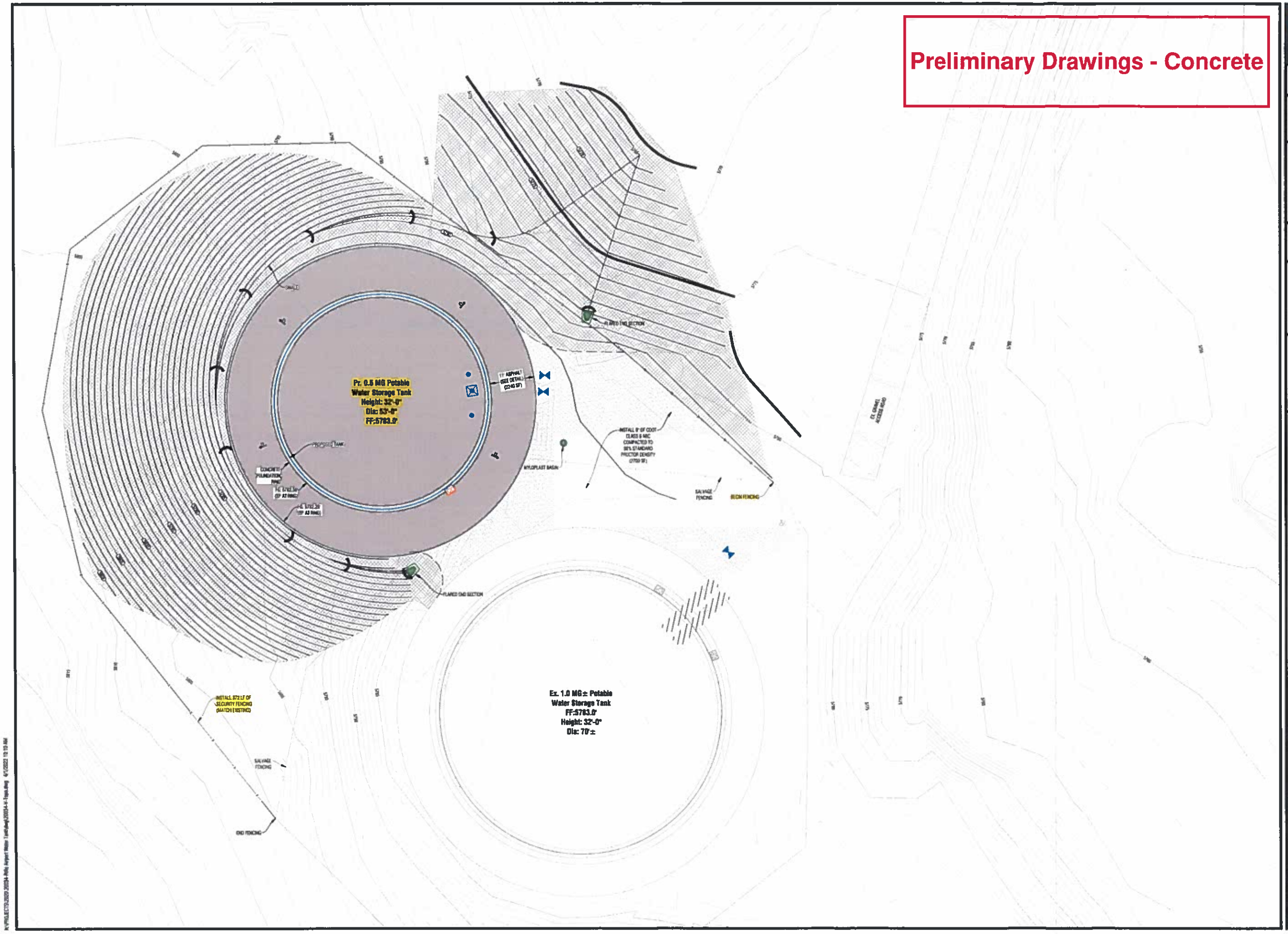
Preliminary Drawings - Concrete



Civil Engineering
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& Beyond
Utilities Unlimited Inc.
525 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.uu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: No
If "Yes", SUE Certification by
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.963.2654

NORTH

0 10 20
Scale: 1" = 10'

811
Know what's below.
Call before you dig.

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank

Site Plan

Bid Set - Not For Construction

No.	Date	Revision	By
1			
2			
3			
4			
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7			
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PROJECT NO.
20004
Designer
BRB
Drafter
BRB
Date
04/11/22

Sheet
C.4

File Name: 20004-c-Site.dwg

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N:\PROJECTS\2020\20034-Rifle Airport Water Tank\dwg\20034-V-Tops.dwg 4/1/2022 10:10 AM

Material Schedule for Tank			
Key	Description	Quantity	Specifications
A	12"Ø COMMON SUPPLY/OUTLET PIPE TANK CONNECTION	1	SEE DETAILS, INCLUDES FLANGED SR ELBOW
B	12"Ø INTERNAL OVERFLOW STANDPIPE W/ SQUARE WEIR INTAKE	1	SEE DETAILS
C	8"Ø TANK DRAIN CONNECTION	1	SEE DETAILS
D	30"Ø HINGED SHELL MANHOLE	2	OSHA - 30"Ø HINGED SHELL MANHOLE (42) 3/4"Ø (A325) BOLTS IN 7/8"Ø HOLES @ 21-1/8" BOLT CL RAD
E	24"Ø MANWAY	3	OSHA - 4" MIN. FLANGE DEPTH, 1/4" STEEL PLATE, (3) 3/4" BOLT PATTERN W/ FULL FACE RING FLANGE -TYPE GASKET- SBR
F	30"Ø MANWAY	1	OSHA - 4" MIN. FLANGE DEPTH, 1/4" STEEL PLATE, (12) 3/4" BOLT PATTERN W/ FULL FACE RING FLANGE -TYPE GASKET- SBR
G	HANDRAIL, SAFETY CAGE AND ICE KICK	1	OSHA
H	STEEL LADDER & STEEL GRATED PLATFORM	1	OSHA
J	TANK VENT	1	AWWA COMPLIANT D100-05 ALUMINUM AIR VENT FOR 18"Ø PIPE, 1,200 CFM MIN. AIR FLOW, ACCESSIBLE, NON VISIBLE 24 MESH NON-CORRODIBLE SCREEN. MANUFACTURER: ADVANCED TANK CONSTRUCTION, INC (18 AST ROOF VENT), OR ENGINEER APPROVED EQUAL.
K	ANCHOR BRACKET	10	SEE DETAILS
L	PASSIVE MIXING SYSTEM FOR 12"Ø FLANGED COMMON SUPPLY/OUTLET	1	TIDEFLEX, OR ENGINEER APPROVED EQUAL.

NOTES:

ALL MATERIAL AND CONSTRUCTION SHALL BE AWWA AND STATE OF COLORADO DESIGN CRITERIA FOR POTABLE WATER SYSTEMS' COMPLIANT UNLESS SPECIFIED OTHERWISE.

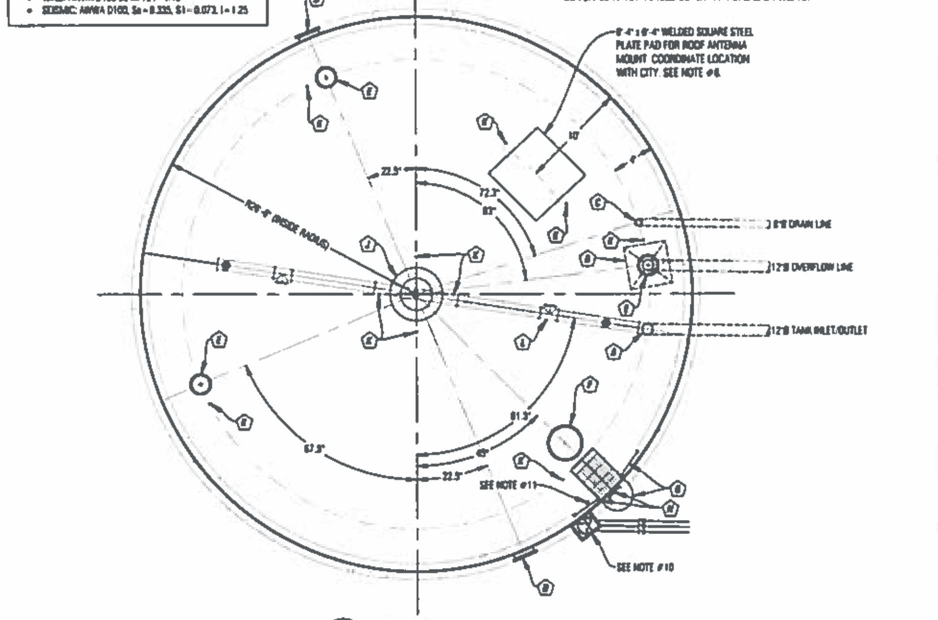
STEEL PIPE SHALL BE ASTM A53, SCHEDULE 40.

WATER TANK DESIGN CRITERIA

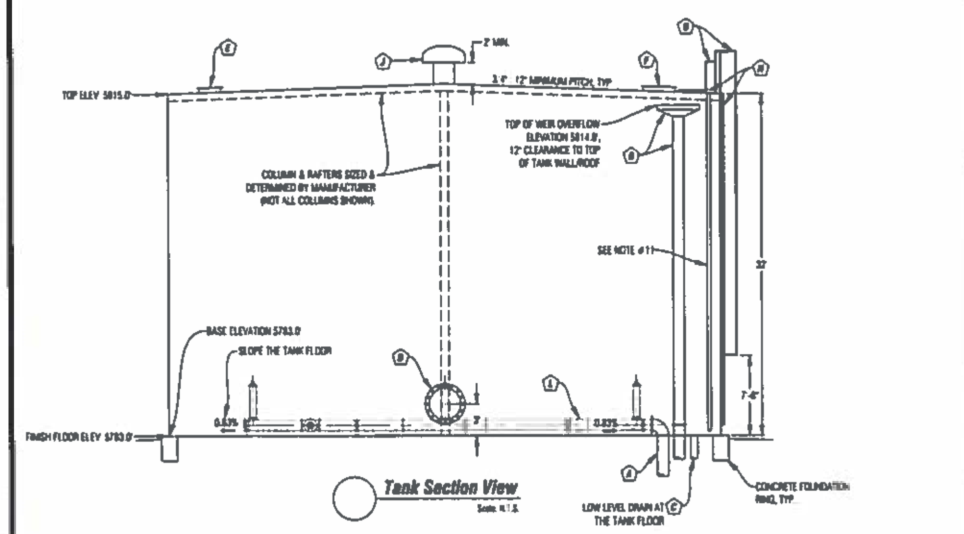
- DIMENSIONS AS INDICATED.
- STATE OF COLORADO DESIGN CRITERIA FOR POTABLE WATER SYSTEMS.
- INFLOW 500 GPM (1/2 OF EX. PUMP RATE @ 1000 GPM)
- DESIGN: AWWA D100-11
- ALTERNATE: AWWA D100-14
- DESIGN PRESSURE: ATMOSPHERIC
- ROOF LIVE LOAD: 40 PSF
- WIND: AWWA D100 90 MPH, I = 1.15
- SEISMIC: AWWA D100, Ss = 0.335, S1 = 0.073, I = 1.25

NOTES

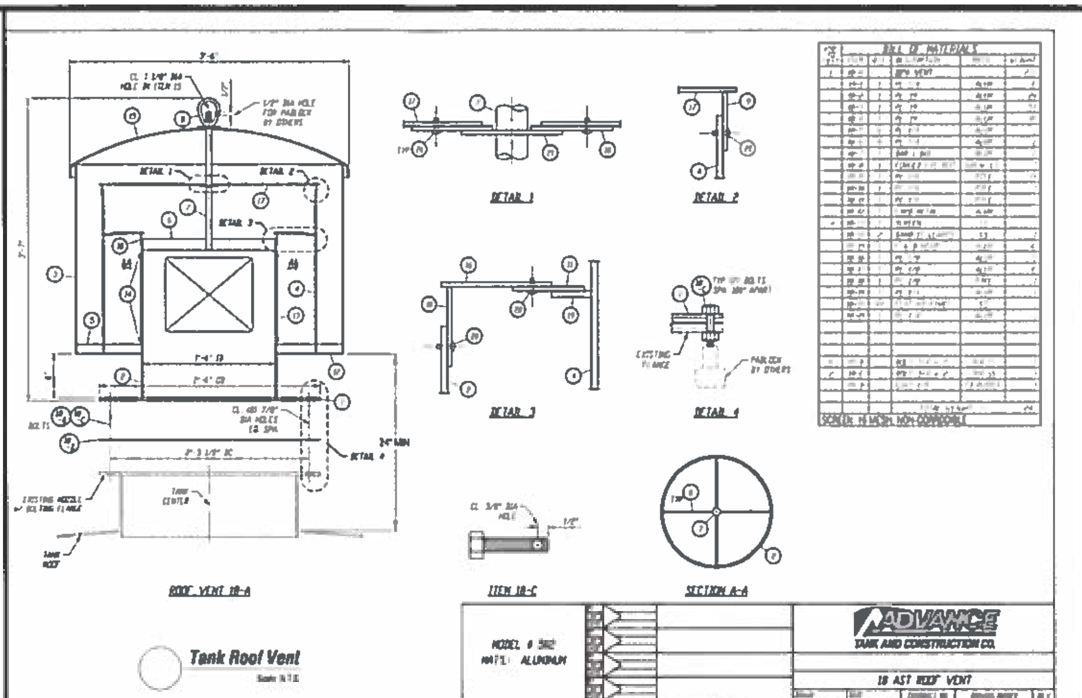
1. AT THE DIRECTION OF THE CITY OF RIFLE PUBLIC WORKS DEPARTMENT, ACTIVE WATER TANK MIXING IS NOT INCLUDED IN THIS DESIGN. THE CITY IS ADVISED THAT THE PASSIVE SYSTEM INCLUDED MAY REQUIRE MORE FREQUENT WATER QUALITY MONITORING/TESTING THAN IS REQUIRED BY THE CURRENT STORAGE AND AND THAT ROUTINE TANK DRAINING MAY BE REQUIRED TO MEET COMPLIANCE STANDARDS AND REQUIREMENTS.
2. QUALITY CONTROL TESTING SHALL BE IN CONFORMANCE WITH APPLICABLE AWWA STANDARDS
3. QUALITY CONTROL TESTING TO BE PERFORMED BY INDEPENDENT TESTING AGENT UNLESS OTHERWISE AUTHORIZED BY OWNER.
4. 100% VISUAL EXAMINATION OF ALL WELDS IS REQUIRED
5. RADIOGRAPHY SHALL BE REQUIRED IN ACCORDANCE WITH AWWA D100 INCLUDING RANDOM RADIOGRAPHY LOCATIONS.
6. VACUUM BOX TESTING SHALL BE REQUIRED OF THE FLAT BOTTOM SEAMS, OR OTHER MUTUALLY ACCEPTED METHOD.
7. HYDROSTATIC TESTING SHALL BE REQUIRED (AFTER FINISH COATING CURE)
8. INSTALL NEW 1/4" x 8'-4" SQUARE REINFORCING STEEL PLATE FOR ANTENNA MOUNT LOCATE REINFORCING PLATE ON SOLID ROOF PLATE. AVOID OVERLAP OF ROOF PLATE SEEM. ANTENNA MOUNT AND WIRING MOUNTING EQUIPMENT TO BE MANUFACTURED BY METAL & CABLE CORP., INC. MODEL MASS XL131-2 MAGNETIC MOUNT, AND CT 1800-24-U-4 CABLE TRAY MOUNTS. ELEVEN (11) CABLE MOUNTS REQUIRED, SPACED 4 FT ON CENTER.
9. INSTALL TANK CATHODIC PROTECTION PER SPECIFICATIONS.
10. INSTALL UNISTRUT PIECES WELDED TO THE OUTSIDE OF THE TANK. THE UNISTRUT PIECES SHALL BE 12 INCHES LONG, MOUNTED HORIZONTALLY, AND LOCATED EVERY 8 FEET UP THE ENTIRE SIDE OF THE TANK STARTING AT 4 FEET ABOVE THE BOTTOM OF THE TANK. THE UNISTRUT SHALL BE PAINTED THE SAME AS THE TANK EXTERIOR.
11. A 2 INCH THREADED PORT SHALL BE INSTALLED AT THE EDGE OF THE TANK AT THE TOP OF THE TANK. BELOW THE PORT A 2 INCH PVC PIPE SHALL BE INSTALLED THAT EXTENDS TO WITHIN 4 INCHES OF THE BOTTOM OF THE TANK AND ATTACHES TO THE SIDE OF THE TANK EVERY 5 FEET. THE PVC SHALL BE PERFORATED. THIS SHALL BE THE STILLING WELL FOR THE LEVEL TRANSMITTER. AT THE TOP OF THE TANK THERE SHALL BE A 8" X 8" X 8" STAINLESS STEEL BOX CONNECTED TO THE 2" THREADED PIPE. THIS BOX SHALL BE FOR THE ELECTRICIAN TO CONNECT A CONDUIT TO FOR THE LEVEL TRANSMITTER CABLE. THE BOX SHALL HAVE A HINGED COVER THAT OPENS ON THE TOP



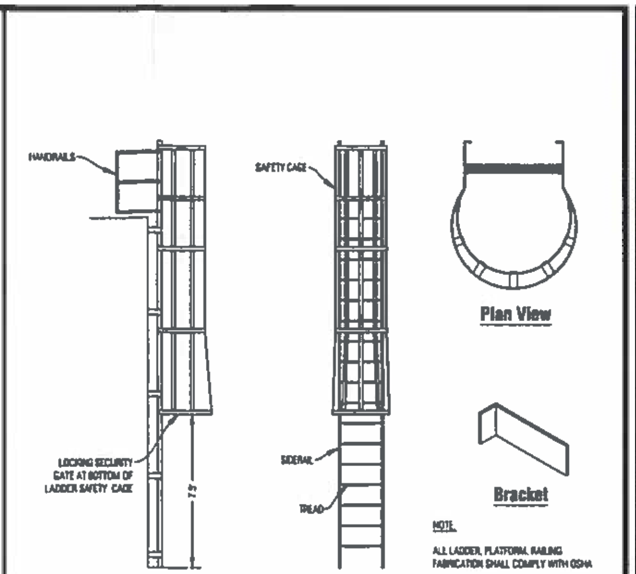
Tank Plan View
Scale: N.T.S.



Tank Section View
Scale: N.T.S.

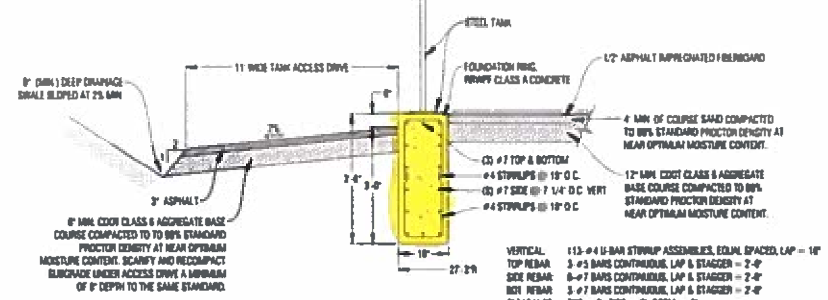


Tank Roof Vent
Scale: N.T.S.



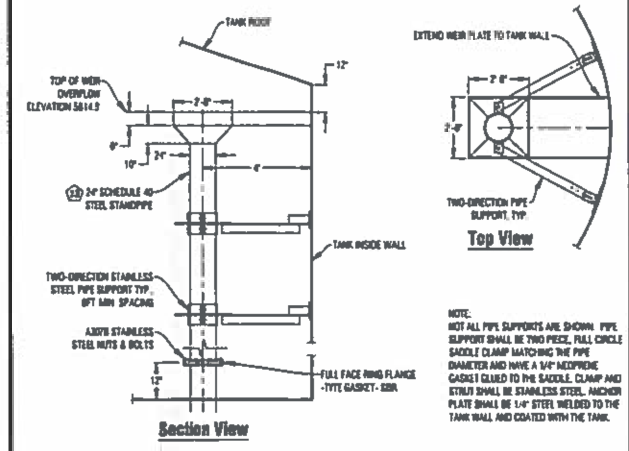
NOTE:
ALL LADDER, PLATFORM, RAILING FABRICATION SHALL COMPLY WITH OSHA.

Steel Ladder & Cage
Scale: N.T.S.



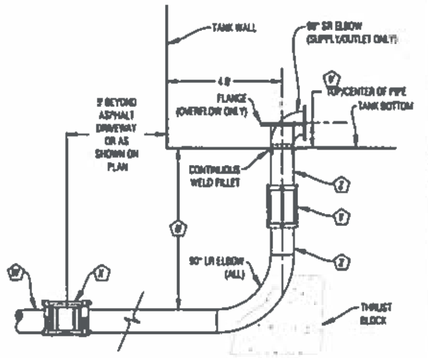
NOTES:
1. CDOT = COLORADO DEPARTMENT OF TRANSPORTATION
2. GRADE 60 REBAR, 4000 PSI CONCRETE.
3. THE FOUNDATION RING FOOTING MAY BE FORMED IN SHORT, STRAIGHT SEGMENTS SO LONG AS THE MINIMUM WALL THICKNESS IS MAINTAINED AND THAT BOTH THE INSIDE AND THE OUTSIDE CIRCLE RADIUS ARE NOT ENCROACHED.
4. PRIOR TO ANY BACKFILLING OR CONCRETE FOUNDATION RING CONSTRUCTION, EXPOSED SOILS SHALL BE INSPECTED AS REQUIRED BY THE ENGINEER.
5. IF BEDROCK IS NOT ENCOUNTERED UNDER THE TANK, EXCAVATE, SCARIFY AND RECOMPACT TO DESIGN SUBGRADE UNDER THE TANK A MINIMUM OF 8" DEPTH TO 100% MAXIMUM STANDARD PROCTOR.
6. TANK FOUNDATION AND ROAD CONSTRUCTION SHALL COMPLY WITH KUMAR & ASSOCIATES, INC. "SUBSOIL STUDY FOR FOUNDATION DESIGN", JOB NO. 20-07-616, DATED JANUARY 21, 2021.

Tank Foundation & Access Drive
Scale: N.T.S.



NOTE:
NOT ALL PIPE SUPPORTS ARE SHOWN. PIPE SUPPORT SHALL BE TWO PIECE, FULL CIRCLE SADDLE CLAMP MATCHING THE PIPE DIAMETER AND HAVE A 1/4" NEOPRENE GASKET GLUED TO THE SADDLE. CLAMP AND STRUT SHALL BE STAINLESS STEEL. ANCHOR PLATE SHALL BE 1/4" STEEL WELDED TO THE TANK WALL AND COATED WITH THE TANK.

Overflow Standpipe Weir Intake
Scale: N.T.S.



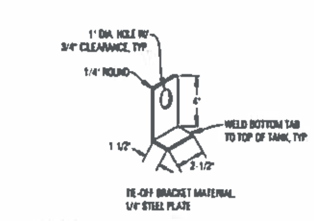
Material Schedule for Tank - Pipe Connection			
Key	8"Ø DRAIN	12" TANK SUPPLY/OUTLET	12"Ø OVERFLOW
S	STEEL PIPE SCHEDULE 40, ASTM A53 WELDED JOINTS	STEEL PIPE SCHEDULE 40, ASTM A53 WELDED JOINTS	STEEL PIPE SCHEDULE 40, ASTM A53 WELDED JOINTS
T	DRESS STYLE 40 LONG BODY COUPLING, STEEL PIPE TO STEEL PIPE, OR ENGINEER APPROVED EQUAL, 2-1/2" GAP, MIN	DRESS STYLE 40 LONG BODY COUPLING, STEEL PIPE TO STEEL PIPE, OR ENGINEER APPROVED EQUAL, 2-1/2" GAP, MIN.	DRESS STYLE 40 LONG BODY COUPLING, STEEL PIPE TO STEEL PIPE, OR ENGINEER APPROVED EQUAL, 2-1/2" GAP, MIN
U	8"Ø RESTRAINED C900 PVC/SCH 40 STEEL COUPLING, OR ENGINEER APPROVED EQUAL.	12"Ø RESTRAINED C900 PVC/SCH 40 STEEL COUPLING, OR ENGINEER APPROVED EQUAL.	12"Ø RESTRAINED C900 PVC/SCH 40 STEEL COUPLING, OR ENGINEER APPROVED EQUAL.
W	JOINT RESTRAINED C900 PVC (CL305/DR14)	JOINT RESTRAINED C900 PVC (CL305/DR14)	JOINT RESTRAINED C900 PVC (CL305/DR14)
V	FLUSH (0"), NO FLANGE	12" (CENTER) FULL FACE RING FLANGE -TYPE GASKET- SBR	12" (TOP) FULL FACE RING FLANGE -TYPE GASKET- SBR
W	3'-8"	5'-0"	4'-0"

NOTES:

ALL NUTS AND BOLTS SHALL BE 316 STAINLESS STEEL.

ALL PIPE TRENCH BACKFILL UNDER AND WITHIN 5' OF THE TANK SHALL BE CDOT CLASS 6 AGGREGATE BASE COURSE COMPACTED TO 100% MAXIMUM STANDARD PROCTOR DENSITY.

Tank Pipe Connections
Scale: N.T.S.



Fall Protection Tie-Off
Scale: N.T.S.

Preliminary Drawings - Concrete

Civil Engineering
Surveying
& Beyond
Sopris Engineering Unlimited Inc.
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: No
If "Yes" SUE Certification by
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.665.6554

NORTH
Scale 1" = 10'

811
Know what's below. Call before you dig.

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank

Tank Details

Bid Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

PROJECT NO. 20034
Sheet
C.5

BID SET

Rifle Airport 0.5 MG Water Storage Tank

RIFLE, COLORADO

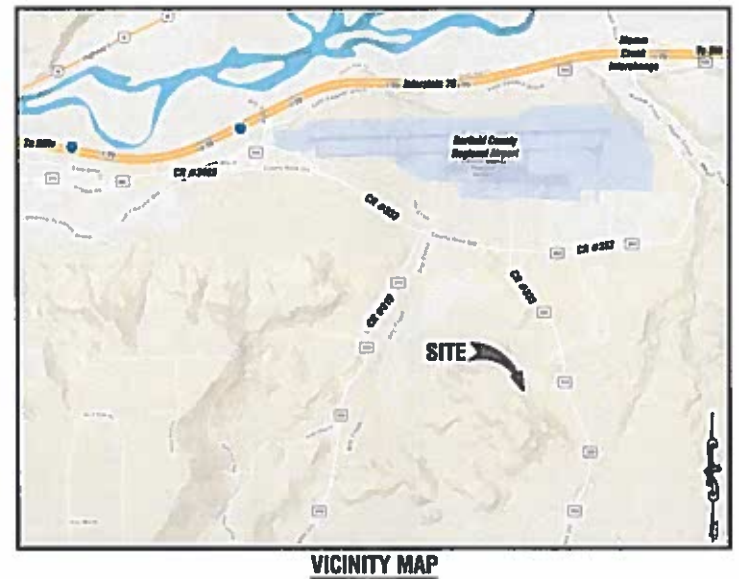
NOTE:
THIS PLAN SET IS INTENDED TO BE PLOTTED IN COLOR. FAILURE TO DO SO MAY RESULT IN MISSING DATA & INFORMATION CRITICAL TO THE PROJECT.

ABBREVIATIONS

APPROX	APPROXIMATE	GA	GAUGE	QTY	QUANTITY		
ARCH	ARCHITECT	GAL	GALLON				
AVG	AVERAGE	GALV	GALVANIZED	R	RADIUS		
		GB	GRADE BREAK	REF	REFERENCE		
B&B	BALLED AND BURLAPPED	GC	GENERAL CONTRACTOR(R)	REINF	REINFORCE(D, ING)		
BLDG	BUILDING	GPM	GALLON PER MINUTE	REQ'D	REQUIRED		
BM	BENCHMARK			REV	REVISION(S), REVISED		
BOC	BACK OF CURB	HORIZ	HORIZONTAL	RIM	RIM ELEVATION		
BOV	BLOW OFF VALVE	HP	HIGH POINT	ROW	RIGHT-OF-WAY		
BR	BOTTOM OF RAMP	HT	HEIGHT	RP	RADIUS POINT		
BS	BOTTOM OF STEP						
BW	BOTTOM OF WALL	ID	INSIDE DIAMETER	SAN	SANITARY		
		INV	INVERT ELEVATION	SCH	SCHEDULE		
CAL	CALIPER	IN	INCHES	SD	STORM DRAIN		
CF	CUBIC FEET	INCL	INCLUDE(D)	SEC	SECTION		
CIP	CAST-IN-PLACE	IRR	IRRIGATION	SF	SQUARE FOOT (FEET)		
CJ	CONTROL JOINT			SHT	SHEET		
CL	CENTERLINE	JT	JOINT(S)	SIM	SIMILAR		
CLR	CLEAR(ANCE)			SPEC'S	SPECIFICATIONS		
C.O	CLEANOUT	LIN	LINEAR	SQ	SQUARE		
COMP	COMPACTED	LP	LOW POINT	STA	STATION		
CONC	CONCRETE	LT	LIGHT	STD	STANDARD		
CONT	CONTINUOUS			STL	STEEL		
CONTR	CONTRACTOR	MATL	MATERIAL	STRUCT	STRUCTURAL		
CU	CUBIC	MAX	MAXIMUM	SYM	SYMMETRICAL		
		MECH	MECHANICAL				
DBL	DOUBLE	MH	MANHOLE	TBC	TOP OF BACK OF CURB		
DEG	DEGREE	MIN	MINIMUM	TC	TOP OF CURB		
DEMO	DEMOLISH, DEMOLITION	MISC	MISCELLANEOUS	THK	THICK		
DIA	DIAMETER			T LF	TOP OF LIGHT FOOTING		
DIM	DIMENSION	NIC	NOT IN CONTRACT	TO	TOP OF		
DN	DOWN	NOM	NOMINAL	TOPO	TOPOGRAPHY		
DTL	DETAIL	NTS	NOT TO SCALE	TR	TOP OF RAMP		
DWG	DRAWING			TRANS	TRANSFORMER		
		OC	ON CENTER(S)	TS	TOP OF STEP		
EA	EACH	OD	OUTSIDE DIAMETER	TW	TOP OF WALL		
EF	EACH FACE	OPP	OPPOSITE	TYP	TYPICAL		
EJ	EXPANSION JOINT						
ELEV	ELEVATION	PA	PLANTING AREA	UNFIN	UNFINISHED		
ELECT	ELECTRICAL	PC	POINT OF CURVATURE				
ENG	ENGINEER	PERF	PERFORATE(D)	VAR	VARIES		
EOP	CURB UP	PED	PEDESTRIAN	VERT	VERTICAL		
EQ	EQUAL	PERIM	PERIMETER	VEH	VEHICLE		
EST	ESTIMATE	PI	POINT OF INTERSECTION	VOL	VOLUME		
EW	EACH WAY	PL	PROPERTY LINE				
EXIST	EXISTING	POB	POINT OF BEGINNING	W/	WITH		
		PSF	POUNDS PER SQUARE FOOT	W/O	WITHOUT		
FG	FINISHED GRADE	PSI	POUNDS PER SQUARE INCH	WT	WEIGHT		
FIN	FINISH	PT	POINT, POINT OF TANGENCY	WWF	WELDED WIRE FABRIC		
FL	FLOW LINE	PVC	POLYVINYL CHLORIDE				
FOB	FACE OF BUILDING	PVMT	PAVEMENT	YD	YARD		
FOW	FACE OF WALL	PVR	PAVER(S)				
FS	FINISH SURFACE						
FT	FOOT (FEET)						
FTG	FOOTING						

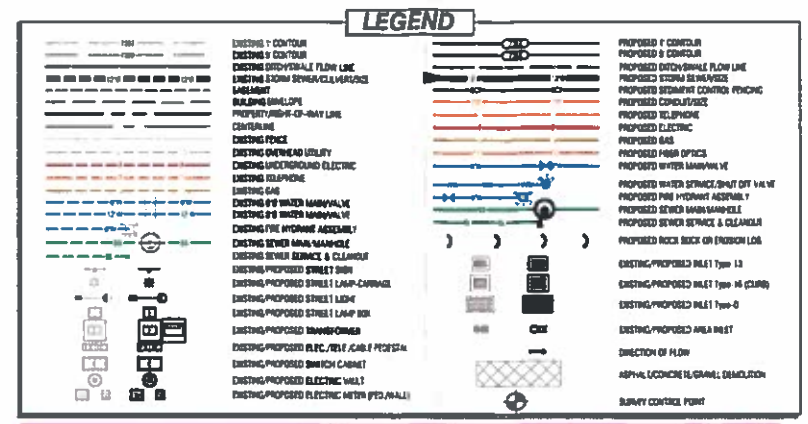
INDEX OF SHEETS

SHEET NO.	SHEET LIST
C.1	Cover Sheet
C.2	Grading & Earthwork
C.3	Utility & Underground Piping Plan
C.4	Site Plan
C.5	Tank Details
C.6	Civil Details
C.7	Civil Details
S.1	Structural Details (TBD)
E.1	Electrical Notes & Legend
E.2	Electrical Site Plan and 1-Line Diagram



VICINITY MAP
1" = 2000'

LEGEND



Preliminary Drawings - Civil

GENERAL NOTES

1. THE WARRANTY PERIOD SHALL BE TWO (2) YEARS FROM THE DATE OF ACCEPTANCE.
2. CONSTRUCTION WORK: ANY NOISE CREATED BY OPERATING OR CAUSING TO BE OPERATED ANY EQUIPMENT (MECHANICAL OR NON-MECHANICAL, SELF-PROPELLED OR MANUALLY MANIPULATED USED IN CONSTRUCTION, REPAIR, ALTERATION OR DEMOLITION WORK ON BUILDINGS, STRUCTURES, STREETS, ALLEYS OR APPURTENANCES AT ANY TIME OTHER THAN BETWEEN THE HOURS OF 7:00 A.M. AND 7:00 P.M. ON MONDAY THROUGH FRIDAY UNLESS OTHERWISE SPECIFIED IN THE PROJECT SUPPLEMENTARY GENERAL CONDITIONS. THE TOWN/CITY MANAGER OR HEREIN AUTHORIZED TO ISSUE A CONSTRUCTION WORK NOISE PERMIT ALLOWING CONSTRUCTION WORK NOISE TO OCCUR AT A TIME OTHER THAN THE TIME SET FORTH HEREIN BASED ON CIRCUMSTANCES WHICH NECESSITATE SUCH CONSTRUCTION WORK. IN THE EVENT THE TOWN/CITY MANAGER ISSUES SUCH A PERMIT, THE TOWN/CITY COUNCIL SHALL BE ADVISED OF SUCH ISSUANCE AT THE NEXT REGULAR TOWN/CITY COUNCIL MEETING.
3. IN ORDER OF PRECEDENCE, ALL CONSTRUCTION SHALL MEET OR EXCEED THE PROJECT PLANS AND TECHNICAL SPECIFICATIONS, STANDARDS ESTABLISHED BY THE LATEST EDITIONS OF THE TOWN/CITY PUBLIC WORKS MANUAL AND/OR ENGINEERING STANDARDS, AND CDOT SPECIFICATIONS, AS REFERENCED HEREIN, AND BE SUBJECT TO OBSERVATION BY THE PROJECT ENGINEER, TOWN/CITY AND CDOT AS APPLICABLE.
4. IN CASE OF A CONFLICT BETWEEN VARYING SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LATEST STANDARD SPECIFICATIONS AND DETAILS OF ALL AGENCIES EXERCISING JURISDICTION OVER THIS PROJECT. A COPY OF THESE SPECIFICATIONS AND DETAILS SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES.
6. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES TWO (2) SIGNED COPIES OF THE LATEST PLANS, STANDARDS, AND SPECIFICATIONS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY AND PROJECT ENGINEER. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THESE PLANS WITHOUT PRIOR OBTAINING WRITTEN APPROVAL FROM THE OWNER, PROJECT ENGINEER, AND GOVERNING AGENCY.
7. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL APPLICABLE LAWS AND REGULATIONS.
8. CONSTRUCTION SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A BASE DESIGN COMPUTER AIDED DRAFTING (CAD) FILE WILL BE PROVIDED TO THE CONTRACTOR UPON SIGNING THE PROJECT ENGINEER'S ELECTRONIC FILE INDEMNITY AGREEMENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE SAFETY ON THE PROJECT. THIS SHALL INCLUDE THE SAFETY OF HIS OWN PERSONNEL, SUBCONTRACTORS, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC. ALL JOB SITE SAFETY SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, AND INCLUDE COMPLIANCE INCLUDING, BUT NOT LIMITED TO, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
10. THE CONTRACTOR SHALL CONTACT ONE CALL OF COLORADO AT 811 (1-800-922-1987) FOR THE MARKING OF MEMBER UNDERGROUND UTILITIES. (www.uniocc.org) A MINIMUM OF SEVENTY TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) IN ADVANCE OF ANY EXCAVATION.
11. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE INDICATED IN THE PLANS, AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER, PROJECT ENGINEER, TOWN/CITY AND CDOT, AS APPLICABLE.
12. LOCATIONS AND ELEVATIONS OF EXISTING APPURTENANCES TO BE MET FOR ENGINEERING PRIOR TO CONSTRUCTION. CONSTRUCTION SHALL REPORT TO THE PROJECT ENGINEER ANY DISCREPANCIES BETWEEN HIS MEASUREMENTS AND THOSE PLANS.
13. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES SHOWN IN THE PLANS AND/OR SPECIFICATIONS. THE CONTRACTOR SHALL NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES. ANY MISSING DIMENSIONS OR DISCREPANCIES IN PLANS, FIELD STAKING, OR PHYSICAL FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT NOTIFYING THE PROJECT ENGINEER, HE DOES SO AT HIS OWN RISK.
14. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES, AND SHALL PROVIDE ALL WORK AND MATERIALS NECESSARY TO CONSTRUCT THE PROJECT IN ITS ENTIRETY.
15. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT DESIGNATED FOR REMOVAL AND THOSE IMPROVEMENTS THAT ARE OUTSIDE THE LIMITS OF THE PROPOSED CONSTRUCTION. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE INDICATED AND SHALL PROVIDE TEMPORARY FENCING, BARRICADES, SUPPORTS, RESTRAINTS, AND/OR BRACING WHERE REQUIRED TO PROTECT EXISTING IMPROVEMENTS. DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPAIRED AND/OR REPLACED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
16. ALL GROUNDING AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE OWNER'S PROPERTY, PUBLIC RIGHT-OF-WAY, PERMANENT EASEMENTS, AND TEMPORARY CONSTRUCTION EASEMENTS. THE CONTRACTOR SHALL NOT OPERATE OUTSIDE THIS AREA WITHOUT THE PRIOR CONSENT OF THE PROPERTY OWNER INVOLVED AND DAMAGE TO PRIVATE PROPERTY BY THE CONTRACTOR OUTSIDE THESE LIMITS WITHOUT THE PERMISSION OF THE PRIVATE PROPERTY OWNER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NOT OBTAINED BY THE OWNER OR OWNER'S REPRESENTATIVES, AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION CONTRACT IN THESE PLANS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE GOVERNING AGENCIES AND LOCAL FIRE DEPARTMENT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANTS/FIRE SUPPRESSION TANK OUT OF SERVICE AT LEAST SEVENTY TWO (72) HOURS PRIOR TO CONSTRUCTION.
19. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE SECURITY AND SHALL PROPERLY PROTECT AND BARRICADE THE CONSTRUCTION SITE UNTIL CONSTRUCTION IS COMPLETE. EXCHANGE, LOSS DUE TO THEFT, OR VANDALISM OF MATERIALS AND EQUIPMENT (SECURED OR UNSECURED) WILL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
20. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK FROM ADJACENT PRIVATE PROPERTY OWNERS. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD, DURING ALL HOURS OF OPERATION FOR THE BUSINESS LOCATED ON THOSE PARCELS.
21. FOR ANY CHANGES OR DEVIATIONS FROM THESE PLANS PROPOSED BY THE CONTRACTOR, SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF MATERIAL.
22. CONTRACTOR MUST COORDINATE ALL CONSTRUCTION WITH THE OWNER'S DESIGNATED CONSTRUCTION PROJECT MANAGER OR THE PROJECT ENGINEER.
23. CONTRACTOR SHALL PROTECT AND PRESERVE ALL SURVEY CONTROL AND PROPERTY MONUMENTATION. ANY DAMAGED MONUMENTS SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE PROJECT'S STATE AT THE CONTRACTOR'S EXPENSE.
24. PRIOR TO MOVING OFF THE JOB SITE THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR THE OWNER'S CONSTRUCTION PROJECT MANAGER TO PERFORM THE FINAL WALK THROUGH OF THE CONSTRUCTION SITE.
25. TEMPORARY POWER, TELEPHONE, WATER, SANITARY SEWER AND WASTE DISPOSAL SERVICE FOR THE SITE IS THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.
26. NO BELOW GRADE WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL) ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE APPROPRIATE GOVERNING AGENCY. PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER INSPECTIONS SHALL BE SCHEDULED AT LEAST FORTY EIGHT (48) HOURS PRIOR.
27. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL NECESSARY TO COMPLETE THE WORK. ALL TRAFFIC CONTROL DEVICES AND USE THESE OF CONTROLLING TRAFFIC THROUGH CONSTRUCTION ZONES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND ALL REVISIONS THERETO INCLUDING LOCAL AND STATE SUPPLEMENTS. ADDITIONAL WORK IN THE RIGHT-OF-WAY OR TRAFFIC CONTROL PERMITS MAY BE NECESSARY AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
28. FOR ANY CONSTRUCTION ACTIVITY WITHIN A ROAD RIGHT OF WAY, CONTRACTOR SHALL PROVIDE ALL WARNING LIGHTS, SIGNS, BARRICADES, FLAG MEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE LASTED EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION ZONE TRAFFIC CONTROL. A CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL TO THE TOWN/CITY AND PROJECT ENGINEER, 7 DAYS PRIOR TO COMMENCING CONSTRUCTION WITHIN A PUBLIC RIGHT-OF-WAY.
29. CONTRACTOR SHALL DESIGNATE A CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) TO MANAGE CONSTRUCTION SIGNAGE AND SAFETY OF OPERATIONS DURING ACTIVITIES WITHIN THE RIGHT OF WAY. A TRAFFIC CONTROL SUPERVISOR SHALL BE AVAILABLE WHENEVER WORK IS IN PROGRESS.
30. IF UNANTICIPATED HAZARDOUS MATERIALS OF ANY KIND ARE ENCOUNTERED IN THE WORK, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL CONSTRUCTION OPERATIONS AND NOTIFY THE PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER FOR FURTHER DIRECTION.
31. ALL DEBRIS RESULTING FROM CONSTRUCTION AND DEMOLITION SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY AND LEGALLY AND SHALL BE CONSIDERED PART OF THE WORK.
32. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES IN ALL DIRECTIONS. DRAINAGE FACILITIES MAY NEED TO BE CONSTRUCTED & MAINTAINED AS NECESSARY TO PROTECT PUBLIC & PRIVATE PROPERTY.
33. ALL CONSTRUCTION SHALL BE SUBJECT TO OBSERVATION AND REVIEW BY THE TOWN/CITY AND THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING FOR AND COORDINATING OBSERVATIONS AND REVIEW OF ALL INSTALLATIONS, OBSERVATIONS AND REVIEW OF CONSTRUCTION WORK IN PROGRESS ARE NOT INTENDED TO BE CONSTRUED AS A GUARANTEE OR WARRANTY BY THE OBSERVER OF THE COMPLETED WORK. ALL GUARANTEES OR WARRANTIES REMAIN WITH THE CONTRACTOR.
34. ALL DISTURBED AREAS MUST BE RECLAIMED PER SECTION 45.4 OF THE CITY PUBLIC WORKS MANUAL. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL AFFECTED OR DAMAGED LANDSCAPING, INCLUDING IRRIGATION, WITH SIMILAR MATERIALS AND PLANTS. SOD SHALL BE USED TO REPLACE LAWN.
35. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE POTENTIAL POLLUTION FROM CONSTRUCTION ACTIVITIES, INCLUDING VEHICLE FUELING & MAINTENANCE, AND STORAGE AND USE OF CHEMICALS & FERTILIZER. THE CONTRACTOR SHALL IDENTIFY BEST MANAGEMENT PROCEDURES FOR HANDLING POTENTIAL POLLUTANTS AND SUBMIT SPILL PREVENTION AND RESPONSE PROCEDURES TO THE TOWN/CITY AND PROJECT ENGINEER PRIOR TO ANY ACTIVITY AT THE PROJECT SITE.
36. THE CONTRACTOR SHALL VERIFY EXISTING PIPE OR MANHOLE INVERTS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
37. THE TOWN/CITY SHALL PROVIDE THE CONTRACTOR WITH A TAX EXEMPT FORM FOR USE IN PURCHASING OF MATERIALS AND SUPPLIES.
38. ALL PRODUCT INFORMATION SHOWING AS PROVIDED BY THE MANUFACTURER. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COMPLYING WITH THE SIMILE MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS FOR THE INSTALLATION OF ALL MATERIALS WITH SPECIAL ATTENTION TO PROPER SPACING OF MASONRY BUNK-NOSE. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE DETAILED PROJECTS AND THOSE SHOWN ON THIS PLAN.
39. ALL SIGNS REMOVED FROM THE RIGHT OF WAY SHALL BE RETURNED TO THE TOWN/CITY OR STORED ONSITE CONTRACTOR TO RECORD PHOTOS OF THE AREA AND REINSTALL SIGNS THAT ARE REMOVED DURING CONSTRUCTION.
40. ANY MAILBOX OTHER MATERIAL TRACKED OR OTHERWISE DEPOSITED ON THE ROADWAY SHALL BE REMOVED DAILY OR AS DIRECTED BY THE DEPARTMENT INSPECTOR.
41. THE CONTRACTOR SHALL PROVIDE ON SITE SANITARY FACILITIES UNLESS FACILITIES ARE ALREADY PROVIDED THAT ARE REASONABLY CLOSE TO THE CONSTRUCTION SITE.
42. THE CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS TO AFFECTED PROPERTY OWNERS AT ALL TIMES DURING CONSTRUCTION AT NO ADDITIONAL COST.
43. THE CONTRACTOR SHALL COMPLY WITH ALL AGREEMENTS BETWEEN THE TOWN/CITY AND PRIVATE PROPERTY OWNERS.
44. ADDITIONAL NOTES ARE LOCATED THROUGHOUT THE CONSTRUCTION DOCUMENTS.

SITE PLAN NOTES

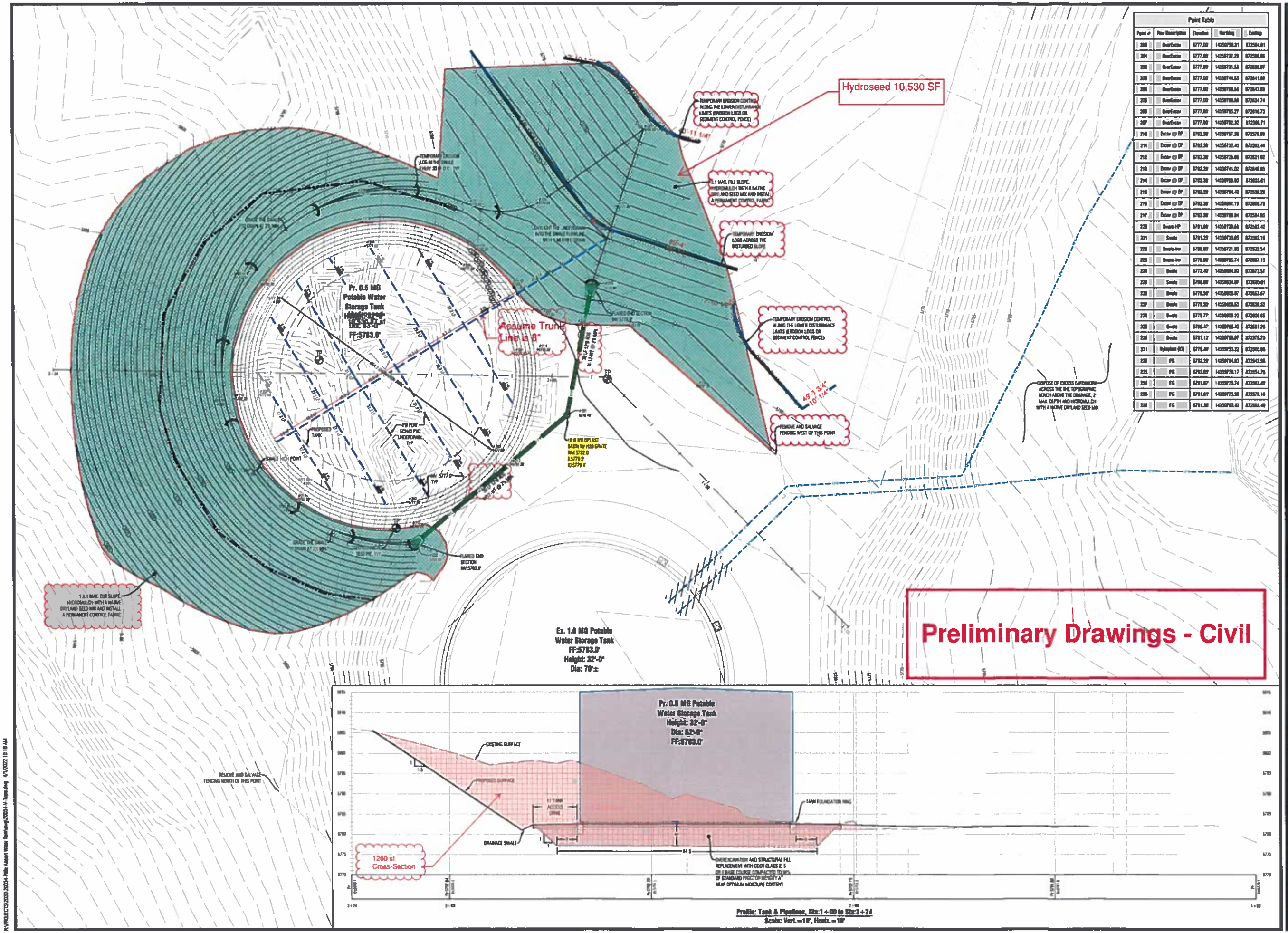
1. DIMENSIONS SHOWN ON THE SITE PLAN ARE TO FACE OF CURB LINE (FLOWLINE) IN CURBED AREAS, EDGE OF ASPHALT, AND EXTERIOR FACE OF BUILDING UNLESS OTHERWISE SPECIFIED.
2. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.

GRADING PLAN NOTES

1. PRIOR TO ANY GRADING OPERATIONS, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE ADEQUATELY IN PLACE. REFER TO THE EROSION AND SEDIMENT CONTROL PLAN, IF PROVIDED, FOR REQUIREMENTS.
2. THE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO FINISH GRADE FOR SURFACE PAVEMENT, TOP OF SIDEWALK AND CURB, TOP OF FLOOR SLABS, ETC. REFER TO TYPICAL SECTIONS FOR MULCH, SOIL PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT FOR BUILDING ELEVATIONS.
3. IF APPLICABLE, ALL TOP OF CURB AND SIDEWALK ELEVATIONS SHALL BE 0.2 HIGH GUTTER ELEVATIONS UNLESS OTHERWISE NOTED. IN AREAS WITH SIDEWALK ABUTTING BACK OF CURB, TOP OF CURB ELEVATIONS SHALL BE EQUAL TO SIDEWALK ELEVATIONS.
4. THE CONTRACTOR SHALL CONSTRUCT FINISH GRADE SLOPES NO STEEPER THAN AS SHOWN ON THESE PLANS.
5. SITE, UTILITY AND ROAD PREPARATION, GRADING AND EXCAVATION PROCEDURES SHALL CONFORM TO THE RECOMMENDATIONS OUTLINED IN THE PROJECT GEOTECHNICAL REPORT.
6. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND SIDEWALKS IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT.
7. IN CASE OF ANY DISCREPANCIES REGARDING EARTHWORK BETWEEN THE GEOTECHNICAL REPORT AND THE SPECIFICATIONS SHOWN IN THESE PLANS, NOTIFY THE PROJECT ENGINEER AND OWNER'S CONSTRUCTION PROJECT MANAGER IMMEDIATELY.
8. THE UPPER 24" OF ALL UTILITY TRENCHES IN UNPAVED AREAS SHALL BE BACKFILLED WITH COMPACTED COHESIVE SOILS. SEE GEOTECHNICAL REPORT FOR COMPACTION AND MOISTURE RECOMMENDATIONS.
9. FINAL PAVEMENT BASECOURSES SHALL BE PROOF ROLLED WITHIN TWENTY FOUR (24) HOURS PRIOR TO THE PLACEMENT OF THE PAVEMENT TO DETECT LOCALIZED AREAS OF INSTABILITY.
10. SUITABLE FILL MATERIALS SHALL BE PLACED IN THIN LIFTS OF 4 TO 6 INCHES LOOSE OR ADJUSTMENT UNLESS OTHERWISE ALLOWED IN THE GEOTECHNICAL REPORT.
11. IF REQUIRED, THE CONTRACTOR SHALL OBTAIN ALL LOCAL AND STATE PERMITS AND AUTHORIZATION TO DISCHARGE FROM DEWATERING ACTIVITIES.
12. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS AND TRENCHES AS NEEDED FOR THE CONSTRUCTION OF THE PROJECT USING MINIMUM PIECES OF HIS CHOICE. REFER TO THE GEOTECHNICAL REPORT FOR ANTICIPATED LEVELS OF GROUNDWATER AND DEWATERING RECOMMENDATIONS.
13. ALL EXCAVATIONS, RETAINING WALLS, ROADWAYS, DRAINAGE FACILITIES, BUILDING STRUCTURES AND TRENCHES SHALL BE SLOPED/SHORED/BRACED FOR PROTECTION OF PERSONNEL IN ACCORDANCE WITH OSHA AND/OR CDOT REGULATIONS AND AT THE CONTRACTOR'S FULL DISCRETION BASED ON THE SITE CONDITIONS. OPEN EXCAVATIONS SHALL BE ADEQUATELY PROTECTED AND/OR FENCED AS NECESSARY AND FOR THE SAFETY OF THE PUBLIC.

PAVING NOTES

1. ALL PAVING WORK AND SUBGRADE PREPARATION/STABILIZATION SHALL CONFORM TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. PREPARED BY HEPWORTH-PAWLAK GEOTECHNICAL, INC. DATED 8/26/14, PROJECT NO 1141234. IN CASE OF ANY CONFLICT WITH THESE PLANS, NOTIFY ENGINEER IMMEDIATELY.
2. IF REQUIRED, ALL CONCRETE, PAVEMENT AND CONSTRUCTION JOINT MIXES, MIXES SPECIFICATIONS OUTLINED IN THE GEOTECHNICAL REPORT. CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4200 PSI, TYPE I/II PORTLAND CEMENT UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT FOR HIGHER SULFATE RESISTANCE, COMPRISING TO ASTM C 150.
3. ALL RADIUS DIMENSIONS SHOWN ON THE PAVING PLAN ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
4. 95% STANDARD PROCTOR IS REQUIRED FOR ALL ROADWAY & DRIVEWAY CONSTRUCTION AND TRENCH BACKFILL UNDER THE ROADWAYS, PARKING AREAS, TRACK, SIDEWALKS, PUBLIC ROW, ACCESS EASEMENTS UNLESS NOTED OTHERWISE. COMPACTION REQUIRED AREAS MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED TO THE TOWN/CITY AND THE PROJECT ENGINEER PRIOR TO PAVING. TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER DURING ACCEPTANCE BY THE OWNER. FAILURE TESTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR & THE ENGINEER & ARE NECESSARY RETEST SHALL BE PERFORMED UNTIL A PASSING RESULT IS OBTAINED. ALL UTILITY TRENCH & SERVICE LINES WITHIN PUBLIC RIGHT OF WAY OR EASEMENT SHALL BE TESTED. ALL COMPACTION SHALL MEET OR EXCEED 95% STANDARD PROCTOR.
5. IF APPLICABLE, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ACCESSIBLE AREAS AND ROUTES ARE BUILT IN ACCORDANCE WITH THE PLANS AND THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN". THE SITE MAY BE INSPECTED BY TOWN/CITY PERSONNEL FOR COMPLIANCE WITH THE STANDARDS.
6. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.
7. CONCRETE SIDEWALK THICKNESS SHALL BE 6" MIN. AND INCREASED TO 8" MIN. AT RAMPS, DRIVEWAYS, DRIVEWAY CROSSINGS, OR AS INDICATED ON THE DETAILS. CONCRETE PAVEMENT THICKNESS IN ROADWAYS SHALL BE PER THE DETAILS. COLOR ADMIXTURES, COLOR SAMPLES SHALL BE PROVIDED TO THE PROJECT ENGINEER FOR SELECTION PRIOR TO CONSTRUCTION.
8. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS OR THIOCYANATES ARE NOT PERMITTED.
9. ALL REINFORCING STEEL SHALL BE EPOXY COATED GRADE 40 FOR #4 AND SMALLER AND GRADE 60 FOR #5 AND LARGER. ALL REINFORCING STEEL IN SLABS AND WALLS SHALL BE HELD AT CORRECT DISTANCE FROM FORMS BY ADEQUATE CONCRETE BLOCKS, SPIDERS, CHAIRS, OR TIES IN ACCORDANCE WITH LATEST ACI DETAILING PRACTICES.
10. DOWELS SHALL BE 12" EPOXY COATED #4 REBAR OR LARGER, CENTERED ON THE JOINT AND GROUTED INTO PLACE.
11. USE 1/4" BASTIC ON ALL EDGES UNLESS NOTED OTHERWISE.
12. EXPANSION JOINTS SHALL BE INSTALLED EVERY 50 LF IN SIDEWALKS AND/OR WHEN ABUTTING EXISTING CONCRETE OR A FIXED STRUCTURE. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH THICK AND SHALL EXTEND THE FULL DEPTH OF THE CONTACT SURFACE AND BEVELED OVER THE JOINT.
13. THE CONTRACTOR SHALL UNLESS OTHERWISE SHOWN ON THE PLANS, BILLACT AND USE A BOND BREAKER AT INLETS, MANHOLES AND SIMILAR RIGID STRUCTURES. SMALLER STRUCTURES SUCH AS VALVE AND MONUMENT BOXES SHALL NOT REQUIRE A BOND BREAKER.
14. CURE FOR 72 HOURS USING DURING COMPOUND, PLASTIC SHEETING OR CONTROLLED MOISTURE.
15. MILL EDGES OF SAWCUT ASPHALT PER PLANS. ALL ASPHALT AND CONCRETE LOCATED WITHIN THE RIGHT-OF-WAY OR PRIVATE PROPERTIES SHALL BE REPLACED PER THE DETAILS. WHEN REPLACING ASPHALT OR CONCRETE, MATCH VERTICAL EDGES OF SAWCUT AND MAINTAIN INTEGR



Point Table				
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200	OverExcav	5777.00	1435870.31	672584.01
201	OverExcav	5777.00	1435873.29	672586.06
202	OverExcav	5777.00	1435873.58	672630.97
203	OverExcav	5777.00	1435874.83	672641.99
204	OverExcav	5777.00	1435878.16	672647.00
205	OverExcav	5777.00	1435878.66	672634.74
206	OverExcav	5777.00	1435875.27	672618.73
207	OverExcav	5777.00	1435872.32	672588.71
210	Excav @ EP	5762.30	1435857.36	672576.00
211	Excav @ EP	5762.30	1435732.49	672593.44
212	Excav @ EP	5762.30	1435725.66	672621.02
213	Excav @ EP	5762.30	1435741.02	672646.83
214	Excav @ EP	5762.30	1435768.00	672653.61
215	Excav @ EP	5762.30	1435794.42	672638.28
216	Excav @ EP	5762.30	1435800.19	672608.76
217	Excav @ EP	5762.30	1435788.04	672584.85
220	Swale-HP	5761.00	1435739.66	672545.42
221	Swale	5761.25	1435730.05	672592.15
222	Swale-Inv	5760.60	1435721.80	672622.54
223	Swale-Inv	5776.00	1435785.74	672657.13
224	Swale	5772.40	1435804.00	672673.57
225	Swale	5766.60	1435824.87	672680.01
226	Swale	5776.50	1435805.87	672653.67
227	Swale	5779.20	1435805.52	672636.52
228	Swale	5779.77	1435806.22	672609.65
229	Swale	5768.47	1435785.49	672581.26
230	Swale	5761.12	1435756.97	672575.70
231	Hydrajetout (KO)	5770.40	1435753.22	672600.66
232	FG	5762.20	1435674.83	672547.56
233	FG	5762.02	1435675.17	672554.76
234	FG	5761.67	1435675.74	672563.42
235	FG	5761.61	1435675.98	672576.16
236	FG	5761.30	1435705.42	672583.40

Civil Engineering Surveying & Beyond
Boundaries Unlimited Inc.
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: NO
If "Yes", SUE Certification by:
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal
NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.625.5334

NORTH
Scale: 1" = 10'

811 Know what's below. Call before you dig.

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank

Grading & Earthwork

Bid Set - Not For Construction

No.	Date	Revisions	By
1			
2			
3			
4			
5			
6			
7			
8			

PROJECT NO. 00000
Designer: JWS
Drafter: JWS
Date: 3/21/22

Sheet C.2

File name: 00000-c-topo.dwg

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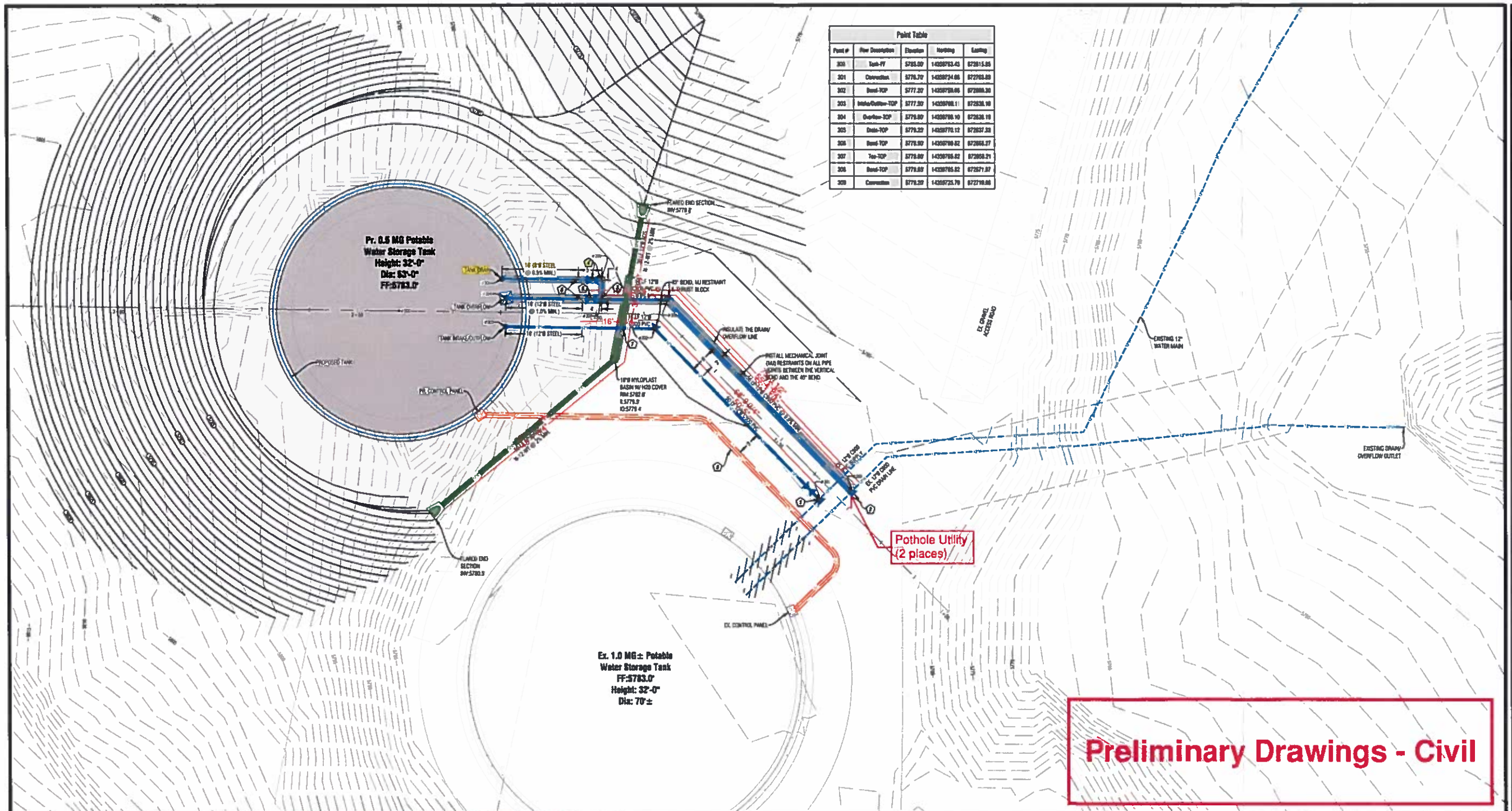

Point Table				
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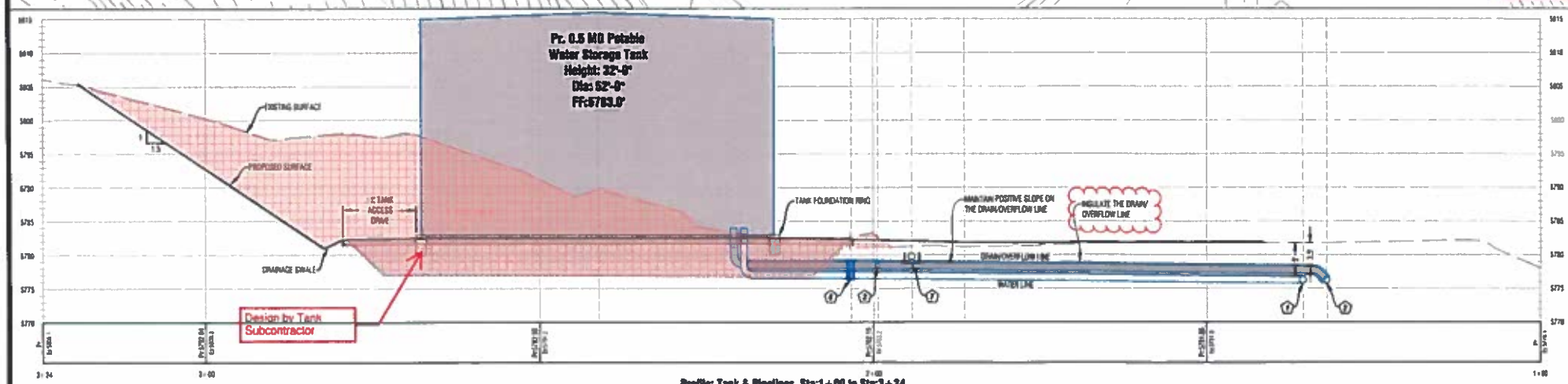
301	Connection	5776.70	1433597246.66	672703.89
302	Bend-TOP	5777.32	1433597246.66	672698.30
303	Inlet/Outlet-TOP	5777.30	1433597246.11	672638.10
304	Overflow-TOP	5779.80	1433597246.10	672626.10
305	Drain-TOP	5779.22	1433597246.12	672637.38
306	Bend-TOP	5779.92	1433597246.62	672653.27
307	Tee-TOP	5779.80	1433597245.62	672653.21
308	Bend-TOP	5779.80	1433597245.62	672571.87
309	Connection	5779.39	1433597225.70	672710.66



Profile: Tank & Pipelines, Sta:1+00 to Sta:3+24
Scale: Vert.=10', Horiz.=10'

FLAGNOTES

1. CONTRACTOR TO POTHOLE AND REPORT PIPELINE ELEVATION TO THE ENGINEER PRIOR TO CONSTRUCTION. CUT IN CONNECTION TO EXISTING 12"Ø C900 PVC PIPE. INSTALL TEE, 12"Ø GATE VALVE, MECHANICAL JOINT (MJ) RESTRAINTS AND THRUST BLOCK.
2. CONTRACTOR TO POTHOLE AND REPORT PIPELINE ELEVATION TO THE ENGINEER PRIOR TO CONSTRUCTION. CUT IN CONNECTION TO EXISTING 12"Ø C900 PVC PIPE. INSTALL TEE AT 45°, 45° VERT. BEND, MJ RESTRAINTS AND THRUST BLOCK.
3. INSTALL 12"x8" TEE, MJ RESTRAINTS AND THRUST BLOCK.
4. INSTALL 8"Ø 90° LR BEND, MJ RESTRAINTS, THRUST BLOCK AND 8"Ø GATE VALVE.
5. INSTALL 12" GATE VALVE AND MJ RESTRAINTS.
6. TRANSITION FROM 12"Ø C900 PVC TO 12"Ø STEEL PIPE.
7. INSULATE THE STORM SEWER TO 5 EACH SIDE OF THE CROSSING (INVERTED U).
8. INSTALL THREE 2" ELECTRICAL CONDUITS FOR CATHODIC PROTECTION SYSTEM, ANTENNA AND SPARE

NOTES

1. UNLESS OTHERWISE STATED ON THESE PLANS, ALL MATERIALS FOR WATER LINES SHALL CONFORM TO THE CITY PUBLIC WORKS MANUAL "PART B - CONSTRUCTION MATERIALS AND METHODS, SECTION 30. WATER TRANSMISSION, DISTRIBUTION AND SERVICE LINES".
2. HARDWARE FOR PIPE FITTINGS & CONNECTIONS SHALL BE 316 STAINLESS STEEL (ABOVE GROUND) AND COR-BLUE (BELOW GROUND).

Civil Engineering Surveying & Beyond
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523 Cooper Ave., Ste. 201
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(T) 970.945.5252
www.uu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: No
If "Yes", SUE Certification by:
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal
NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.625.5554

NORTH

811
Know what's below. Call before you dig.

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank
Utility & Underground Piping
Bid Set - Not For Construction

No	Date	Revision	By
1			
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3			
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PROJECT NO.
Designer
Drafter
Date
Sheet C.3

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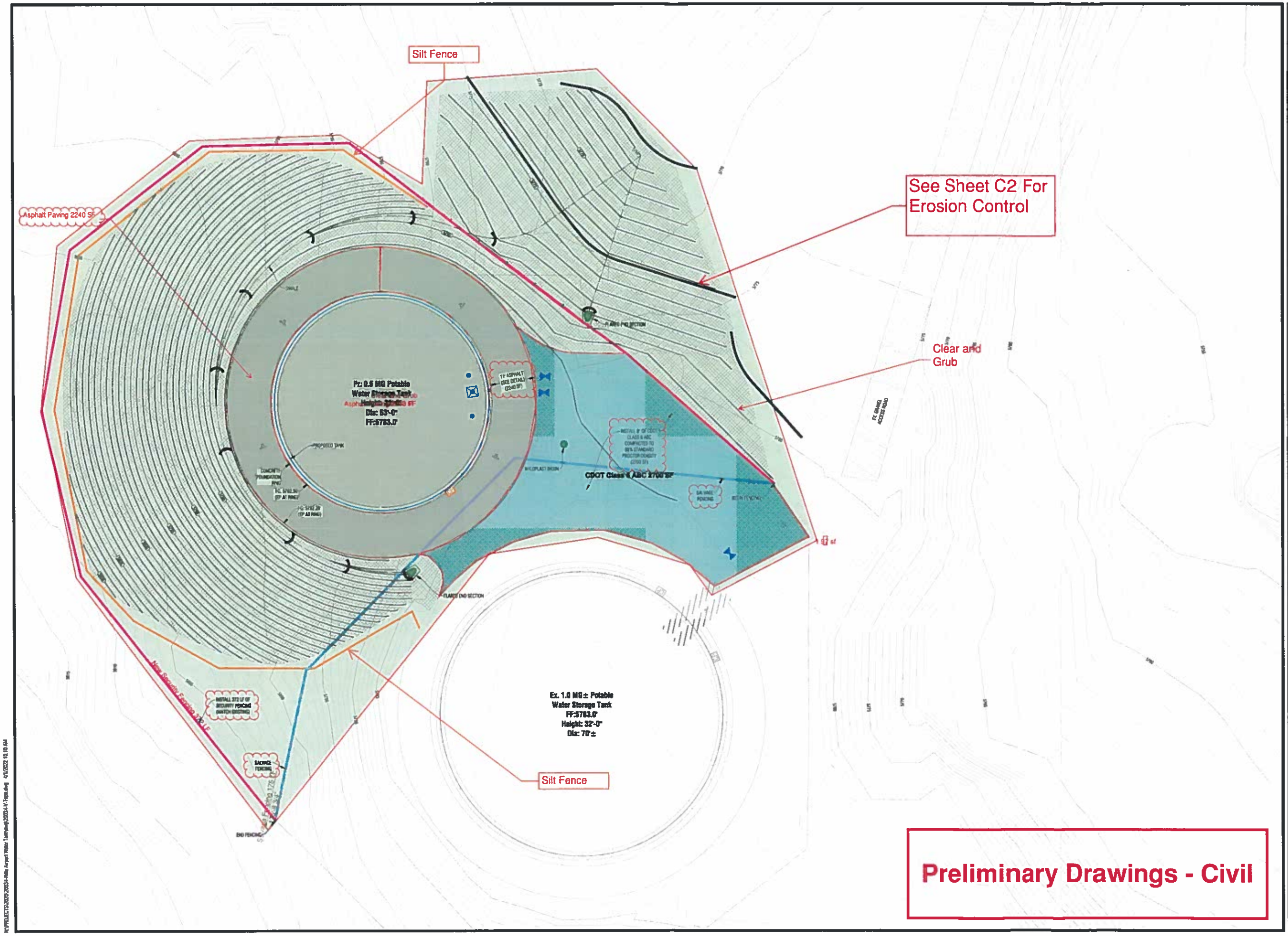

Civil Engineering Surveying & Beyond
Barlec Unlimited Inc.
523 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: No

If "Yes", SUE Certification by:
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.625.5154

NORTH

Scale: 1" = 10'

811
Know what's below. Call before you dig.

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank

Site Plan

Bid Set - Not For Construction

No.	Date	Revision	By
1			
2			
3			
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PROJECT NO.
Designer
Drafter
Date

C.4

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Hydrodynamic Mixing System is Specified in 46 40 10

Material Schedule for Tank

Key	Description	Quantity	Specifications
A	12"Ø COMMON SUPPLY/OUTLET PIPE TANK CONNECTION	1	SEE DETAIL(S). INCLUDES FLANGED SR ELBOW
B	12"Ø INTERNAL OVERFLOW STANDPIPE W/ SQUARE WEIR INTAKE	1	SEE DETAIL(S)
C	8"Ø TANK DRAIN CONNECTION	1	SEE DETAIL(S)
D	30"Ø HINGED SHELL MANHOLE	2	OSHA - 30"Ø HINGED SHELL MANHOLE (42) 3/4"Ø (A325) BOLTS IN 7/8"Ø HOLES @ 21-1/8" BOLT CL RAD.
E	24"Ø MANWAY	3	OSHA - 4" MIN. FLANGE DEPTH, 1/4" STEEL PLATE, (8) 3/4" BOLT PATTERN W/ FULL FACE RING FLANGE -TYPE GASKET- SBR
F	30"Ø MANWAY	1	OSHA - 4" MIN. FLANGE DEPTH, 1/4" STEEL PLATE, (12) 3/4" BOLT PATTERN W/ FULL FACE RING FLANGE -TYPE GASKET- SBR
G	HANDRAIL, SAFETY CAGE AND TOE KICK	1	OSHA
H	STEEL LADDER & STEEL GRATED PLATFORM	1	OSHA
J	TANK VENT	1	AWWA COMPLIANT D100-05 ALUMINUM AIR VENT FOR 18"Ø PIPE, 1,300 CFM MIN. AIR FLOW, ACCESSIBLE, NON-VISIBLE 24 MESH NON-CORRODIBLE SCREEN. MANUFACTURER ADVANCED TANK CONSTRUCTION, INC (18 AST ROOF VENT), OR ENGINEER APPROVED EQUAL
K	ANCHOR BRACKET	10	SEE DETAIL(S)
L	PASSIVE MIXING SYSTEM FOR 12"Ø FLANGED COMMON SUPPLY/OUTLET	1	TIDEFLEX, OR ENGINEER APPROVED EQUAL

NOTES:

ALL MATERIAL AND CONSTRUCTION SHALL BE AWWA AND STATE OF COLORADO DESIGN CRITERIA FOR POTABLE WATER SYSTEMS COMPLIANT UNLESS SPECIFIED OTHERWISE.

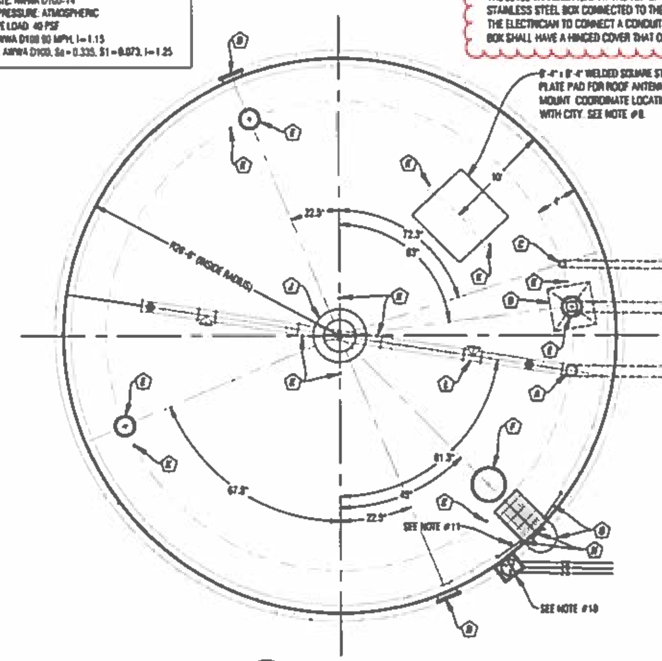
STEEL PIPE SHALL BE ASTM A53, SCHEDULE 40.

WATER TANK DESIGN CRITERIA

- DIMENSIONS AS INDICATED.
- STATE OF COLORADO DESIGN CRITERIA FOR POTABLE WATER SYSTEMS.
- INFLOW 500 GPM (1/2 OF EX. PUMP RATE @ 1000 GPM)
- DESIGN: AWWA D100-11
- ALTERNATE: AWWA D100-14
- DESIGN PRESSURE: ATMOSPHERIC
- ROOF LIVE LOAD: 40 PSF
- WIND: AWWA D100 90 MPH, I=1.15
- SEISMIC: AWWA D100, Ss=0.335, S1=0.073, I=1.25

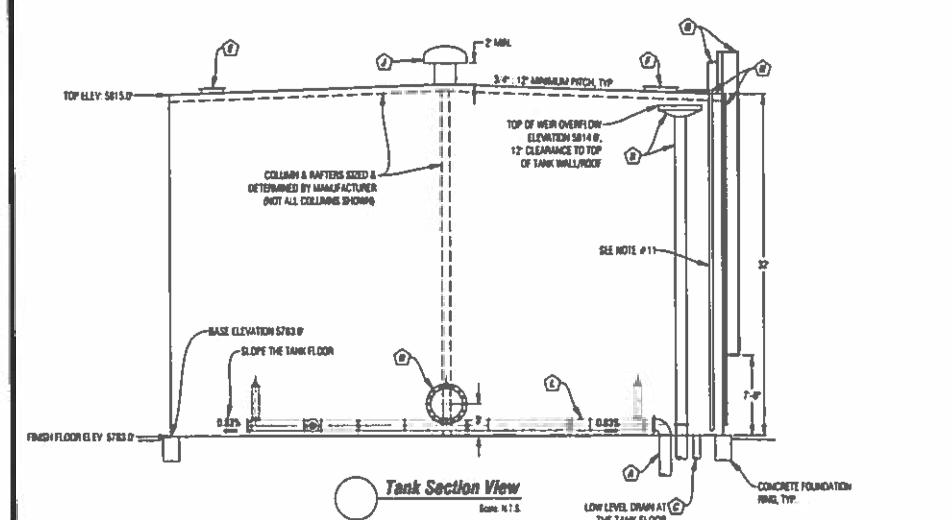
NOTES

1. AT THE DIRECTION OF THE CITY OF RIFLE PUBLIC WORKS DEPARTMENT, ACTIVE WATER TANK MIXING IS NOT INCLUDED IN THIS DESIGN. THE CITY IS ADVISED THAT THE PASSIVE SYSTEM INCLUDED MAY REQUIRE MORE FREQUENT WATER QUALITY MONITORING/TESTING THAN IS REQUIRED BY THE CURRENT STORAGE AND AND THAT ROUTINE TANK DRAINING MAY BE REQUIRED TO MEET COMPLIANCE STANDARDS AND REQUIREMENTS.
2. QUALITY CONTROL TESTING SHALL BE IN CONFORMANCE WITH APPLICABLE AWWA STANDARDS
3. QUALITY CONTROL TESTING TO BE PERFORMED BY INDEPENDENT TESTING AGENT. UNLESS OTHERWISE AUTHORIZED BY OWNER.
4. 100% VISUAL EXAMINATION OF ALL WELDS IS REQUIRED
5. RADIOGRAPHY SHALL BE REQUIRED IN ACCORDANCE WITH AWWA D100 INCLUDING RANDOM RADIOGRAPHY LOCATIONS.
6. VACUUM BOX TESTING SHALL BE REQUIRED OF THE FLAT BOTTOM SEAMS, OR OTHER MUTUALLY ACCEPTED METHOD.
7. HYDROSTATIC TESTING SHALL BE REQUIRED (AFTER FINISH COATING CURE)
8. INSTALL NEW 1/4" x 8'-4" SQUARE REINFORCING STEEL PLATE FOR ANTENNA MOUNT. LOCATE REINFORCING PLATE ON SOLID ROOF PLATE. AVOID OVERLAP OF ROOF PLATE SEEM. ANTENNA MOUNT AND WIRING MOUNTING EQUIPMENT TO BE MANUFACTURED BY METAL & CABLE CORP., INC. MODEL: MASS XL131-2 MAGNETIC MOUNT, AND CT 1000-24-U-4 CABLE TRAY MOUNTS, ELEVEN (11) CABLE MOUNTS REQUIRED, SPACED 4 FT ON CENTER.
9. INSTALL TANK CATHODIC PROTECTION PER SPECIFICATIONS.
10. INSTALL UNISTRUT PIECES WELDED TO THE OUTSIDE OF THE TANK. THE UNISTRUT PIECES SHALL BE 12 INCHES LONG, MOUNTED HORIZONTALLY, AND LOCATED EVERY 8 FEET UP THE ENTIRE SIDE OF THE TANK STARTING AT 4 FEET ABOVE THE BOTTOM OF THE TANK. THE UNISTRUT SHALL BE PAINTED THE SAME AS THE TANK EXTERIOR.
11. A 2 INCH THREADED PORT SHALL BE INSTALLED AT THE EDGE OF THE TANK AT THE TOP OF THE TANK. BELOW THE PORT A 2 INCH PVC PIPE SHALL BE INSTALLED THAT EXTENDS TO WITHIN 4 INCHES OF THE BOTTOM OF THE TANK AND ATTACHES TO THE SIDE OF THE TANK EVERY 5 FEET. THE PVC SHALL BE PERFORATED. THIS SHALL BE THE STILLING WELL FOR THE LEVEL TRANSMITTER. AT THE TOP OF THE TANK THERE SHALL BE A 8" X 8" X 8" STAINLESS STEEL BOX CONNECTED TO THE 2" THREADED PIPE. THIS BOX SHALL BE FOR THE ELECTRICIAN TO CONNECT A CONDUIT TO FOR THE LEVEL TRANSMITTER CABLE. THE BOX SHALL HAVE A HINGED COVER THAT OPENS ON THE TOP.



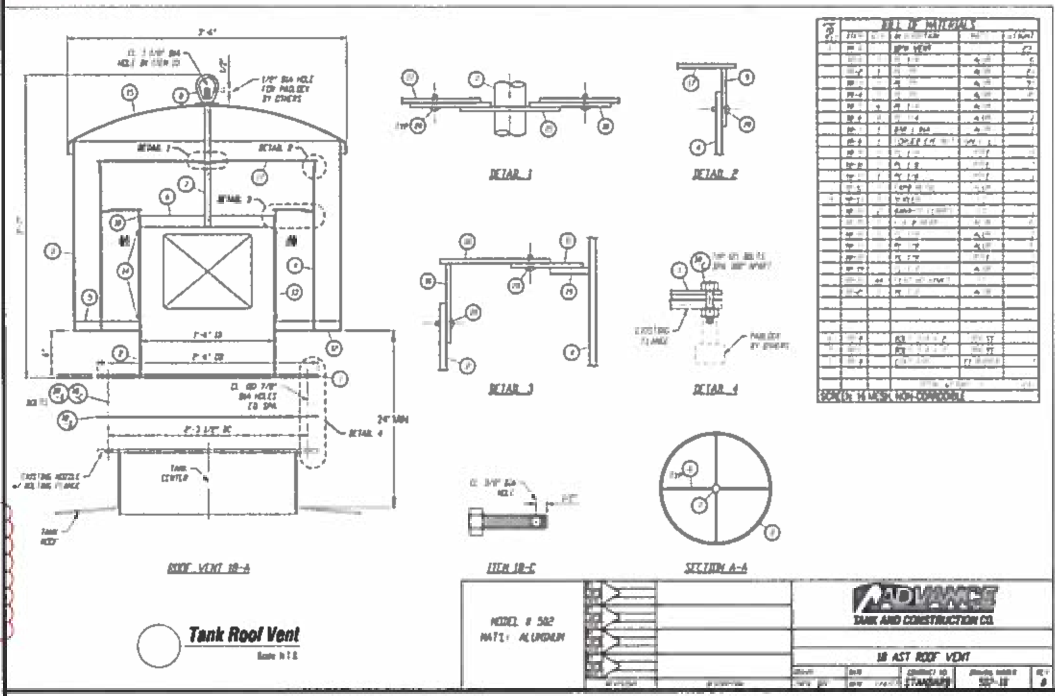
Tank Plan View

Scale: N.T.S.



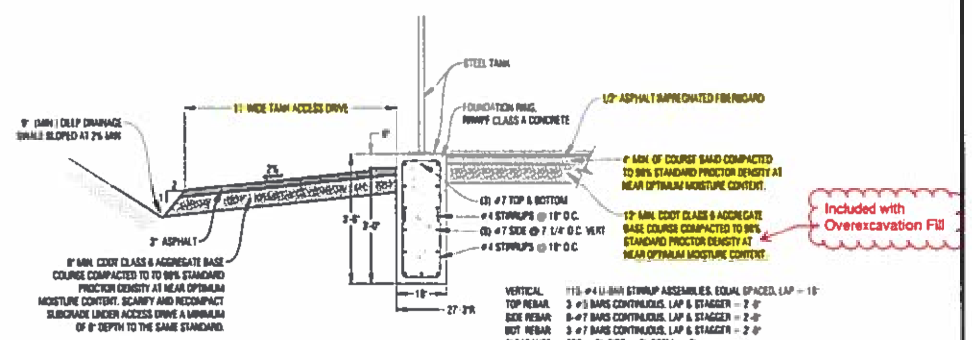
Tank Section View

Scale: N.T.S.



Tank Roof Vent

Scale: N.T.S.



VERTICAL: 115 #4 U-BAR STIRRUP ASSEMBLIES, EQUAL SPACED, LAP = 18"
TOP REBAR: 3 #5 BARS CONTINUOUS, LAP & STAGGER = 2'-8"
SIDE REBAR: 8-#7 BARS CONTINUOUS, LAP & STAGGER = 2'-8"
BOT REBAR: 3 #7 BARS CONTINUOUS, LAP & STAGGER = 2'-8"
CLEARANCE: TOP = 2", SIDE = 2", BOTM = 3"

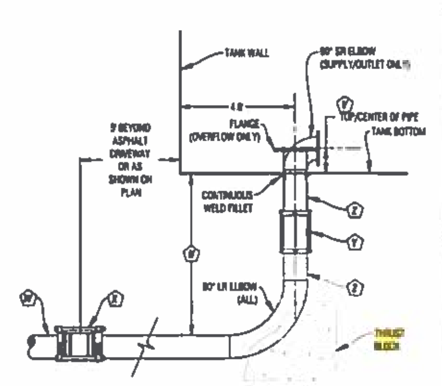
NOTES:

1. CDOT = COLORADO DEPARTMENT OF TRANSPORTATION.
2. GRADE 60 REBAR, 4000 PSI CONCRETE.
3. THE FOUNDATION RING FOOTING MAY BE FORMED IN SHORT, STRAIGHT SEGMENTS SO LONG AS THE MINIMUM WALL THICKNESS IS MAINTAINED AND THAT BOTH THE INSIDE AND THE OUTSIDE CIRCLE RADIUS ARE NOT ENCROACHED.
4. PRIOR TO ANY BACKFILLING OR CONCRETE FOUNDATION RING CONSTRUCTION, EXPOSED SOILS SHALL BE INSPECTED AS REQUIRED BY THE ENGINEER.
5. IF BEDROCK IS NOT ENCOUNTERED UNDER THE TANK, EXCAVATE, SCARIFY AND RECOMPACT TO DESIGN SUBGRADE UNDER THE TANK A MINIMUM OF 8" DEPTH TO 100% MAXIMUM STANDARD PROCTOR.
6. TANK FOUNDATION AND ROAD CONSTRUCTION SHALL COMPLY WITH KUMAR & ASSOCIATES, INC. "SUBSOIL STUDY FOR FOUNDATION DESIGN", JOB NO. 20-07-416, DATED JANUARY 21, 2021

Assumed shown cut is down to bedrock

Tank Foundation & Access Drive

Scale: N.T.S.



Material Schedule for Tank - Pipe Connection

Key	8"Ø DRAIN	12" TANK SUPPLY/OUTLET	12"Ø OVERFLOW
Z	STEEL PIPE SCHEDULE 40, ASTM A53 WELDED JOINTS	STEEL PIPE SCHEDULE 40, ASTM A53 WELDED JOINTS	STEEL PIPE SCHEDULE 40, ASTM A53 WELDED JOINTS
Y	DRESS STYLE 40 LONG BODY COUPLING, STEEL PIPE TO STEEL PIPE, OR ENGINEER APPROVED EQUAL, 2-1/2" GAP, MIN	DRESS STYLE 40 LONG BODY COUPLING, STEEL PIPE TO STEEL PIPE, OR ENGINEER APPROVED EQUAL, 2-1/2" GAP, MIN	DRESS STYLE 40 LONG BODY COUPLING, STEEL PIPE TO STEEL PIPE, OR ENGINEER APPROVED EQUAL, 2-1/2" GAP, MIN
X	8"Ø RESTRAINED C900 PVC/SCH 40 STEEL COUPLING, OR ENGINEER APPROVED EQUAL.	12"Ø RESTRAINED C900 PVC/SCH 40 STEEL COUPLING, OR ENGINEER APPROVED EQUAL.	12"Ø RESTRAINED C900 PVC/SCH 40 STEEL COUPLING, OR ENGINEER APPROVED EQUAL.
W	JOINT RESTRAINED C900 PVC (CL305/DR14)	JOINT RESTRAINED C900 PVC (CL305/DR14)	JOINT RESTRAINED C900 PVC (CL305/DR14)
V	FLUSH (0"), NO FLANGE	12" (CENTER) FULL FACE RING FLANGE -TYPE GASKET- SBR	12" (TOP) FULL FACE RING FLANGE -TYPE GASKET- SBR
U	3'-8"	3'-8"	8'-4"

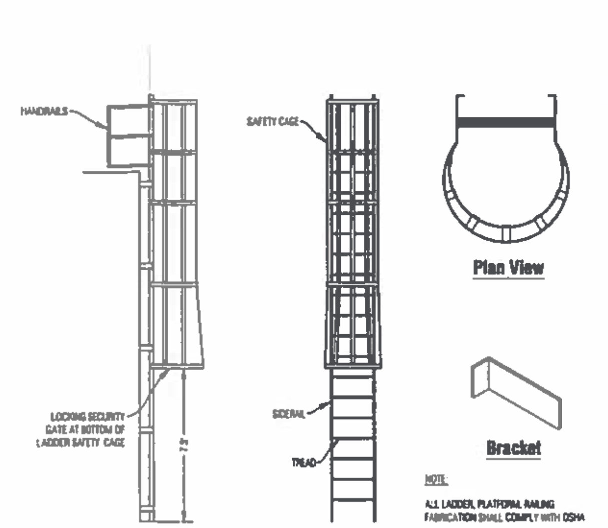
NOTES:

ALL NUTS AND BOLTS SHALL BE 316 STAINLESS STEEL.

ALL PIPE TRENCH BACKFILL UNDER AND WITHIN 5' OF THE TANK SHALL BE CDOT CLASS 6 AGGREGATE BASE COURSE COMPACTED TO 100% MAXIMUM STANDARD PROCTOR DENSITY.

Tank Pipe Connections

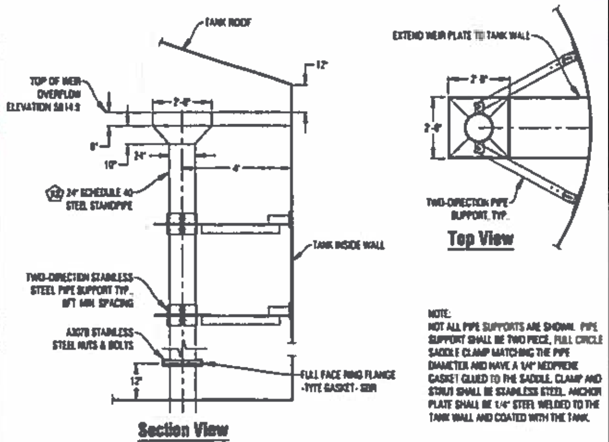
Scale: N.T.S.



NOTE:
ALL LADDER, PLATFORM, RAILING FABRICATION SHALL COMPLY WITH OSHA

Steel Ladder & Cage

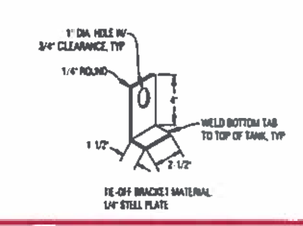
Scale: N.T.S.



NOTE:
NOT ALL PIPE SUPPORTS ARE SHOWN. PIPE SUPPORT SHALL BE TWO PIECE, FULL CIRCLE SADDLE CLAMP MATCHING THE PIPE DIAMETER AND HAVE A 1/4" NEOPRENE GASKET GLUED TO THE SADDLE. CLAMP AND STRUT SHALL BE STAINLESS STEEL. ANCHOR PLATE SHALL BE 1/4" STEEL WELDED TO THE TANK WALL AND COATED WITH THE TANK.

Overflow Standpipe Weir Intake

Scale: N.T.S.



Fall Protection Tie-Off

Scale: N.T.S.

Preliminary Drawings - Civil

RIFLE, COLORADO

Rifle Airport 0.5 MG Water Storage Tank

Tank Details

Bid Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

Sheet C.5

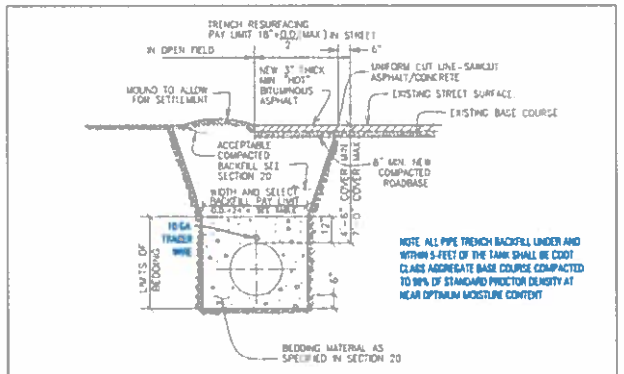
Civil Engineering, Surveying & Beyond — Bookcliff(?) Unlimited Inc.
823 Cooper Ave., Ste. 201, Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: No
Engineer or Surveyor Seal
NOT FOR CONSTRUCTION — Bid Set

Client Information: CITY OF RIFLE, 202 RAILROAD AVENUE, RIFLE, CO 81650, 970.665.6544

NORTH
Scale: 1" = 10'

811 Know what's below. Call before you dig.



NOTE: ALL PIPE TRENCH BACKFILL UNDER AND WITHIN 5-FEET OF THE TANK SHALL BE CDOT CLASS AGGREGATE BASE COURSE COMPACTED TO 98% OF STANDARD PROCTOR DENSITY AT NEAR OPTIMUM MOISTURE CONTENT

TYPICAL TRENCH SECTION

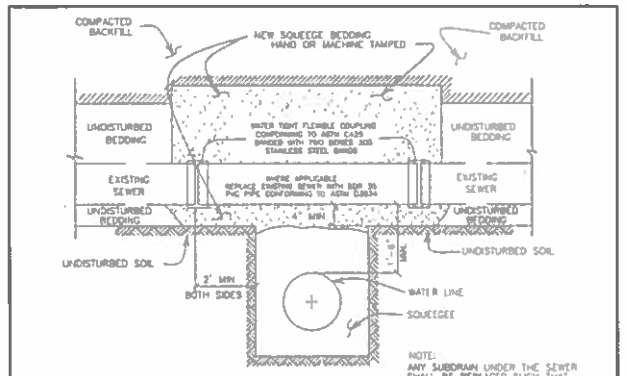
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	2'-4"
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
12"	2'-0"	3'-0"
16"	2'-4"	3'-4"
20"	2'-8"	3'-8"
24"	4'-0"	5'-0"

NOTES
1. PAVING SHALL COMPLY WITH SECTION 15
2. TRENCH WALLS TO BE SUPPORTED AS REQUIRED BY O.S.H.A.
3. ALL DISTURBED SURFACES SHALL BE RESTORED TO ORIGINAL CONDITIONS.
4. BACKFILL COMPACTION SHALL BE 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 OR AASHTO T99
5. IF THE EXISTING PAVEMENT IS GREATER THAN 3", MATCH EXISTING WITH NEW PAVEMENT
6. IF THE EXISTING ROAD BASE IS GREATER THAN 6", MATCH EXISTING WITH NEW ROAD BASE.

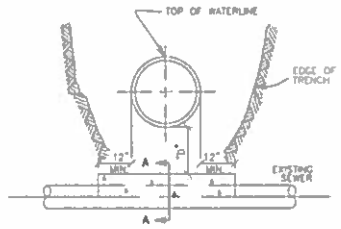
TYPICAL TRENCH SECTION FOR INSTALLATION OF WATER MAINS

approved: WMS
date: 11/8/02 | scale: NTS | dwn: | dwg #: W-1
ENGINEERING DIVISION OF PUBLIC WORKS DEPT.

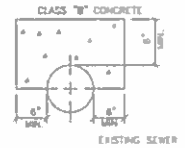
No | Dwn | Date | Revision



NOTE:
ANY SUBDRAIN UNDER THE SEWER SHALL BE REPLACED SUCH THAT NO FLOW SHALL ENTER THE WATER LINE TRENCH.



SEWER CROSSING UNDER
WITH "D" LESS THAN 2'



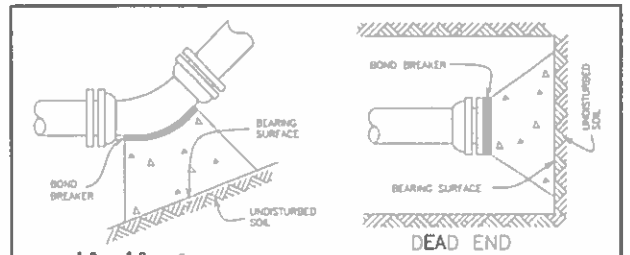
SECTION A-A

NOTE:
ALL EXISTING SEWER DAMAGED DURING INSTALLATION MUST BE REPLACED WITH PVC PIPE.

CROSSING STORM AND SANITARY SEWERS

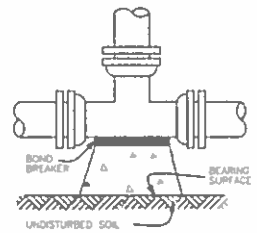
approved: WMS
date: 11/8/02 | scale: NTS | dwn: | dwg #: W-10
ENGINEERING DIVISION OF PUBLIC WORKS DEPT.

No | Dwn | Date | Revision

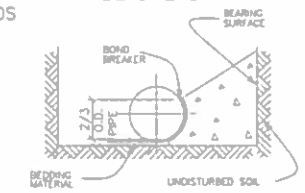


11¼°, 22½°, 45° AND 90° BENDS

DEAD END



TEE



TYPICAL CROSS SECTION

NOTES:
1.) BEARING SURFACES SHOWN IN CHART ARE MINIMUM.
2.) BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER 4",6",8" AND 12" WATER HAMMER = 110 P.S.I. 18",20" AND 24" WATER HAMMER = 70 P.S.I.
3.) BASED ON 3,000 psf SOIL BEARING CAPACITY.
4.) ALL BENDS, TEE BRANCHES AND DEAD ENDS SHALL BE RESTRAINED AND PICK BLOCKED

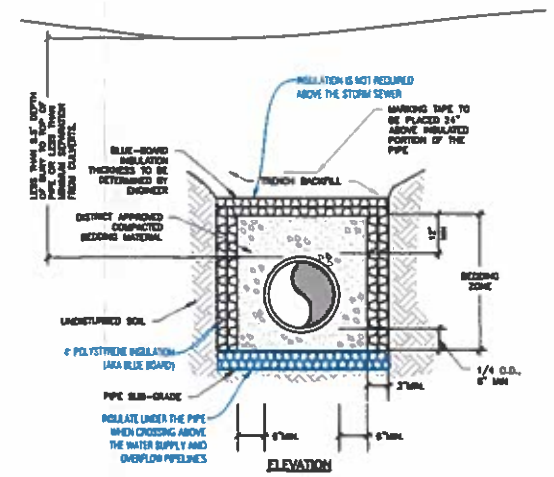
MINIMUM BEARING SURFACE AREA
(IN SQUARE FEET)

SIZE OF PIPE	BENDS 11¼°	22½°	45°	90°	TEE OR DEAD END
4"	1.00	1.00	1.00	1.50	1.50
6"	1.00	1.25	2.25	3.00	3.00
8"	1.00	2.00	4.00	5.25	5.25
12"	2.25	4.50	8.75	11.25	11.25
16"	3.75	7.50	14.50	27.00	19.00
20"	5.00	10.00	19.50	35.50	25.00
24"	7.00	14.00	27.75	51.00	36.00

CONCRETE KICKBLOCKS BEARING SURFACES AND INSTALLATION

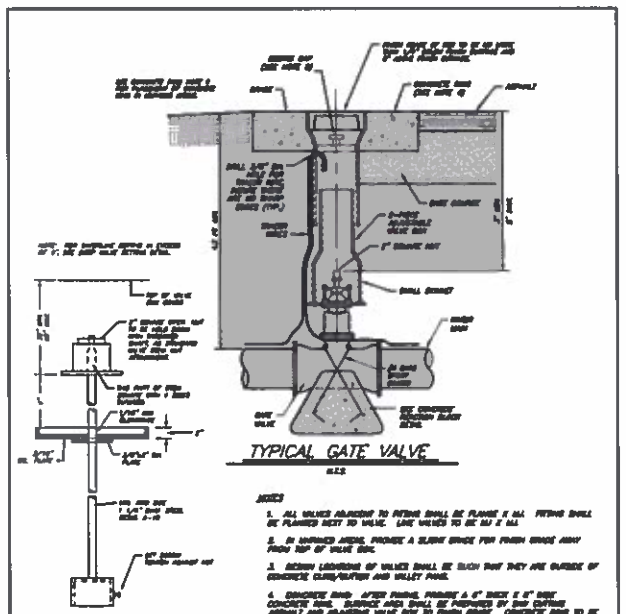
approved: WMS
date: 11/8/02 | scale: NTS | dwn: | dwg #: W-16
ENGINEERING DIVISION OF PUBLIC WORKS DEPT.

No | Dwn | Date | Revision



GENERAL NOTES
1. CONDITION OF LESS THAN MINIMUM BURY DEPTH ALLOWED ONLY WITH WRITTEN APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT DOES NOT MEET MINIMUM BURY REQUIREMENTS.
2. SEE SIDEWALK AND WATER PIPE BEDDING DETAIL FOR BACKFILL MATERIAL AND COMPACTION SPECS.

Storm Sewer Pipe Insulation



NOTES
1. ALL VALVES ADJACENT TO FITTING SHALL BE FLANGE X MJ. FITTING SHALL BE FLANGED NEXT TO VALVE. LAST VALVES TO BE MJ X MJ.
2. IN UNPAVED AREAS, PROVIDE A SLEEVE SPACE FOR FINISH GRADE ABOVE TOP OF VALVE BOX.
3. DESIGN LOCATIONS OF VALVES SHALL BE SUCH THAT THEY ARE OUTSIDE OF CONCRETE CLEAN-OUTS AND VALLEY PANS.
4. CONCRETE BAND - AFTER PAVING, PROVIDE A 6" THICK X 6" WIDE CONCRETE BAND. SURFACE AREA SHALL BE PREPARED BY 2nd COATING ASPHALT AND ADJACENT VALVE BOX TO FINISH GRADE. CONCRETE BAND TO BE PROVIDED IN ALL AREAS.
5. OTHER TYPES OF VALVES SHALL BE INSTALLED IN A SIMILAR MANNER AS SHOWN FOR THE GATE VALVE. INSTALLATION, INSTALLATION OF OTHER VALVE TYPES IS ALLOWED ONLY BY WRITTEN APPROVAL.
6. SEE DRAWING D-06 FOR DEBRIS CAP DETAIL.
7. TRACER WIRE SHALL BE NO LESS THAN 1 FT. FROM TOP OF VALVE BOX COVER. PROVIDE ADEQUATE SLACK IN WIRE TO PROVIDE FOR FUTURE ADJUSTMENT.

GATE VALVE & VALVE BOX DETAIL

approved: WMS
date: 11/8/02 | scale: NTS | dwn: | dwg #: W-25A
ENGINEERING DIVISION OF PUBLIC WORKS DEPT.

No | Dwn | Date | Revision
1 | BOP | 1.3.06 | RELOCATE TRACER WIRE

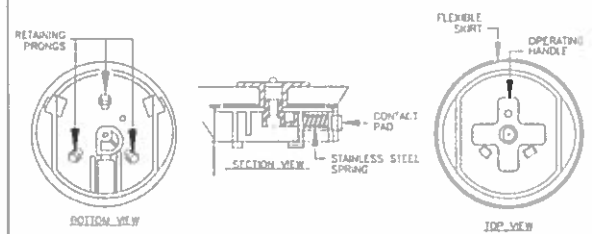
NOTES

1 DEBRIS CAP SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATION

2 FLEXIBLE SKIRT SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR DIAMETER OF THE PIPE

3 THE DEBRIS CAP SHALL BE MANUFACTURED BY SW SERVICES, INC., PHOENIX, ARIZONA OR EQUAL

4 THE DEBRIS CAP SHALL BE COMPRISED OF A HOLLOW MEMBER HAVING A CYLINDRICAL OUTER SURFACE A CLOSURE FOR ONE END AND THREE POINT RESILIENT CONTACT PADS PROJECTING FROM THE OUTER SURFACE. THE CAP SHALL HAVE A FLEXIBLE SKIRT PROVIDING AN OUTWARD SEAL PREVENTING DEBRIS FROM GETTING PAST THE CAP. THE CAP MUST WITHSTAND, WITHOUT SLIPPAGE, A MINIMUM VERTICAL FORCE OF 50 POUNDS, AT A LOADING RATE OF 1.0 IN/ MINUTE. THE CAP SHALL BE MOLDED USING GENERAL ELECTRIC ABS #HM 4500. THE CAP SHALL HAVE RETAINING PRONGS TO RETAIN A STANDARD LOCATING COIL

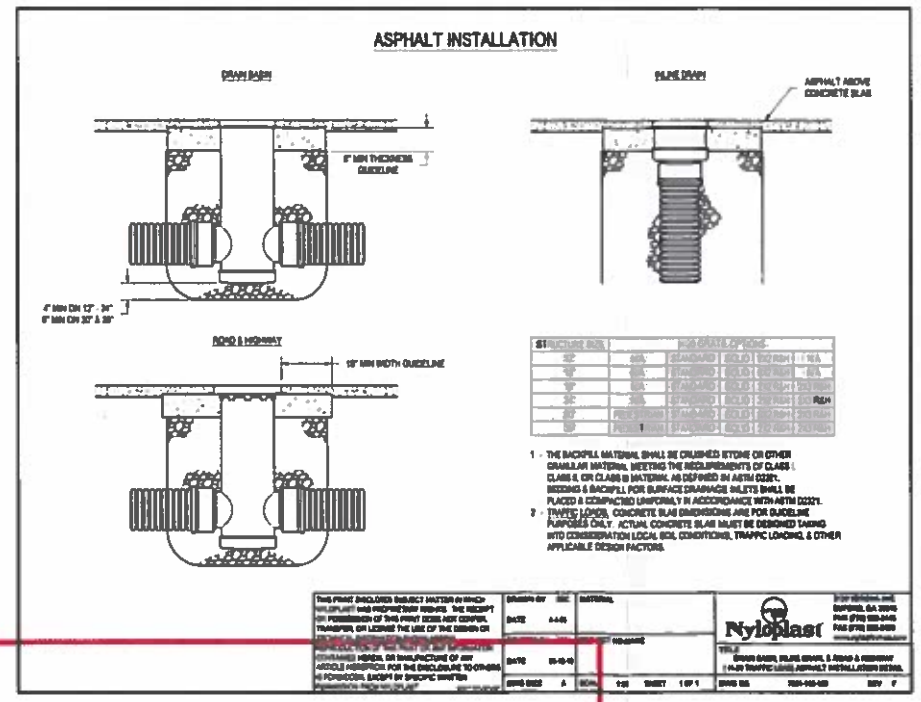


DEBRIS CAP INSTALLATION

DEBRIS CAP FOR VALVE BOXES

approved: WMS
date: 10/7/03 | scale: NTS | dwn: | dwg #: W-50
ENGINEERING DIVISION OF PUBLIC WORKS DEPT.

No | Dwn | Date | Revision



Preliminary Drawings - Civil

Civil Engineering Surveying & Beyond
Barries Unlimited Inc.
623 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: No
If "Yes", SUE Certification by
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal
NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.625.5254

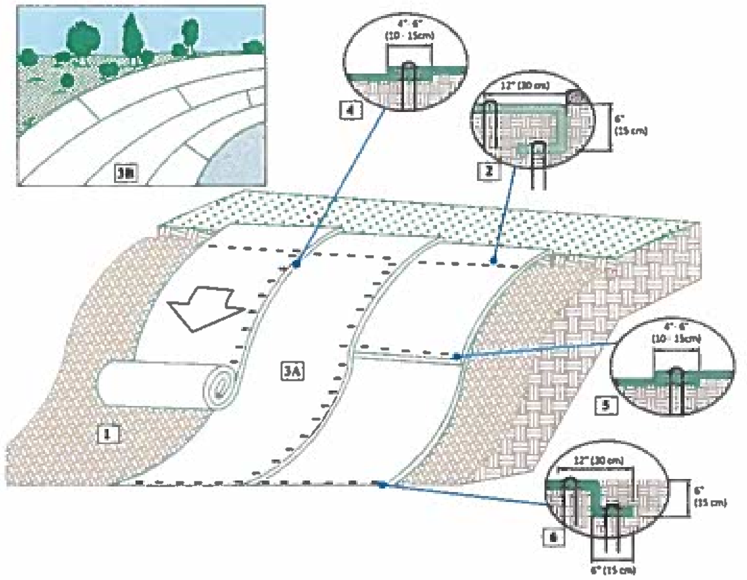
NORTH
Scale: 1" = 1'

811
Know what's below. Call before you dig.

RIFLE, COLORADO
Riffe Airport 0.5 MG Water Storage Tank
Civil Details-1
Bid Set - Not For Construction

No	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			
8			

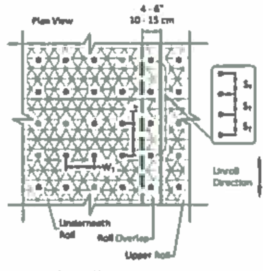
PROJECT NO. 20034
Designer: BRL
Drafter: BRL
Date: 2010-LAW
Sheet C.6
File Name: 20034-c-dpw.dwg



Instructions

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
2. Begin at the top of the slope by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench. Anchor the RECPs with a row of staples/stakes/pins spaced at S_1 apart in the bottom of the trench. Backfill and compact the trench after stapling and fold the roll over downslope. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced at S_1 apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide. RollMax RECPs and ECBs should utilize Staple Pattern C, TRMs and VMax materials should utilize Staple Pattern D.
4. The edges of parallel RECPs must be stapled with approximately 4" - 6" (10 - 15 cm) overlap.
5. Consecutive RECPs spliced down the slope must overlapped with the upstream mat atop the downstream mat (shingle style). The overlap should be 4" - 6" (10 - 15 cm).
6. At the terminal end, secure each mat across the width with a row of staples/stakes/pins spaced at S_1. If exposed to flow, foot traffic, wind uplift or other disruption, trench the terminal end in as shown in detail.
7. Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may be used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.

Staple Pattern Guide



• Pin / Staple / Twist Pin, as appropriate for field conditions

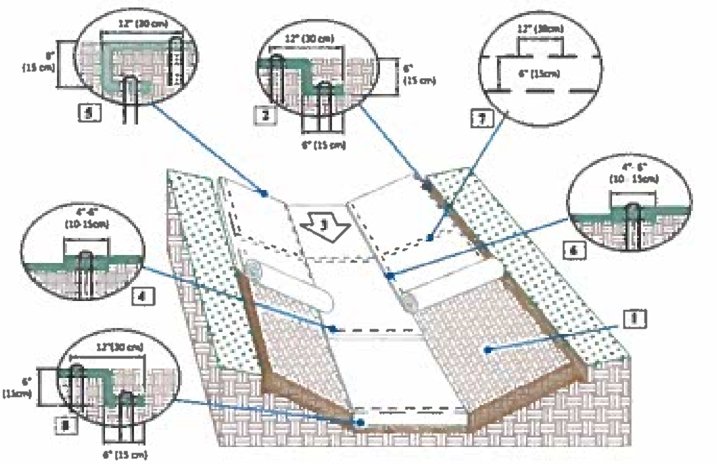
	Staple Pattern	
Dimension	C	D
W_1	30" (75 cm)	24" (60 cm)
L_1	30" (75 cm)	20" (50 cm)
S_1	18" (45 cm)	18" (45 cm)
Nominal Frequency	1.7 / SY	3.0 / SY
Application	ECB (Degradable)	TRM (Permanent)

*Note: Staple Pattern A and B used prior to 8/2019 have been discontinued.

ROLLMAX ROLLED EROSION CONTROL — NORTH AMERICAN GREEN

Project: Standard Slope Installation Recommendations RollMax RECPs, VMax TRMs
Shown: Perspective View, Some Fasteners and Vegetation Omitted for Clarity- NTS

Date: 3/24/20
Revision: 0
Drawings: 1/3

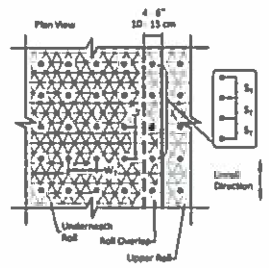


NOTES:
*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

Instructions

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
2. Begin at the top of the channel by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench with approximately 12" (30 cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes/pins approximately 12" (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12" (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced approximately 12" (30 cm) apart across the width of the RECPs.
3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide.
4. Place consecutive RECPs end-over-end (Shingle style) with a 4"- 6" (10 - 15 cm) overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.
5. Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes/pins spaced at S_1 apart in a 6" (15 cm) deep X 6"(15 cm) wide trench. Backfill and compact the trench after stapling.
6. Adjacent RECPs must be overlapped approximately 4"- 6" (10 - 15 cm) and secured with staples/stakes/pins at S_1.
7. In high flow channel applications a staple check slot is recommended at 30 to 40 feet (9 - 12m) intervals. Use a double row of staples staggered 6" (15 cm) apart and 12" (30 cm) on center over entire width of the channel.
8. The terminal end of the RECPs must be anchored with a row of staples/stakes/pins spaced at S_1 apart in a 6" (15 cm) deep X 6" (15 cm) wide trench. Backfill and compact the trench after stapling.
9. Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may be used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.

Staple Pattern Guide



• Pin / Staple / Twist Pin, as appropriate for field conditions

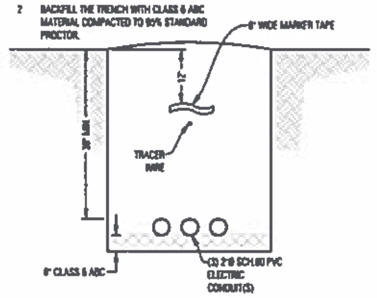
	Staple Pattern
Dimension	E
W_1	20" (50 cm)
L_1	20" (50 cm)
S_1	18" (45 cm)
Nominal Frequency	3.8 / SY

ROLLMAX ROLLED EROSION CONTROL — NORTH AMERICAN GREEN

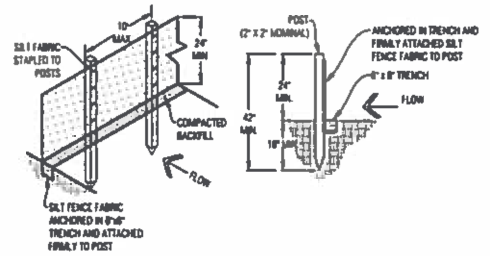
Project: Standard Channel Installation Recommendations RollMax RECPs, VMax TRMs
Shown: Perspective View, Some Fasteners and Vegetation Omitted for Clarity- NTS

Date: 3/24/20
Revision: 0
Drawings: 2/3

NOTES:
1. CONDUITS SHALL BE INSTALLED WITH AT LEAST 4-FEET OF SEPARATION BETWEEN OTHER UTILITIES
2. BACKFILL THE TRENCH WITH CLASS 6 ABC MATERIAL COMPACTED TO 95% STANDARD PROCTOR.

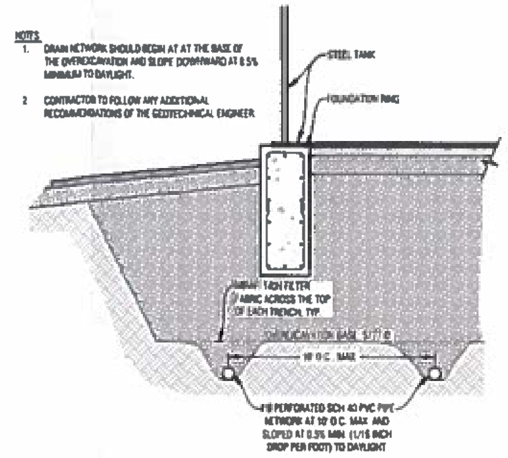


Conduit Trench
Scale: N.T.S.

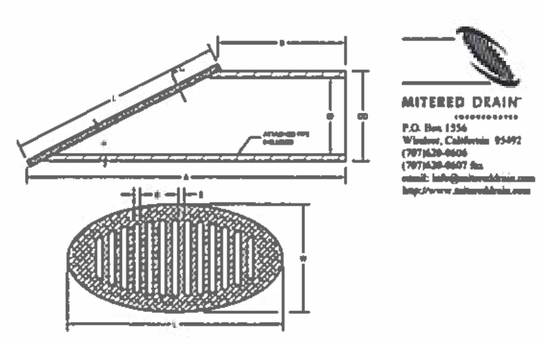


Temp. Sediment Control Fence
Scale: N.T.S.

NOTES:
1. DRAIN NETWORK SHOULD BEGIN AT AT THE BASE OF THE OVEREXCAVATION AND SLOPE DOWNWARD AT 0.5% MINIMUM TO DAYLIGHT.
2. CONTRACTOR TO FOLLOW ANY ADDITIONAL RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.



Underdrain System
Scale: N.T.S.



MITERED DRAIN™
P.O. Box 1556
Windsor, California 95492
(707)838-0606
(707)838-0607 fax
email: info@mitereddrain.com
http://www.mitereddrain.com

Mitered Drain™ (pat. pending)
DIMENSION TABLE *

PIPE SIZE	SLOPE	MODEL NO.	GRATE MATERIAL	ATTACHED MITERED PIPE MATERIAL	A (in.)	B (in.)	C (in.)	D (in.)	DD (in.)	E (in.)	L (in.)	W (in.)	θ	APPROX. WEIGHT (lbs.)	AREA OF GRATE OPENING (sq. in.)
3"	2:1	[illegible]	BRASS	PVC Sch. 40	12	6	0.25	3.63	3.3	0.25	8.4	4.2	26.5°	3	7
3"	2:1	[illegible]	[illegible]	PVC Sch. 80	16	4	0.375	2.88	3.3	0.375	11.8	4.0	18.5°	2	10.4
3"	2:1	[illegible]	[illegible]	PVC Sch. 80	16	4	0.375	2.88	3.3	0.375	11.8	4.0	18.5°	2	10.4
3"	2:1	[illegible]	[illegible]	PVC Sch. 40	14.7	3	NA	3.63	3.3	0.375	12.4	4.0	18.5°	1.4	[illegible]
3"	2:1	[illegible]	[illegible]	PVC Sch. 40	14.7	3	NA	3.63	3.3	0.375	12.4	4.0	18.5°	1.4	[illegible]
4"	2:1	[illegible]	[illegible]	PVC Sch. 80	18.5	4.5	0.375	3.77	4.0	0.375	14.7	5.0	18.5°	3.6	17.9
4"	2:1	[illegible]	[illegible]	PVC Sch. 80	18.5	4.5	0.375	3.77	4.0	0.375	14.7	5.0	18.5°	3.6	17.9
4"	2:1	[illegible]	[illegible]	PVC Sch. 40	18.5	3.5	NA	3.90	4.0	0.375	18.5	5.0	18.5°	2.3	10.75
4"	2:1	[illegible]	[illegible]	PVC Sch. 40	18.5	3.5	NA	3.90	4.0	0.375	18.5	5.0	18.5°	2.3	10.75
6"	2:1	[illegible]	[illegible]	[illegible]	30	8	0.75	5.96	6.0	[illegible]	22.4	7.6	18.5°	13	41.9
8"	2:1	[illegible]	[illegible]	[illegible]	40	14	0.75	7.97	8.1	0.75	28.3	9.7	18.5°	26	78.7
12"	2:1	[illegible]	[illegible]	[illegible]	60	17	0.75	11.83	13.2	1.0	42.5	14	[illegible]	[illegible]	[illegible]

* ALL DIMENSIONS ARE IN INCHES AND ALL WEIGHTS ARE IN POUNDS, AND MAY VARY.

BASIC SPECIFICATIONS
Brass grates are made of copper alloy No. 836.
HDPE grates are made with UV inhibitor.
Set screws are type 18-8 stainless steel.
Not recommended for traffic loads. Made in the U.S.A.

Preliminary Drawings - Civil

Civil Engineering
Surveying
& Beyond
Bookcliff Survey Services / Unlimited Inc.
823 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: No
If "Yes": SUE Certification by
Firm: N/A
Job #: N/A
Date: N/A

Engineer or Surveyor Seal
NOT FOR CONSTRUCTION — Bid Set

Client Information:
CITY OF RIFLE
202 RAILROAD AVENUE
RIFLE, CO 81650
970.665.6544

NORTH
Scale: 1" = 1'

811 Know what's below. Call before you dig.

RIFLE, COLORADO
Rifle Airport 0.5 MG Water Storage Tank
Civil Details-2
Bid Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

Sheet
C.7

➢ PROJECT FORECASTED CASH FLOW

	Payment Schedule
Jul-22	$541,792.00
Aug-22	$523,654.00
Sep-22	$425,900.00
Oct-22	$596,232.00
Nov-22	$563,752.00
Dec-22	$365,500.00

VELOCITY CONSTRUCTORS INC.

2022-02

City of Rifle

Statement of Qualifications (SOQ) for Rifle Airport 0.5 MG Water Tank

Prepared for:
City of Rifle
202 Railroad Avenue
Rifle, CO 81650

Prepared by:
Velocity Constructors, Inc.
2107 W. College Ave.
Englewood, CO 80110

Velocity Constructors, Inc.
2107 W. College Ave, Englewood, CO 80110
Phone: 303-984-7800 Fax: 303-984-7802
www.velocityci.com

➢ GENERAL INFORMATION

GENERAL DESCRIPTION OF THE FIRM

Velocity Constructors, Inc, (VCI) is a general construction company specializing in Water and Wastewater Treatment Plants, Lift and Booster Pump Stations, Water Tanks, Wells, PRV Vaults, Water Vaults, and Pump/Utility Infrastructure Projects. Incorporated on April 4, 2002, as a Construction Firm by Grant Dunkle-President and Robert Rogstad-Vice President. VCI has grown to an award-winning business comprised of 65+ individuals ranging from salesman, estimators, safety and quality managers, site superintendents, project managers, project engineers, site supervisors, foreman, and craft personnel who provide a broad range of construction services.

With core strengths in consulting, engineering, and construction services, VCI excels in providing technical services in the engineering, construction, equipment installation, renovation, and demolition areas. VCI provides consulting, and engineering support to numerous cities, state agencies and a variety of private clients.

VCI has developed and implemented a mature health and safety program that is understood and supported by the entire company. Our health and safety professionals have developed and implemented health and safety plans for city and private clients and routinely conduct health and safety audits of our projects, review and approve all project safety and health plans, and interact with regulatory and client health and safety counterparts. VCI is a customer-oriented firm and we pride ourselves in the relationships we foster with our customers and the quality services we perform. Our clients have recognized VCI for our outstanding services and quality management. Our commitment to providing technical excellence and outstanding professional service in a timely and cost-efficient manner has resulted in satisfied customers.

Our Operating Principles:

- We recognize that our employees are our greatest asset, and we offer them opportunities for growth
- We value innovative thinking and strive to find better ways of delivering value to our clients
- We perform our work in a safe and secure environment
- We complete our projects on time, under budget, and to the owner's satisfaction
- We operate with integrity
- We continue to be an integral part of the business community

VCI has completed projects in compliance with RCRA, CERCLA, NEPA, the Clean Water Act, and EPA regulations among other state and federal regulations. Construction experience includes Design-Build, Design-Bid-Build, CMAR, and CMGC Projects. Our construction management experience includes public and stakeholder interface, regulatory compliance, project management, subcontractor management, safety management, and quality assurance management.

Constructing at high altitude requires the right tools and the right people to rise to the challenge. Having completed many high-altitude projects, we have proven our first-hand knowledge of constructing within the extreme working conditions often found at high altitude. Our ingenuity and innovative techniques allow us to use the conditions to our advantage. We work hard and fight through any rough weather that comes our way.

VCI has the capabilities and experience to serve as an integral team member providing construction services for the City of Rifle. We will provide recognized and experienced technical staff who have the judgment and knowledge to support this project.

VCI's primary contact for this SOQ will be Dan Harrington, Project Manager, Phone: 303-974-3860, Email: dharrington@velocityci.com.

COLORADO PROFESSIONAL AND CONTRACTOR LICENSES

VCI Incorporated on April 4, 2002, as a Construction Firm with Jurisdiction in Colorado. State of Colorado Identification Number 20021085684. VCI's DUNS #135766264. VCI has a General Contractor-Class A LIC2377322 through the City and County of Denver.

LEGAL STATUS

VCI is a competent and professional service contractor with an established reputation with many Metro Districts, Cities, State, and Private Companies. VCI is pleased to say that we have no litigation, arbitration, or administrative hearing/claims to report in the last 5 years. VCI has no legal actions taken by any regulatory agency against or involving the firm or its agents or employees with respect to any work performed, include the disposition of each.

➢ PROJECT EXPERIENCE

Some of our most recent construction and general contractor experience is as follows:

Well #7 PRA Improvements / Frisco, CO	
Owner: Town of Frisco 0102 School Road Frisco, CO 80443 Jeff Goble 970-668-0836	**Engineer:** FEI Engineers, Inc. 5325 S. Valentia Way Greenwood Village, CO 80111 Nathan Martinson 303-300-3464
Project Number: 1708	**Start Date:** 06/2017
Original Contract Amount: $1,358,720	**Final Contract Amount:** $1,300,322
Substantial Completion Date: 03/2018	**Actual Completion Date:** 03/2018
Description: Work consisted of retrofitting of an existing wellhead with a new 75 horsepower vertical turbine line shaft pump to lift, pressurize, and convey the groundwater into the existing distribution system. Construction of new 395 square foot masonry block (CMU) well house with a pump room and chemical room. The well room consists of 258 square feet of interior floor space; the chemical room consists of 40 square feet of interior floor space. Construction of a masonry screen wall with canopy system for protection of a packaged generator (emergency power) system. Installation of process piping and equipment to convey and treat the process water with sodium hypochlorite prior to introduction into the existing distribution system. Installation of a 15,000 gallon, buried, pressurized carbon steel vessel with necessary piping, valves, and appurtenances. Constructing miscellaneous site improvements including site utilities, emergency power systems, final site grading, site piping, process piping, valves, instrumentation, controls, and electrical Work. Also includes select demolition, salvage or abandonment of existing facilities, valves and piping, etc.	

High Zone Reuse Pump Station and Storage Tank / Erie, CO	
Owner: Town of Erie 645 Holbrook Street Erie, CO 80516 Wendi Palmer 303-926-2875	**Engineer:** Merrick and Company 2480 W. 26th Avenue Denver, CO 80211 Terry Kenyon 303-800-9046
Project Number: 1714	**Start Date:** 09/2017
Original Contract Amount: $1,719,957	**Final Contract Amount:** $1,760,209
Substantial Completion Date: 12/2018	**Actual Completion Date:** 01/2019
Description: Construction of masonry pump station building, including, but not limited to, piping, valves, and appurtenances; equipment; and electrical and control systems. Construction of a 1.0 million gallon buried	

post-tensioned concrete water storage tank. Associated yard piping; connections to existing piping; site work; including grading, concrete flat work and access drive, and all other items necessary to complete the project; electrical; and SCADA integration.

Dillion Water Tank / Dillion, CO	
Owner: Town of Dillion 275 Lake Dillion Drive Dillion, CO 80435 Scott O'Brian 970-262-3408	**Engineer:** FEI Engineers, Inc. 5325 S. Valentia Way Greenwood Village, CO 80111 Nick Toussaint 303-300-3464
Project Number: 1506	**Start Date:** 06/2015
Original Contract Amount: $1,654,421	**Final Contract Amount:** $1,684,174
Substantial Completion Date: 01/2016	**Actual Completion Date:** 08/2016
Description: Work consisted of construction of a 1.5-million-gallon steel water storage tank including earthwork excavation, fill, and compaction; foundation improvements; inlet, outlet piping and supports; drain and overflow piping; tank installation and erection; testing and commissioning. Construction of a single analyzer building that included exposed distribution piping and analyzer equipment for chlorine residual and pH monitoring. Construction of tank inlet and outlet yard piping consisting of pipe, valves, thrust restraint, concrete encasement, and other appurtenances. Site earthwork and improvements to construct new facilities and decommissioning and demolition of existing storage tank. Improvements to site utilities, miscellaneous civil structures, access road, final site grading, yard piping, valves, instrumentation, controls, and electrical work. Providing tank monitoring system integration to the existing treatment plant supervisory control and data acquisition (SCAD) system.	

Victor Water Tank and Electrical Generator Improvements / Victor, CO	
Owner: City of Victor 500 Victor Avenue Victor, CO 80860 Debra Downs 719-689-5641	**Engineer:** Dewberry Engineers, Inc. 1095 S. Monaco Parkway Denver, CO 80903 Mike Lutz 303-951-0612
Project Number: 1308	**Start Date:** 04/2013
Original Contract Amount: $535,397	**Final Contract Value:** $535,397
Substantial Completion Date: 10/2014	**Actual Completion Date:** 10/2014
Description: Install of a 250,000-gallon steel water tank on new ring wall foundation with isolation piping and valves to interconnect with existing tank. Install new emergency generator at the existing micro filter water treatment plant.	

Wiggins Water Project - Treatment Building and Equipment / Wiggins, CO	
Owner: Town of Wiggins 304 Central Avenue Wiggins, CO 80654 John Richardson 970-768-7197	**Engineer:** Industrial Facilities Engineering, Inc. P.O. Box 984 Morrison, CO 80465 Tim Holbrook 720-963-4060
Project Number: 1110	**Start Date:** 01/2012
Original Contract Amount: $1,769,614	**Final Contract Amount:** $1,737,614
Substantial Completion Date: 10/2012	**Actual Completion Date:** 11/2012

Description: Construction of a drinking water facility with building, microlite filtration, an automated 1.0 MGD peak capacity membrane treatment system, 50,000 gallon above ground steel storage water tank, outfall structure and yard piping.

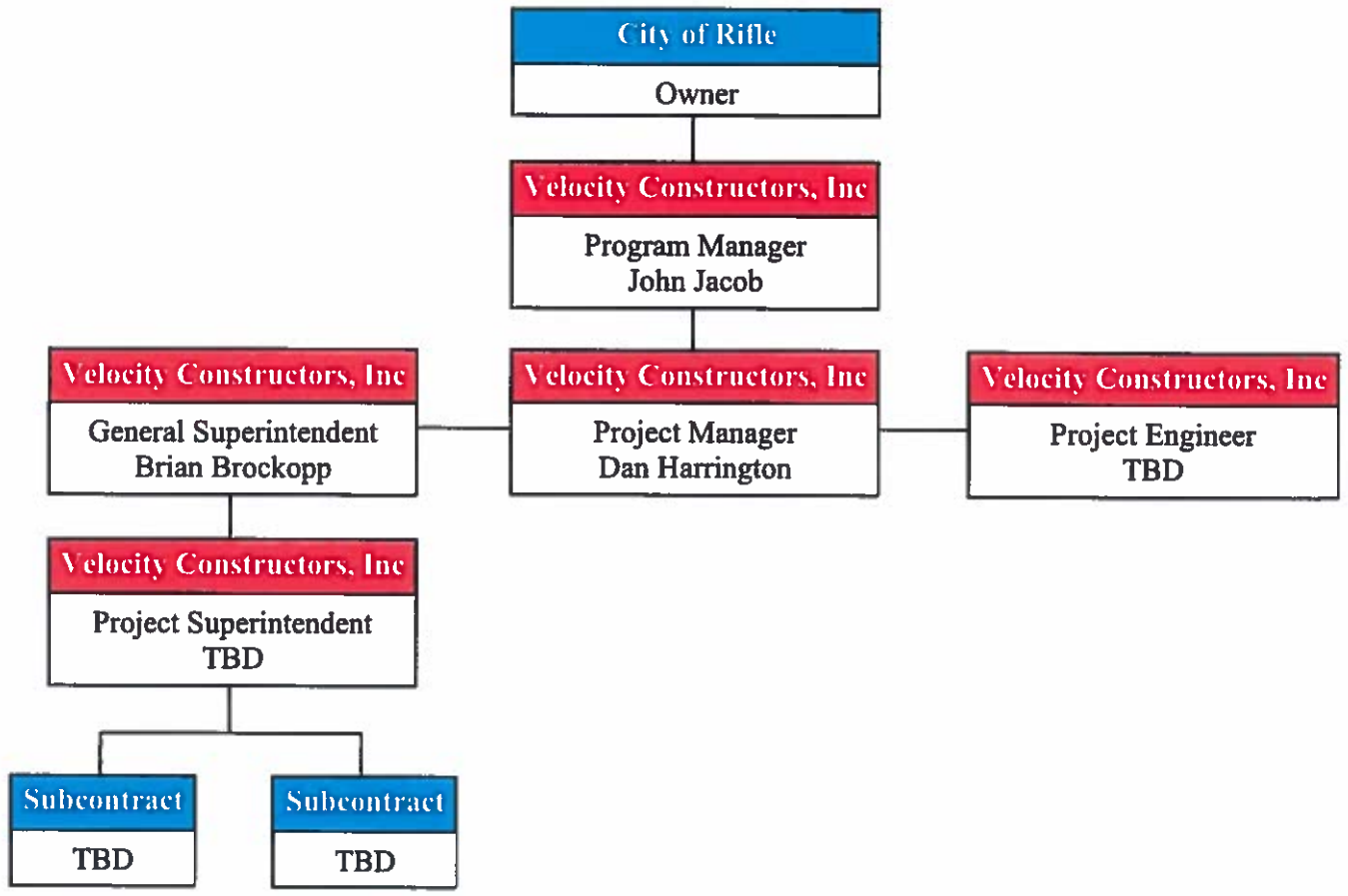
➢ PROJECT TEAM

VCI specializes in the construction of large municipal water and wastewater treatment plants including pumping stations, tank construction, power generation, reverse osmosis and membrane softening, grit removal, high service pumps stations, filtration, underground piping systems, oxygen generation, chlorine contact basins, nanofiltration, odor control systems, aeration basins, clarifiers, and lift stations. Our extensive Colorado experience not only allows our firm to effectively solve problems associated with the construction of large-scale municipal water and wastewater facilities but also enables us to draw from our long-lasting relationships in the industry with the most qualified and reliable subcontractors best suited for this type of work.

Our construction management philosophy focuses on developing an interactive, inclusive working relationship among the client, the design firms, and the construction team. We begin the management process immediately upon award and remain your partner until the project is complete.

ORGANIZATION STRUCTURE

The following organizational structure represents a typical project organizational chart showing project key personnel.



TEAM MEMBER ROLES AND RESPONSIBILITIES

The success of any project is first, to establish a team that understands team management concepts. VCI has compiled successful teams, who understand it is critical to maintain well defined lines of communications,

responsibilities, and a plan. Members of our team fully understand the team concepts of management that will achieve a successful project for all involved.

The following personnel will be available for the Rifle Airport 0.5 MG Water Tank Project located in Rifle, Colorado. Additional experienced project staff will be added to the project team as needed. Resumes for the following key personnel are provided within this SOQ.

Company	Personnel	Office	Fax	Email	Position
VCI	John Jacob	303-974-3854	303-984-7802	jjacob@velocityci.com	Program Manager
VCI	Dan Harrington	303-974-3860	303-984-7802	dharrington@velocityci.com	Project Manager
VCI	Brian Brockopp	303-870-5073	303-984-7802	bbrockopp@velocityci.com	General Superintendent

➢ SAFETY RATING

VCI is committed to having safe worksites. We maintain a program of safety training before employment begins, and during employment. We accomplish this through preemployment safety orientation, weekly safety meetings and formalized outside training for all our workers. We also have daily worker's task planning for safety.

Prior to the incidents in 2016, VCI EMR average was substantially lower. Since then VCI has implemented higher safety standards for our employees. We also signed up with Pinnacol Safety Services to help us develop a safety culture throughout the company. We have also utilized resources through our insurance carriers like Holmes Murphy and Travelers and their safety Consultants to conduct safety inspections on our projects. This has resulted in a substantial amount of feedback for the Superintendents and Project Managers to better control safety on their projects. Advanced Safety and Holmes Murphy have conducted safety audits on over 12 of our projects. They also help with safety planning on certain critical activities and conduct safety training for our superintendents and employees as needed and at VCI's quarterly superintendent's safety meeting. Another tool that we utilize in training our employees is Click Safety and JJ Keller training. These are programs that allows the employees access to a substantial amount of training they do on job sites over the internet. Examples are training for trench safety, confined space, fall protection and many other courses for activities that are scheduled on a particular part of the project.

VCI also is registered with the State of Colorado Department of Labor and Employment Division of Workers Comp Premium Cost Containment Certified Certificate number 4859. We are also a member of Pinnacol Assurance Risk Management Alliance Program.

Year	EMR	TRFR	DART	Total Number ofMan-Hours
2019	1.21	1.93	1.93	103,695
2020	1.12	0.00	0.00	90,835
2021	0.93	0.00	0.00	77,110

In the last three (3) years VCI nor any General Contractors used on VCI projects have had any jobsite OSHA citations.

VCI EMR rateing for 2021 is 0.93 due to our commitment and efforts for a safer work place. Our goal is no accidents on any of our projects.

VCI Safety Compliance

VCI is committed to providing a safe and healthy work environment for everyone involved in all VCI projects. To this end, we have developed a comprehensive Subcontractor Safety Program that addresses the safety

concerns of each project as well as the safety expectations of VCI and our clients. This program supplements, but does not supersede the ***VCI Corporate Safety Manual***, safety programs of our clients, or other applicable requirements. The requirements of this program may vary depending on specific job sites pre-existing conditions.

VCI recognizes that nearly all occupational injuries and illnesses are preventable and that a high level of safety performance provides long-term beneficial returns, including healthy employees and a productive work environment. Therefore, safety will not be compromised. It is fully accepted as an integral part of the VCI organization and daily project activities. ***VCI's goal is ZERO occupational illnesses, and injuries.***

➢ SUBCONTRACTORS

VCI Constructors, Inc. (VCI) EEO and DBE programs were developed to ensure that subcontractors, material suppliers, vendors and consultants do not discriminate in employment based upon race, color, religion, sex, national origin, age, or disability; and, where the need has been identified, provide equal employment opportunity through affirmative action. VCI makes the effort to utilization DBE subcontractors and suppliers on each of our projects.

VCI when working with subcontractors, material suppliers, and vendors we utilize two (2) different types of agreements. First is a Master Subcontractor Agreement, and second is a Supplier / Vendor Agreement. VCI has developed a Subcontractor Management Plan which covers the items noted below.

Subcontractor Management Plan (SMP) outlines the relationship between contractors and subcontractors while performing work on a project, and it outlines the methods by which the primary contractor will ensure the production of quality deliverables from each of its subcontractors and ensure the development of long-term business relationships between the companies.

Please note that this plan contains key components that should be considered when drafting an SMP. This guide is not all-inclusive and certain areas may not apply to your contract. Also, include other components or areas pertinent to your contract.

Although the procurement person prepares the SMP, it is vital that the SMP contain the input of other members of the contract management team to ensure that existing issues, vulnerabilities, and risks are adequately addressed. Consequently, the SMP draft should be routed for input through members of the contract management team.

This SMP provides guidance for subcontract management activities, including the following:

- Prequalification and bidding process
- Insurance considerations
- Beginning work
- Work site's written safety plan
- Safety training and recordkeeping policies
- Safety inspections
- Work-in-progress and post-project reviews

VCI can self-perform up to approximately 75% of the work in a typical infrastructure project if required to meet schedule or cost constraints. Focused team, with the proven ability to deliver quality, innovative and cost-effective solutions. The members of our proposed key staff have the highest level of integrity and a demonstrated history of proactively addressing constructability issues, providing cost-effective and efficient solutions from design to start-up and commissioning. VCI utilizes multiple disciplined subcontractors when soliciting for projects.

➢ FINANCIAL STATEMENT

VCI currently uses the services of Hughes & Company, Certified Public Accountants and Business Advisors for their financial audits. Current Financial Statement and Balance Sheets provided within the RFP.

➢ BANKING REFERENCE

VCI has had a continuing relationship with BOK Financial since December 2003, BOK Financial; 15710 W. Colfax Ave., Golden, CO 80401; Bonnie Souder 720-264-5628.

➢ BONDING REFERENCE

Lockton Companies, LLC handles the surety bonds for VCI. Bonds are underwritten by Western Surety Company and issued through Lockton's office. Lockton Companies, LLC; 8110 E. Union Avenue, Suite 700, Denver, CO 80237; Susan J. Lattarulo, 303-414-6276.

➢ INSURANCE REFERENCE

Holmes Murphy – Colorado; 7600 East Orchard Road, Suite 230 South Greenwood Village, CO 80111; Nick Brown, 720-622-9110. Current Certificate of Liability Insurance can be provided upon request.

➢ PROJECT REFERENCES

VCI's extensive experience in Colorado not only allows our firm to effectively solve problems associated with the construction of municipal water and wastewater facilities in varying locations throughout Colorado but also enables us to draw from our long-lasting working relationships within the industry with several Engineering Firms and qualified and reliable subcontractors best suited for this type of work.

PROJECT REFERENCES

High Peak Camp Wastewater Treatment Facility / Estes Park, CO	
Owner: The Salvation Army 1370 Pennsylvania Street Denver, CO 80203 William Raihl 303-866-9297	**Engineer:** Wright Water Engineers, Inc. 2490 W. 26th Ave., Suite 100A Denver, CO 80211 Jeffrey Nelson 303-480-1700
Description: The work includes but is not limited to the furnishing of labor and materials and equipment for the construction and installation of a new headworks building and influent lift station, wastewater treatment facility including new building, treatment equipment (Submersible Pumps, Ultraviolet Disinfection System, Cloth Media Filter, and Sequencing Batch Reactor (SBR), electrical and controls system and all appurtenances. Construction and installation of an exfiltration bed.	

Widefield Wastewater Treatment Plant Nutrient & Dewatering Improvements / Colorado Springs, CO	
Owner: Widefield Water & Sanitation District 8495 Fontaine Blvd Colorado Springs, CO 80925 Rob Bannister 719-985-0548	**Engineer:** JDS-Hydro Consultants, Inc 545 E. Pikes Peak Ave., Suite 300 Colorado Springs, CO 80903 Doug Schwenke 719-227-0072
Description: Construction of new concrete Anoxic Basin with EnviroMix compressed air mixing system with compressor shed and electrical and controls. Excavation required shoring using micro piles and shotcrete. Modifications to existing Aeration Basin which included new slide gates and internal recycle	

pumps and chemical feed. New aluminum catwalks with handrail at new Anoxic Basin and existing Aeration Basin. Construction of new Chemical Feed masonry building with twin tee roofing, chemical tanks and feed system, a buried overflow tank, plumbing, HVAC and electrical and controls. Modifications to the existing dewatering building which included construction of a new distributor shed, two new Schwing Bioset screw presses, distributer and conveyor system, new sludge pumps, new filtrate pump, piping and valves and electrical and controls. A new macerator with piping, valves and electrical and controls were installed in the existing Sludge Thickening Building. New site yard piping installed as part of this project.

Sunrise Ranch Wastewater Treatment Plant Improvements / Loveland, CO	
Owner: Emissaries of Divine Light 100 Sunrise Ranch Road Loveland, CO 80538 Michael Costello 970-679-4200	**Engineer:** NOCO Engineer 11323 Coal Mine St. Firestone, CO 80504 Josh Cook 720-324-3625
Description: The construction of a fully functional wastewater treatment facility utilizing a SBR system. The wastewater treatment facility includes installation of sewer lines, manholes, flow measurement devices, Sequencing Batch Reactor (SBR), UV disinfection system, Control Building, controls, and instrumentation, and decommissioning of the existing wastewater treatment system. The final product shall be capable of meeting the effluent limits.	

JOHN JACOB

Program Manager

EXPERIENCE SUMMARY

John has been with VCI for over 8 years and has 20 years of construction experience. John's success has been as principal-in-charge responsible for projects ranging from $10k to $35M in value. Contract delivery methods vary from competitive bid, negotiated Design-Build, and CMAR experience. John works with owners, design consultants, contractors, and field staff and develop the planning and execution of schedules. Skills include the development and administration of all cost estimates and fiscal controls, obtaining permits, development of project scopes of work, and project budgets while negotiating contracts and quality control provisions and cost reporting. Integrates scope of work development with budget and schedule preparation.

EDUCATION

Allegheny College
May 1995
B.S. Environmental Science
Minor Political Science

Colorado State University
May 2004
Certificate of Construction Management

TRAINING & CERTIFICATIONS

Microsoft Word & Excel, SureTrak, Primavera P3, Spectrum Accounting, Timberline, OSHA 10 Hour, State of Colorado Water and Wastewater Facility Operators Certificate in Class C Industrial Wastewater license, CPR and First Aid certified.

CONTACT

PHONE:
303-974-3854

WEBSITE:
www.velocityci.com

EMAIL:
jjacob@velocityci.com

WORK EXPERIENCE

Velocity Constructors, Inc. – Program Manager
April 2014 - Current
Responsible for managing construction of water treatment plants, wastewater treatment plants and associated utilities for both new plant and expansion of existing plants. Knowledge of complex water and wastewater treatment processes, treatment equipment and pump stations. Develop and maintain schedules. Scope of projects included procurement, installation, and development of startup plans of technical treatment equipment. Perform as the Project Manager for owners which include design review, value engineering, specification and front-end contract document preparation, bidding, scheduling, and management of construction contracts.

Weaver Construction Management/Garney Construction – Project Manager
January 2008 – April 2014
Responsible for ensuring the timely and costly completion of construction projects by overseeing all phases of the project. This entails working with a variety of stakeholders to schedule and plan work, coordinate equipment and materials, operate within budget, and monitor overall progress.

Bosco Constructors – Project Manager/Project Engineer
September 2005 – January 2008
Hired as a project engineer and was promoted to project manager. Responsible for direct coordination with superintendents. Reviewed submittals developed RFIs and prepared change orders. Responsible for project procurement while maximizing profit during buy-out. Provided layout for projects, completed take-offs for material procurement, and drawings.

RELEVANT EXPERIENCE

High Peak Camp Wastewater Treatment Facility / Estes Park, CO
Contract Value: $ 3,887,991
Schedule History: Still in Progress

Town of Fleming Wastewater Treatment Facility / Fleming, CO
Contract Value: $ 2,620,667
Schedule History: Completed May 2020

Well #7 PRA Improvements / Frisco, CO
Contract Value: $ 1,300,322
Schedule History: Completed March 2018

High Zone Reuse Pump Station and Storage Tank / Erie, CO
Contract Value: $ 1,760,209
Schedule History: Completed January 2019

Town of Granby South Service Area Water Treatment Plant / Granby, CO
Contract Value: $ 5,996,538
Schedule History: Completed November 2017

Dillion Water Tank / Dillion, CO
Contract Value: $ 1,684,174
Schedule History: Completed August 2016

DAN HARRINGTON

Project Manager

EXPERIENCE SUMMARY

Dan has been with VCI for over 7 years and has over 32 years of construction experience. Dan success has been as project manager responsible for projects ranging from $100k to $4M in value. Contract delivery methods vary from Design-Build, CMAR, Competitive Bid, and Negotiated. Dan is experienced in determining and defining scopes of work and deliverables, predicting resources needed to complete project, obtaining necessary permits, approvals, and other regulatory prerequisites, drafting and submitting budgets based on scopes of work and resource requirements, manage costs in order to meet budget, provide direction over contracts and subcontracts, manage construction schedule and activities, issue progress updates as needed regarding costs and timelines, ensure work is done in compliance with all relevant building and safety codes, selection and management of subcontractor and supplier relationships, and coordinate efforts across entire project between architects, designers, engineers, and subcontractors

TRAINING & CERTIFICATIONS

Microsoft Word & Excel, SureTrak, Primavera P3, Spectrum Accounting, Timberline, Associated General Contractors, The Cambridge Institute Seminars- High Performance Teams, Claims Management, Scheduling, Construction Contracts, Crestcom Bulletproof Manager Program

CONTACT

PHONE:
303-974-3860

WEBSITE:
www.velocityci.com

EMAIL:
dharrington@velocityci.com

EDUCATION

Colorado State University
May 1997
B.S. Industrial Construction Management

WORK EXPERIENCE

Velocity Constructors, Inc. – Project Manager
April 2015 - Current
Responsible for managing construction of water treatment plants, wastewater treatment plants and associated utilities for both new plant and expansion of existing plants. Knowledge of complex water and wastewater treatment processes, treatment equipment and pump stations. Develop and maintain schedules. Scope of projects included procurement, installation and development of startup plans of technical treatment equipment. Perform as the Construction Manager for owners which include design review, value engineering, specification and front-end contract document preparation, bidding, scheduling, and management of construction contracts.

Glacier Constructors – Project Manager
July 12 – March 2015
Oversaw and direct construction projects from conception to completion. Reviewed project in-depth to schedule deliverables and estimate costs. Oversaw all onsite and offsite constructions to monitor compliance with building and safety regulations. Coordinate and direct construction workers and subcontractors. Reviewed work progress on daily basis. Prepared internal and external reports pertaining to job status. Negotiate terms of agreements, draft contracts and obtain permits and licenses. Ensure quality construction standards and the use of proper construction techniques.

WM Brown Construction Corporation – Project Manager
October 1996 – May 2012
Conducted meetings with engineers, and contractors on an ongoing basis regarding project objectives and progress. Managed and motivating site foremen and teams. Ensured all equipment needed were available on site. Ensured budget costs relating to wages, contractors, materials, and equipment were not exceeded. Approving purchase requests. Ensured construction process started and ended on time and ensured daily and weekly deadlines were met. Ensured compliance with health, safety, and all other regulations.

RELEVANT EXPERIENCE

High Peak Camp Wastewater Treatment Facility / Estes Park, CO
Contract Value: $ 3,887,991
Schedule History: Still in Progress

Town of Fleming Wastewater Treatment Facility / Fleming, CO
Contract Value: $ 2,620,667
Schedule History: Completed May 2020

Well #7 PRA Improvements / Frisco, CO
Contract Value: $ 1,300,322
Schedule History: Completed March 2018

Town of Granby South Service Area Water Treatment Plant / Granby, CO
Contract Value: $ 5,996,538
Schedule History: Completed November 2017

Dillion Water Tank / Dillion, CO
Contract Value: $ 1,684,174
Schedule History: Completed in August 2016

BRIAN BROCKOPP

General Superintendent

EXPERIENCE SUMMARY

Brian has been with VCI for over 18 years and has over 26 years of construction experience. Brian is responsible for the field operations on construction projects ranging from $100k to $4M. His duties include preparing weekly schedules, daily construction logs, material procurement and scheduling of suppliers and subcontractors. His dedication to safety includes preparing job-site meetings/giving weekly safety meetings and daily review of sub-contractor's safety practices. He reviews the project budget and is responsible to maintain a budget and keep the project on schedule. He is responsible to assure that the project is being built per the plans and specifications.

TRAINING & CERTIFICATIONS

Fire Protection Products, Forklift Operator, Excavation Training First Aid, Adult CPR, Trench Shoring Training, Trained on Installing Self Contained Piping

CONTACT

PHONE:
303-870-5073

WEBSITE:
www.velocityci.com

EMAIL:
bbrockopp@velocityci.com

EDUCATION

Lakewood High School

Rex Davis Project Management, CDOT Training Facility

WORK EXPERIENCE

Velocity Constructors, Inc. – General Superintendent
January 2003 - Current
Responsible for managing construction of water treatment plants, wastewater treatment plants and associated utilities for both new plant and expansion of existing plants. Knowledge of complex water and wastewater treatment processes, treatment equipment and pump stations. Develop and maintain schedules. Scope of projects included procurement, installation, and development of startup plans of technical treatment equipment. Perform as the Construction Manager for owners which include design review, value engineering, specification and front-end contract document preparation, bidding, scheduling, and management of construction contracts.

Bosco Constructors, Inc. – Superintendent
January 1999 – January 2003
Schedule subcontractors, consultants, and vendors in critical path to ensure timely completion. Perform quality control duties and responsibilities regarding the work being performed. Communicate with project team regarding RFI's, and Material Submittals. Ensure that subcontractor is fully executing and complying with his contracted scope of work. Coordinate required inspections with local jurisdictions. Identify subcontractor non-compliance with safety, health, and environmental quality standards. Identify conflicts in construction progress and communicate them to project team for resolution. Maintain daily log (written) of activities on the jobsite. Perform Superintendent duties at multiple job sites, simultaneously. Ensure subcontractor has corrected all deficiencies identified by project team. Preside over weekly subcontractor meetings designed to coordinate the work.

Shank Constructors, Inc. – Superintendent
September 1996 – January 1999
Lead and managed the on-site construction team. Coordinating and oversaw all work on site. Attended production meetings. Reviewed schedule and budget and ensuring adherence to these. Ensured quality standards are met. Placing orders for materials and responsible for equipment and materials on site. Followed project timeline to ensure deadlines were met. Monitored and ensuring on-site safety compliance, cleanliness, and orderliness. Maintaining records for site personnel such as daily field reports, field orders and RFIs. Liaising with inspection authorities regarding approvals.

RELEVANT EXPERIENCE

High Peak Camp Wastewater Treatment Facility / Estes Park, CO
Contract Value: $ 3,887,991
Schedule History: Still in Progress

Well #7 PRA Improvements / Frisco, CO
Contract Value: $ 1,300,322
Schedule History: Completed March 2018

Walden Wastewater Treatment Facility Improvements / Walden, CO
Contract Value: $ 713,404
Schedule History: Completed April 2019

Victor Water Tank and Electrical Generator Improvements / Victor, CO
Contract Value: $ 525,397
Schedule History: Completed October 2014

Wiggins Water Project - Treatment Building and Equipment / Wiggins, CO
Contract Value: $ 1,737,614
Schedule History: Completed November 2012

OFFICE OF THE SECRETARY OF STATE
OF THE STATE OF COLORADO

CERTIFICATE OF FACT OF GOOD STANDING

I, Jena Griswold, as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office,

VELOCITY CONSTRUCTORS, INC.

is a

Corporation

formed or registered on 04/04/2002 under the law of Colorado, has complied with all applicable requirements of this office, and is in good standing with this office. This entity has been assigned entity identification number 20021085684 .

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 05/06/2022 that have been posted, and by documents delivered to this office electronically through 05/09/2022 @ 13:17:22 .

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 05/09/2022 @ 13:17:22 in accordance with applicable law. This certificate is assigned Confirmation Number 14007290 .

Secretary of State of the State of Colorado

**********End of Certificate**********

Notice: A certificate issued electronically from the Colorado Secretary of State's Web site is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's Web site, http://www.sos.state.co.us/biz/CertificateSearchCriteria.do entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our Web site, http://www.sos.state.co.us/ click "Businesses, trademarks, trade names" and select "Frequently Asked Questions."

City and County of Denver
Community Planning and Development
www.denvergov.org/contractor_licensing

License/Registration Number: **LIC237322**
Expiration Date: 12/31/2023
License Type: General Contractor - Class A

E-Licensing

Issued To:

By Authority of the Executive Director of Community Planning and Development

VELOCITY CONSTRUCTORS INC
2107 W COLLEGE AVE
ENGLEWOOD, CO 80110

Amount	Fund/Org/Revenue Code	Payment Date	Trans #	Status
$250.00	R351600-*-01010-0141200	12/31/2020	7463603	Paid

RENEWAL INFORMATION

Renewal notices will be e-mailed to e-mail address on file.

Renewal information is available at **www.denvergov.org/Contractor_Licensing.**

INSPECTION INFORMATION

Inspection requests called in by 12:00 a.m. will usually be scheduled for the following working day.

Please provide the following information when you call for an inspection:

- √ Permit number
- √ Type of inspection and inspection code

Automated Inspection Request System: 720-865-2501

Inspections are performed Monday through Friday.

Wallet Contractor ID Card: MUST BE KEPT IN YOUR POSSESSION AT ALL TIMES.

Cut on outside of line, then fold in half.

City and County of Denver

IDENTIFICATION CARD

E-Licensing

License/Registration No.: LIC237322

This is to certify that VELOCITY CONSTRUCTORS INC has been issued a General Contractor - Class A license in the City and County of Denver, beginning on 31 December 2020 and ending on 31 Dec 2023, unless license is revoked.

By Authority of the Executive Director of Community Planning and Development

City and County of Denver
Community Planning and Development
201 W COLFAX AVE DEPT 205
DENVER, COLORADO 80202

DENVER
THE MILE HIGH CITY

Licenses & Certificates:	720.865.2770
Permit Counter:	720.865.2705
Inspection Administration:	720.865.2505
Automated Inspection Request:	720.865.2501

LIC. 100 (4/100) CPDA

16297 E. Crestline Lane
Centennial, CO 80015
Phone: 303-400-4220
Fax: 303-400-4215

Inspection Report for

City of Rifle
Rifle, CO

1MG Steel On-Grade
Airport Tank

Date Completed: September 24, 2020

Commercial Dive Team:

Diver – Nathan Monroe
Dive Controller – Ceasar Hernandez
Tender – Colin Lafever

Scope of Work:

Our team completed sediment removal using underwater vacuum equipment. Sediment depth, averaging 1 inch (dirt, iron & manganese), was removed from the tank floor. When the cleaning process was finished, a full visual inspection was performed of the tank interior and all interior fixtures. The team also performed a full visual inspection of the tank exterior and all attached fixtures. The details of the inspection findings are included in the report below.

Summary of the Inspection:

Exterior Inspection

1. The team had to go portable to get to the tank. (In a gated area)
2. The foundation was found in good condition with minor hairline cracking noted.
3. The wall was found in good condition with minor oxidation, staining and chalking noted.
4. The overflow was found in good condition with minor chalking noted.
5. The manways were found secure and in good condition with minor staining and chalking noted and 0.01% uniform surface corrosion present on the hardware only.
6. The ladder was found secure, OSHA approved and in good condition with minor chalking noted.
7. The hatch was found locked with a gasket present and in good condition with minor oxidation and chalking noted.
8. The roof was found in good condition with minor oxidation and chalking noted.
9. The vent was found in good condition with minor chalking and oxidation noted.

Key

Excellent – Like new, no repairs needed
Good – Cosmetic problems, repair if utility wants
Fair – Minor problems, repairs needed
Poor – Major problems, fix now

Summary of the Inspection:

Interior Inspection

1. The interior roof was found in good condition with minor sags & runs in the coating, staining and 0.01% intergranular corrosion noted.
2. The ladder was found secure and in good condition with minor sags & runs in the coating, sediment staining, micro & macro blistering, chalking and 0.01% uniform surface corrosion noted.
3. The overflow was found in good condition with minor sags & runs in the coating and staining noted.
4. The interior wall was found in good condition with minor sediment staining and chalking noted.
5. The floor was found in good condition with moderate chalking and heavy sediment staining noted.
6. The manways were found in good condition with minor chalking, micro & macro blistering, moderate sediment staining and 0.01% rust noduling noted.
7. The inlet was found in good condition with minor sediment staining, moderate chalking and 0.01% rust noduling noted.
8. The outlet was found in good condition with minor sediment staining, micro & macro blistering, moderate chalking and 0.03% rust noduling noted.
9. The nine support columns were found secure and in good condition with minor sags & runs in the coating, sediment staining and moderate chalking noted.

Recommendations:

1. Install a #24 mesh screen on the exterior overflow.
2. Continue to schedule a clean and inspect every 3-5 years per AWWA and the State of Colorado recommendations.

Key

Excellent – Like new, no repairs needed
Good – Cosmetic problems, repair if utility wants
Fair – Minor problems, repairs needed
Poor – Major problems, fix now

Inland Potable Services, Inc.

Exterior Inspection Report

Foundation Condition

Foundation Exposed? Y ☒ N ☐
Anchor Bolts Present? Y ☐ N ☒
Corrosion on Anchor Bolts Present? Y ☐ N ☐ N/A ☒
Anchor Bolts Loose? Y ☐ N ☐ N/A ☒
Cracking Noted In Foundation? Y ☒ N ☐ N/A ☐
Spalling Noted? Y ☐ N ☒ N/A ☐

Summary: The foundation was found in good condition with minor hairline cracking noted.

Wall Panel Condition

Coating Condition: Good
Seams/Welds Condition: Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☒ N ☐
De-lamination Present? Y ☐ N ☒
Dents Present? Y ☐ N ☒

Holes Present? Y ☐ N ☒
Signs Of Leaking? Y ☐ N ☒

Summary: The wall was found in good condition with minor oxidation, staining and chalking noted.

Overflow Structure Condition

Coating Condition: Good
Seams/Welds Condition: Good
Stand Off Supports Condition: Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒
Directly Connected To Sewer or Drain? Y ☐ N ☒ N/A ☐

End Cap Present? Y ☒ N ☐
Hinge and Cap Condition: Good
#24 mesh Screen Present? Y ☐ N ☒
Condition: N/A

Summary: The overflow was found in good condition with minor chalking noted.

Manway Condition

Coating Condition: Both Good
Weld/Seam Condition: Both Good
Corrosion Present? Y ☒ N ☐
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

Summary: The manways were found secure and in good condition with minor staining and chalking noted and 0.01% uniform surface corrosion present on the hardware only.

Access Ladder Condition

Ladder Type: Steel welded
Is Ladder and Safety Climb **OSHA** Approved? Y ☒ N ☐
Is Vandal Guard Present? Y ☒ N ☐
Locked? Y ☒ N ☐ N/A ☐
Safety Climb Type: Cage
Safety Climb Condition: Good
Is Top Of Tank Easily Accessible? Y ☒ N ☐
Coating Condition: Good
Seams/Welds Condition: Good
Stand Off Supports Condition: Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

Summary: The ladder was found secure, OSHA approved and in good condition with minor chalking noted.

Access Hatch Condition

Coating Condition: Good
Seams/Welds Condition: Good
Corrosion Present: Y ☐ N ☒
Oxidation Present? Y ☒ N ☐
De-lamination Present? Y ☐ N ☒
Hatch Size: 3 foot square
Riser Height: 4 inches Lid Height: 2 inches
Hatch Locked? Y ☒ N ☐

Hinge Condition: Good
Gasket Present? Y ☒ N ☐
Intact? Y ☒ N ☐ N/A ☐
Insects, Dirt Or Debris Present Under Hatch? Y ☐ N ☒

Summary: The hatch was found locked with a gasket present and in good condition with minor oxidation and chalking noted.

Roof Condition

Roof Type: Domed
Coating Condition: Good
Seams/Welds Condition: Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☒ N ☐
De-lamination Present? Y ☐ N ☒
Low Spots Present? Y ☒ N ☐
Holes in Roof? Y ☐ N ☒
Cathodic Protection Plates Present? Y ☐ N ☒
Sealed Edges: Y ☐ N ☐ N/A ☒
Loose Plates? Y ☐ N ☐ N/A ☒
Missing Plates? Y ☐ N ☐ N/A ☒

Summary: The roof was found in good condition with minor oxidation and chalking noted.

Vent Condition

Coating Condition: Good
Seams/Welds Condition: Good
Corrosion Present: Y ☐ N ☒
Oxidation Present? Y ☒ N ☐
De-lamination Present? Y ☐ N ☒
#24 Mesh Screen in Place? Y ☒ N ☐
Condition: Good

All Openings Sealed? Y ☒ N ☐
Cap Condition: Good

Summary: The vent was found in good condition with minor chalking and oxidation noted.

Inland Potable Services, Inc.
Interior Inspection Report

Roof Condition

Coating Condition: Good
Welds/seam Condition: Good
Corrosion Present On Panels? Y ☒ N ☐
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

Summary: The interior roof was found in good condition with minor sags & runs in the coating, staining and 0.01% intergranular corrosion noted.

Ladder Condition

Ladder Location: 12 o'clock
Coating Condition: Good
Weld/Seam Condition: Good
Supports Condition: Good
Corrosion Present? Y ☒ N ☐
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

Summary: The ladder was found secure and in good condition with minor sags & runs in the coating, sediment staining, micro & macro blistering, chalking and 0.01% uniform surface corrosion noted.

Overflow Condition

Overflow Location: 1 o'clock
Coating Condition: Good
Weld/Seam Condition: Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

Summary: The overflow was found in good condition with minor sags & runs in the coating and staining noted.

Wall Panel Condition

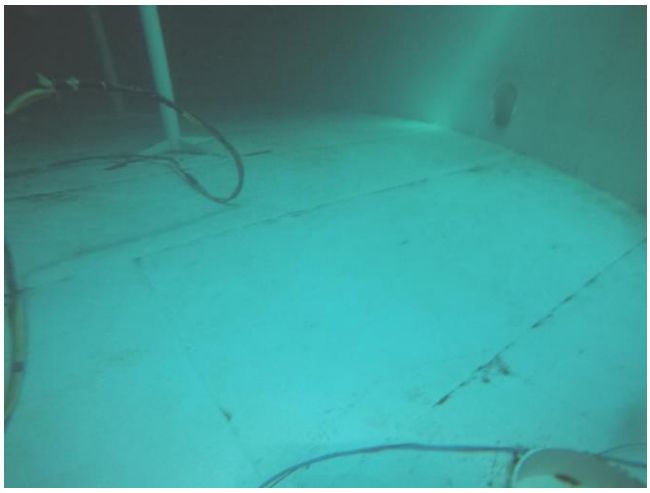
Coating Condition: Good
Welds/seam Condition: Good
Corrosion Present On Panel? Y ☐ N ☒
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒
Is Biofilm Present: Y ☐ N ☒
Any irregularities or structural deficiencies? Y ☐ N ☒

Summary: The interior wall was found in good condition with minor sediment staining and chalking noted.

Floor Condition

Coating Condition: Good
Welds/seam Condition: Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒
Sediment Depth: 1 inch
Any irregularities or structural deficiencies? Y ☐ N ☒

Summary: The floor was found in good condition with moderate chalking and heavy sediment staining noted.

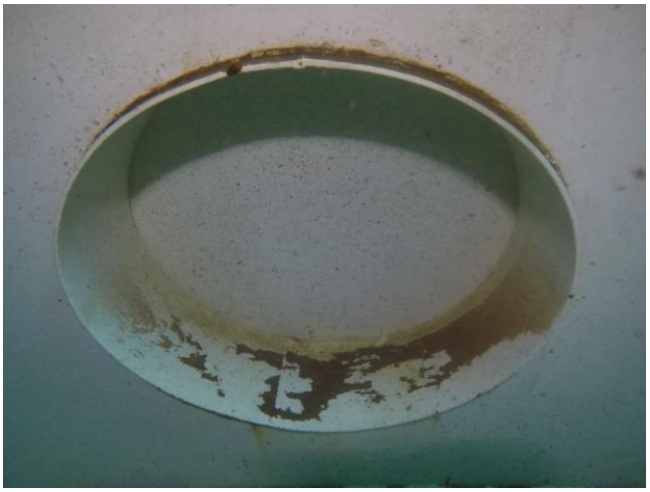


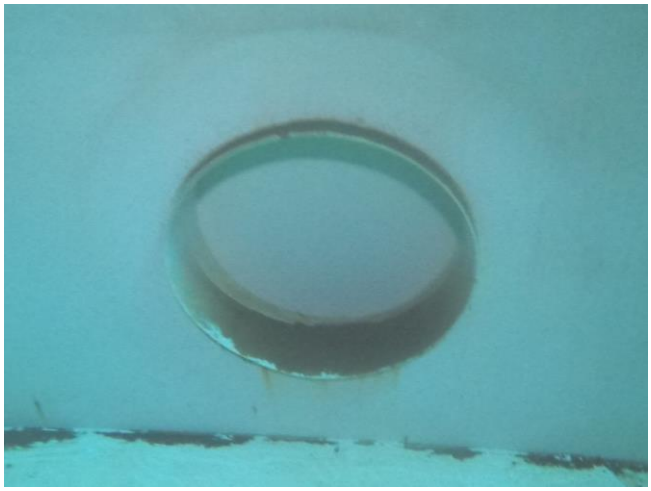
Manway Condition

Manway Location(s): 3 o'clock & 11 o'clock
Coating Condition: Both Good
Weld/Seam Condition: Both Good
Corrosion Present? Y ☒ N ☐
Oxidation Present? Y ☐ N ☒

De-lamination Present? Y ☐ N ☒

Summary: The manways were found in good condition with minor chalking, micro & macro blistering, moderate sediment staining and 0.01% rust noduling noted.

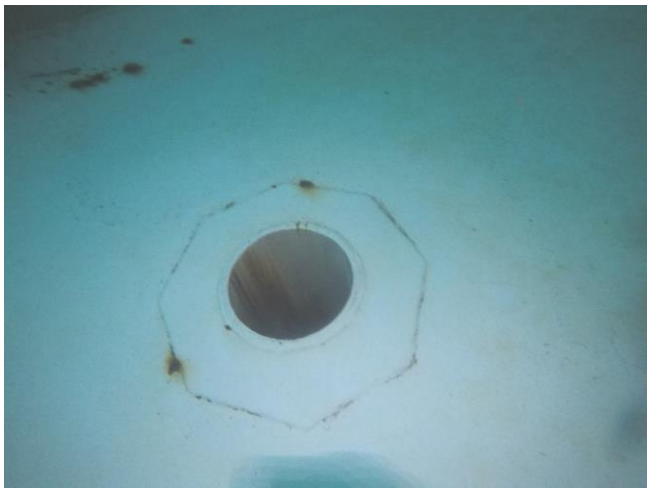




Inlet Condition

Common Inlet/Outlet? Y ☐ N ☒ Location: N/A
If Separate:
Inlet Location: 12 o'clock
Coating Condition: Good
Weld/Seam Condition: Good
Corrosion Present? Y ☒ N ☐
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

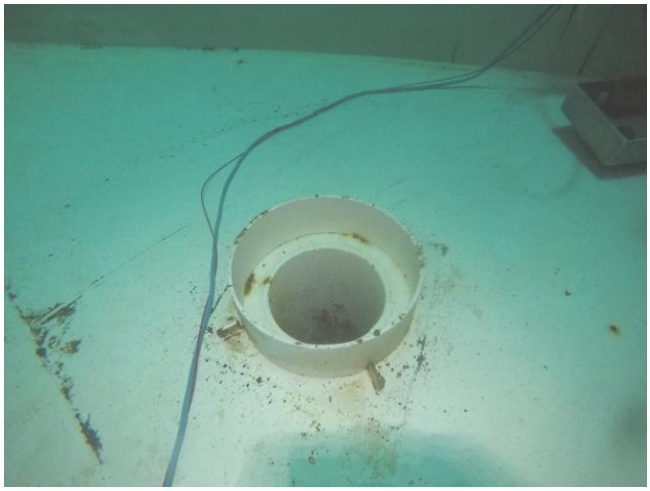
Summary: The inlet was found in good condition with minor sediment staining, moderate chalking and 0.01% rust noduling noted.



Outlet Condition

Common Inlet/Outlet? Y ☐ N ☒ Location: N/A
If Separate:
Outlet Location: 12:05 o'clock
Outlet Condition: Good
Weld/Seam Condition: Good
Corrosion Present? Y ☒ N ☐
Oxidation Present? Y ☐ N ☒
De-lamination Present? Y ☐ N ☒

Summary: The outlet was found in good condition with minor sediment staining, micro & macro blistering, moderate chalking and 0.03% rust noduling noted.

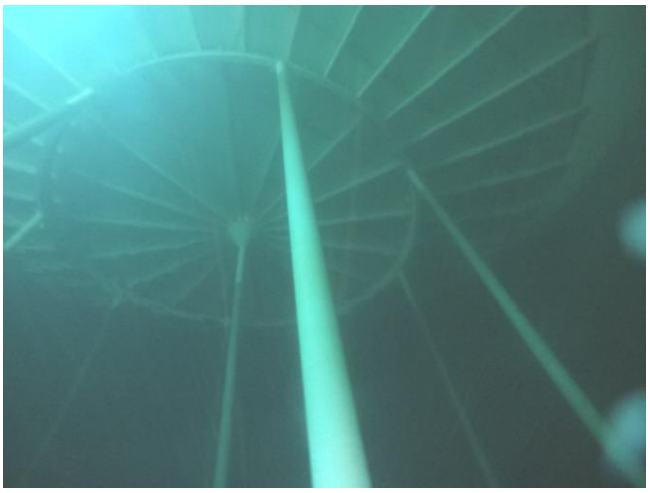


Support Column Condition

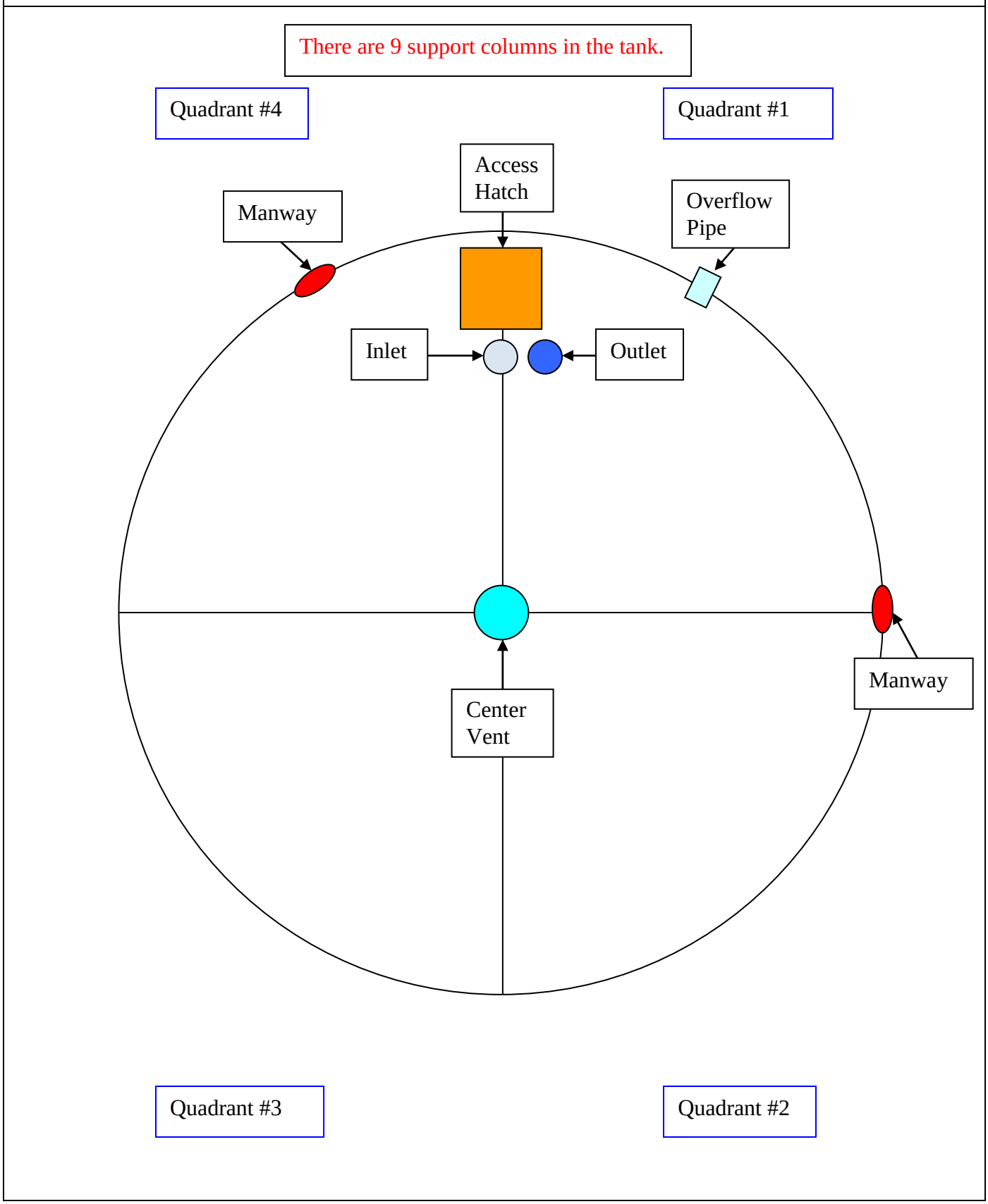
Number Of Columns: 9
Coating Condition: All Good
Welds/seam Condition: All Good
Corrosion Present? Y ☐ N ☒
Oxidation Present? Y ☐ N ☒

De-lamination Present? Y ☐ N ☒

Summary: The nine support columns were found secure and in good condition with minor sags & runs in the coating, sediment staining and moderate chalking noted.



Tank Layout


There are 9 support columns in the tank.
Quadrant #4
Quadrant #1
Access Hatch
Manway
Overflow Pipe
Inlet
Outlet
Manway
Center Vent
Quadrant #3
Quadrant #2

Boundaries Unlimited Inc.

Civil Engineering
Surveying
& Beyond

Basis of Design Report

City of Rifle
Rifle Airport 0.5 MG Water Storage Tank

Rifle, Colorado
Feb. 2021

Image: 2021 Google

COLORADO LICENSED
DERIC JON WALTER
37110
PROFESSIONAL ENGINEER

License No. 37110
Licensed Professional Engineer, State of Colorado

Applicant

City of Rifle
202 Railroad Ave.
Rifle, CO 81650
970.665.6599

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XIV. Conclusions & Recommendations 4
XV. Appendix 4

I. Introduction

The purpose of this document is to provide the information required under Chapter 7 – *Finished Water Storage* of the State of Colorado Design Criteria for Potable Water Systems (2017) and Regulation No. 11 – *Colorado Primary Drinking Water Regulations* for the construction of an additional finished water storage tank owned and operated by the City of Rifle. The proposed 0.5 MG above ground steel finish water storage tank is to be constructed adjacent to an existing 1,000,000-gallon above ground steel finish water storage tank south of the Garfield County Regional Airport.

The site is located in the NW1/4 of the SE1/4, Section 24, T.6S., R.93W. of the 6th P.M. within an easement on private property located approximately 0.7 mile south of the intersection of County Road #352 (aka Airport Road) and County Road #333 (aka Hunter Mesa Road).

Figure 1: Location of Existing & Proposed Finish Water Storage Tanks

For consistency, this report will address the required information as itemized in Chapter 7 of the Design Criteria.

II. Section 7.0.1 (Sizing)

As outlined in the City of Rifle Request for Proposal (2020), the existing Rifle Airport 1.0 MG Water Storage Tank was constructed in 2000. The tank needs to be drained for maintenance and recoated. To perform this maintenance and future maintenance, an additional tank is needed. The existing tank does not have adequate enough demand to meet turnover so the new tank is to be 0.5 MG. The existing tank has level controls and a pump station on Airport Road. The existing water tank has overflow and drain lines. It is desired that these lines can be connected to

923 Cooper Avenue, Ste. 201 | Glenwood Springs, CO 81601 | 970.945.5252 | www.bu-inc.com

the new tank to utilize the existing discharge point. The site is within Airport Land Partners property and additional easement is expected for the new tank. To manage potential water quality deterioration problems, only one tank will be placed online at a time until such time that growth demands the use of both tanks.

The new 0.5 MG tank will have a diameter of 53.0-feet and a maximum water storage depth of 30.5-feet (wall height of 32-feet for 12' clearance between the overflow/roof and 6" a silt stop).

III. Section 7.0.2 (Location of Water Storage Tanks)

The existing tank site is to be expanded to the northwest and the new tank constructed adjacent to the existing tank. The new tank will be constructed with the same finish floor elevation and height as the existing tank. According to the Federal Emergency Management Agency FEMA Flood Map Service Center website, the site is located within the "Not Printed" Community Panel #0802051360B. Regardless, the site is located on a hillside approximately 0.5 miles west of the nearest ephemeral drainage and more than 200-feet above. The site is not subject to any known contamination sources.

IV. Section 7.0.3 (Protection from Contamination)

As discussed, the site is located away from and well above any possible waterborne contamination sources and is not subject to any other known contamination sources. The tank air vent screen will be 24-mesh to exclude birds, animals and insects. All mountings and structural attachments to the steel tank will be welded to the tank and coated with the tank to prevent damage to the tank and/or coating system.

V. Section 7.0.4 (Protection from Trespassers)

The existing tank site is protected by a 6-foot tall chain link fence with 3-strand barbed wire top. This fencing system will be expanded to include the new tank. The new tank's access ladder will also be equipped with a locking security gate at the bottom of the ladder safety cage. City Public Works employees also visit the site on a routine basis for operation and security.

VI. Section 7.0.5 (Drains)

The new storage tank will have an 8"Ø drain pipeline connected to the 12"Ø overflow pipeline, but separated from the common inlet/outlet pipeline. This pipeline will be connected to the existing tank's free-flowing 12"Ø drain/overflow pipeline which is also separate from that tank's common inlet/outlet pipeline. The existing drain pipeline discharges into a drainage channel to the east which is protected by riprap. The end of the existing pipe is elevated several feet above the discharge surface to prevent backwater (air gap) and is equipped with an automatic drainage gate valve. The existing drainage channel slopes away from the daylight point to prevent pooling. The condition of the automatic drainage gate valve and existing riprap will be assessed during the construction process and repaired/improved, if necessary, to ensure that contaminants such as insects, rodents, birds, etc. cannot enter the pipeline.

VII. Section 7.0.6 (Stored Water Age)

Tank level controls will be set for a 5-foot operational depth (79,500-gallon) below the tank full elevation. This will improve turnover and maintain approximately 420,000-gallons of available fire protection water (3,500-gallons per minute for 2 hours, or 2,250-gallons per minute for 3 hours). The tank will be equipped with an interior passive mixing system (Tideflex Mixing System, or engineer approved equal). This mixing will help reduce the potential for stratification and freezing.

VIII. Section 7.0.7 (Overflow)

The new storage tank will have an interior 2'-6" x 2'-6" overflow standpipe weir intake 12" below the lowest point of the roof structure and connected to the free-flowing 12"Ø overflow pipeline previously discussed in Section VI: *Section 7.0.5 (Drains)*. Weir and pipeline calculations are provided in the Appendix to confirm that the proposed system can overflow the supply system's full buildout pump rate of 1500 gpm. The existing automatic drainage gate valve has not experienced any freezing issues.

IX. Section 7.0.8 (Access)

The new storage tank will have two (2) 36"Ø side mount hinges shell manholes, one (1) 36"Ø roof mount manway and three (3) 24"Ø roof mount manways. The additional 24"Ø manways will afford access for tank inspection and entry at each quadrant in the tank roof. All access openings will be framed at least 4-inches above the surface of the roof at the opening, fitted with a solid, water and insect tight gasketed cover which overlaps the framed opening and extends down around the frame, be hinged on one side and have a locking device.

X. Section 7.0.9 (Vents)

The new storage will be vented at the center of the roof with an Advance Tank and Construction Co AST Roof Vent for an 18"Ø pipe, engineer approved equal. Ventilation calculations are provided in the Appendix to confirm that the proposed system can sufficiently accommodate a pipeline break at three (3) realistic locations in the distribution system with the most conservative being at the intersection of the Tank access road and County Road #333 (Hunter Mesa Road). A Factor of Safety of 1.15 was applied to the calculations. The non-corrodible screen shall be 16 mesh. The site is below 6,500 feet MSL, so the accumulated snow depth has been assumed as 24-inches and the bottom of the vent set accordingly.

XI. Section 7.0.10 (Roof and Sidewalls)

The new steel tank will be watertight with property welded joints, penetrations, manways, ports, and supports. The roof will be sloped at 3/4":12" minimum pitch.

XII. Section 7.0.11 (Construction Material)

The new tank and attached plumbing will be constructed of carbon steel and the interior coated with an ANSI/NSF 61 certified paint. A cathodic protection system will be installed to reduce the steel corrosivity. All pipe and fittings in contact with the finished water will be ANSI/NSF 61 certified.

XIII. Section 7.0.12 (Other Considerations)

A subsoil study was completed for the site by Kumar & Associates, Inc. (Project No.20-7-616, dated January 21, 2021). The investigation included three test pit borings near the proposed tank site. A copy of the geotechnical report has been included in the Appendix.

The water level for the new tank will be monitored using a pressure transducer install within a pipe stilling well inside the tank. The transducer will be wire into the existing SCADA system on the existing tank and the system adjusted accordingly.

XIV. Conclusions & Recommendations

The proposed 0.5 MG above ground steel finished water storage tank will enable the City of Rifle to take the adjacent existing tank offsite for maintenance and ultimately increase the City's water storage capacity. The reduced size will service the region's water needs and afford better water quality management by increasing water turnover. The design is based on current water demands, matches the elevations of the existing adjacent tank, utilizes the existing pipeline network, utilizes the existing SCADA system and includes cathodic protection.

XV. Appendix

- Overflow Weir Datasheet
- Overflow Piping Datasheet
- Ventilation Calculations
    - Maximum Discharge Flow Determination
    - Air Vent Sizing
    - AST Vent Capacity Table
- Subsoil Study-Kumar & Associates, Inc.

Weir Report

City of Rifle 500k Tank: Overflow Weir

Rectangular Weir

Crest	= Sharp
Bottom Length (ft)	= 8.00
Total Depth (ft)	= 0.50

Calculations

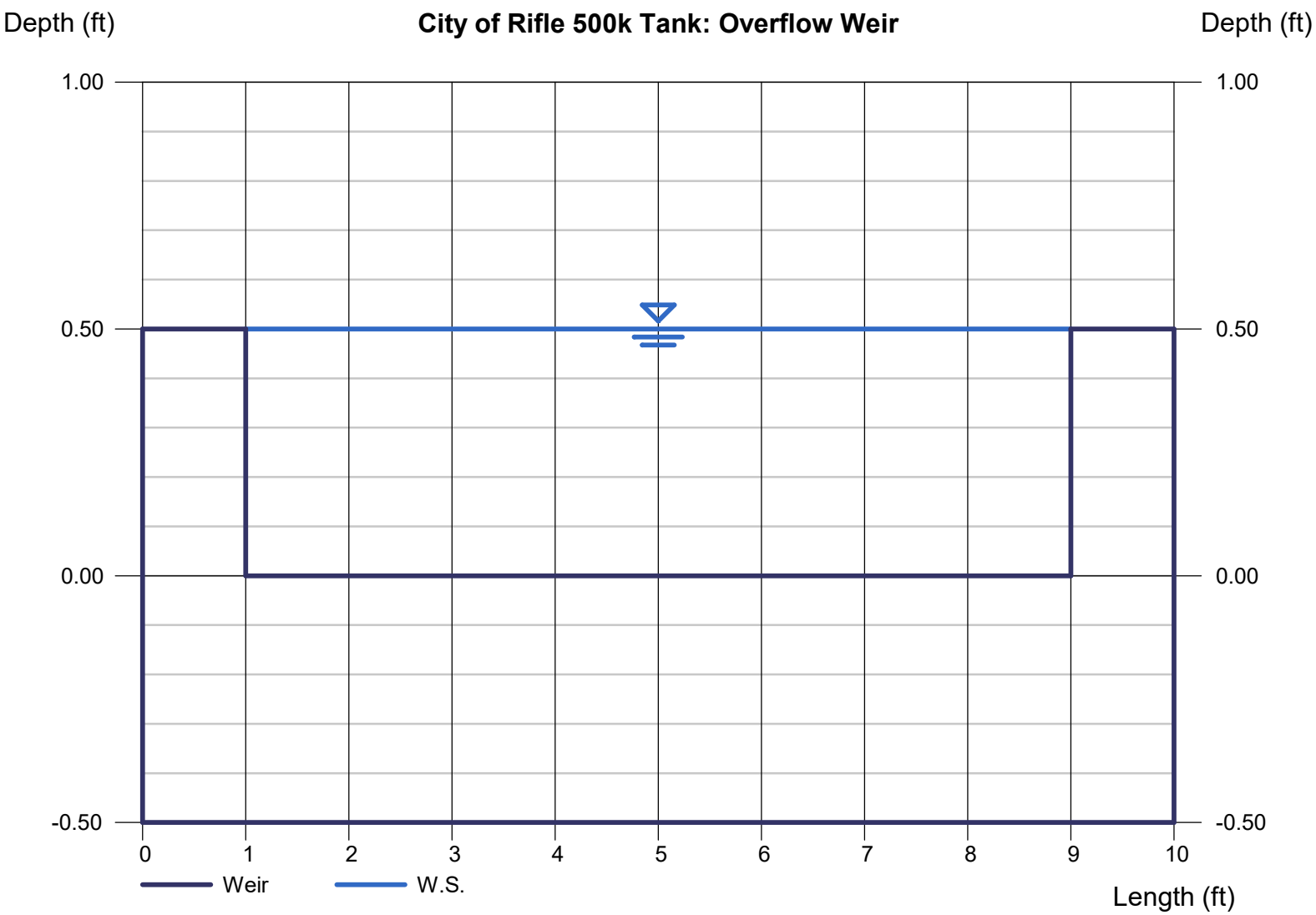
Weir Coeff. Cw	= 3.33
Compute by:	Known Depth
Known Depth (ft)	= 0.50

Highlighted

Depth (ft)	= 0.50
Q (cfs)	= 9.419
Area (sqft)	= 4.00
Velocity (ft/s)	= 2.35
Top Width (ft)	= 8.00

Peak Inflow Rate: 1500 gpm
3.43 cfs
Factor of Safety: 1.5
Design Flow Rate: 5.2 cfs (min.)

Capacity at 9.4 cfs > 5.2 cfs. Therefore construct a 2.5'x2.5' weir box which will have effective weir lengths of 2' on each side (8' total).



City of Rifle 500k Tank

Manning Formula Uniform Pipe Flow at Given Slope and Depth

Overflow Pipe Capacity: 12" Sch.40 Steel Section @ 1.0%, Hw/D=0.8		
Inputs:		
Minimum Flow Required	1500	gal/min
Pipe Diameter, di	11.940	in
Manning Roughness, n	0.012	
Pressure slope (possibly equal to pipe slope), S_o	0.010	slope
Percent of (or ratio to) full depth (100% or 1 if flowing full)	0.800	fraction
Results:		
Flow, Q	1671	gal/min
Velocity, v	5.582	ft/s
Velocity head, hv	0.484	ft
Flow Area, A	0.667	ft^2
Wetted Perimeter, P	2.203	ft
Hydraulic Radius	0.303	ft
Top Width, T	0.796	ft
Froude Number, F	1.08	
Shear Stress (tractive force), τ	0.497	psf
Flow Requirements Met?	*Yes*	

Overflow Pipe Capacity: 12" C900 PVC CL305 Section @ 0.8%, Hw/D=0.8		
Inputs:		
Minimum Flow Required	1500	gal/min
Pipe Diameter, di	11.200	in
Manning Roughness, n	0.009	
Pressure slope (possibly equal to pipe slope), S_o	0.008	slope
Percent of (or ratio to) full depth (100% or 1 if flowing full)	0.800	fraction
Results:		
Flow, Q	1680	gal/min
Velocity, v	6.379	ft/s
Velocity head, hv	0.632	ft
Flow Area, A	0.587	ft^2
Wetted Perimeter, P	2.067	ft
Hydraulic Radius	0.284	ft
Top Width, T	0.747	ft
Froude Number, F	1.27	
Shear Stress (tractive force), τ	0.373	psf
Flow Requirements Met?	*Yes*	

Version 2.0 (20 June 2017)(adjusted by BUI)

HawsEDC Calculators

http://hawsedc.com/engcalcs/Manning-Pipe-Flow.php

City of Rifle 500k Tank

Ventilation Calculations

Maximum Disharge Flow Determination

Maximum Pipe Flow Calculations for most likely waterline breaks in vicinity of water tank.
The following Hazen Williams Equation is used to determine pipe flows:

$$Q = 0.442\ C\ D^{2.63}\ (\Delta P/L)^{0.54}$$, where

Q = Water Flow Rate (GPM)

C = Hazen Williams coefficient, depends on pipe mat'l & age. New C900 PVC pipe is 150

D = Pipe Inside Dia. (inches), Transmission Pipeline is 12"Ø C900 PVC per SGM plans (6/19/20). Assume Class 165.

L = Pipe length between water tank and waterline break, (ft)

H = Head elevation difference between tank water level and pipe break (ft)

ΔP = Pressure difference between ends of pipe (psi) = Head (ft)/2.31

Locations of Closest Probable Waterline Break	L (feet)	D (inch)	H (feet)	ΔP (psi)	C	Q (GPM)
Int. of Tank Road & CR#333	930	12.08	76.0	32.9	150	7,650
Int. of CR#333 & Hunter Mesa Shop Rd.	1,760	12.08	132.0	57.1	150	7,304
Int. of CR#333 & CR#352	4,570	12.08	234.0	101.3	150	5,943

Maximum: 7,650

with 1.15 Factor of Safety: **8,797**

Note: Maximum Tank Discharge Rate (Q) of 7,650 GPM is greater than the anticipated Maximum Tank Intake Rate of 1,500 GPM

Air Vent Sizing

Following calculation for tank **"inbreathing"** venting requirement in accordance the following equation (6) from Sec. 3.3.2.2.2 of Venting Atmospheric an Low-pressure Storage Tanks, API Sandard 2000, 7th Edition, March 2014.

$$V_{ip}=8.02*V_{pe}$$, where

V_{ip} is the inbreathing venting requirement - cubic feet per hour (cfh) of air

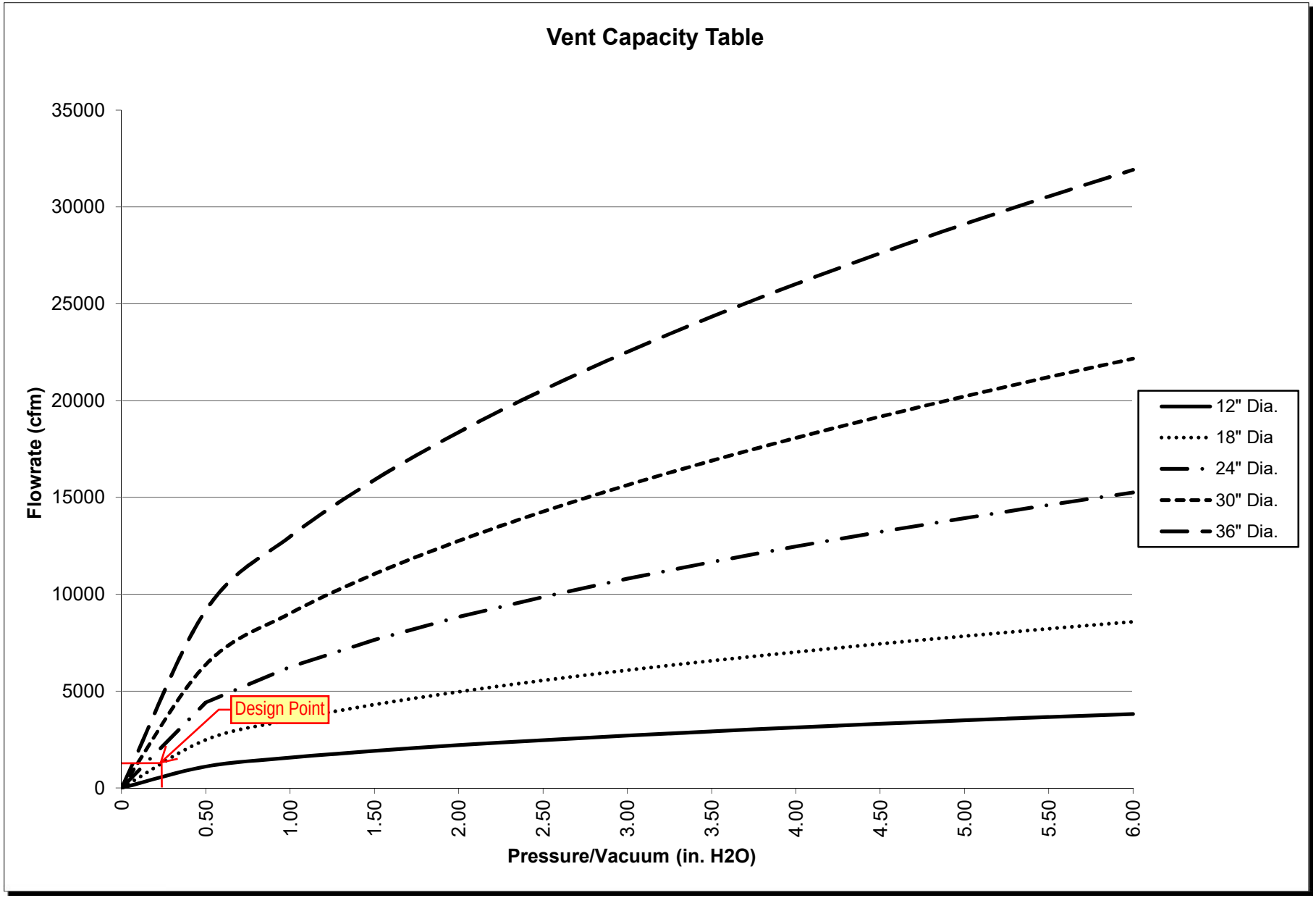
V_{pe} is the maximum rate of liquid discharing - US GPM

$V_{ip=}$ 70,555 cfh

1,176 cfm

Recommendation:

AST-VENT from Advance Tank and Construction Co. for an 18"Ø pipe (18-AST Roof Vent)
Vacuum presure at 1,176 CFM Air flow is approx. 0.25 in. (H2O) or 0.00903 psig (OK)
(see AST Vent Capacity Table for 18"Ø Pipe - attached)


Vent Capacity Table
Flowrate (cfm)
35000
30000
25000
20000
15000
10000
5000
0
0
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
Pressure/Vacuum (in. H2O)
Design Point
12" Dia.
18" Dia
24" Dia.
30" Dia.
36" Dia.

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and Environmental Scientists

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An Employee Owned Company

Office Locations: Denver (HQ), Parker, Colorado Springs, Fort Collins, Glenwood Springs, and Summit County, Colorado

SUBSOIL STUDY
FOR FOUNDATION DESIGN
PROPOSED RIFLE AIRPORT
500,000 GALLON WATER STORAGE TANK
RIFLE, COLORADO

PROJECT NO. 20-7-616

JANUARY 21, 2021

PREPARED FOR:

BOUNDARIES UNLIMITED
ATTN: BRUCE LEWIS, PE
923 COOPER AVENUE, SUITE 201
GLENWOOD SPRINGS, COLORADO 81601
(bruce@bu-inc.com)

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FIGURE 1 - LOCATION OF EXPLORATORY BORINGS

FIGURE 2 - LOGS OF EXPLORATORY BORINGS

FIGURE 3 - LEGEND AND NOTES

FIGURES 4 and 5 - SWELL-CONSOLIDATION TEST RESULTS

TABLE 1- SUMMARY OF LABORATORY TEST RESULTS

PURPOSE AND SCOPE OF STUDY

This report presents the results of a subsoil study for a proposed 500,000 gallon water storage tank to be located to the south of Airport Road, Rifle, Colorado. The project site is shown on Figure 1. The purpose of the study was to develop recommendations for the foundation design. The study was conducted in accordance with our proposal for geotechnical engineering services to Boundaries Unlimited dated August 18, 2020.

A field exploration program consisting of exploratory borings was conducted to obtain information on the subsurface conditions. Samples of the subsoils obtained during the field exploration were tested in the laboratory to determine their classification, compressibility or swell and other engineering characteristics. The results of the field exploration and laboratory testing were analyzed to develop recommendations for foundation types, depths and allowable pressures for the proposed tank foundation. This report summarizes the data obtained during this study and presents our conclusions, design recommendations and other geotechnical engineering considerations based on the proposed construction and the subsurface conditions encountered.

PROPOSED CONSTRUCTION

The proposed water tank will be a ½ million gallon, above-ground steel storage tank with a design bottom elevation of 5,780 feet. The tank will have a height of about 32 feet and a diameter of about 52 feet. Grading within the tank footprint will be relatively extensive with cut depths up to about 20 feet. We assume relatively light to moderate foundation loadings, typical of the proposed type of construction. The tank floor will be supported on aggregate base and the tank wall will be supported on a concrete ring wall foundation. Extensive excavation into the hillside west of the tank is proposed with a permanent cut slope up to around 25 feet high.

If tank loadings, location or grading plans change significantly from those described above, we should be notified to re-evaluate the recommendations contained in this report.

SITE CONDITIONS

There is an existing above-ground steel water storage tank at the subject site located as shown on Figure 1. The existing tank site was graded nearly flat on the downhill, northeast side and cut

possibly up to around 15 feet deep on the west side. The terrain in the proposed tank site is irregular with ground surface slopes up to about 25 to 40 percent generally down to the east. Vegetation consists of juniper trees and sage brush. A rough-cut trail had been made to access the boring locations shown on Figure 1. Numerous sandstone boulders were exposed on the ground surface of the tank site along with a minor snow depth at the time of our field exploration.

GEOLOGIC CONDITIONS

The project site is covered by colluvium deposits underlain by undifferentiated Wasatch and Ohio Creek Formations. The Wasatch is a sequence of variegated claystone, siltstone, sandstone and conglomerate and the Ohio Creek is mainly sandstone and conglomerate. No severe geologic conditions which would make the proposed development infeasible were identified at the tank site. Excavation difficulty and construction induced slope instability should be considered in the development plan where the proposed new tank site cuts into the steep hillside to the west.

FIELD EXPLORATION

The field exploration for the project was conducted on December 22, 2020. Three exploratory borings were drilled at the locations shown on Figure 1 to evaluate the subsurface conditions. The borings were advanced with 4-inch diameter continuous flight augers powered by a track-mounted CME-45 drill rig. The borings were logged by a representative of Kumar & Associates.

Samples of the subsoils were taken with 1⅜ inch and 2-inch I.D. spoon samplers. The samplers were driven into the subsurface materials at various depths with blows from a 140 pound hammer falling 30 inches. This test is similar to the standard penetration test described by ASTM Method D-1586. The penetration resistance values are an indication of the relative density or consistency of the subsoils and hardness of the bedrock. Depths at which the samples were taken and the penetration resistance values are shown on the Logs of Exploratory Borings, Figure 2. The samples were returned to our laboratory for review by the project engineer and testing.

SUBSURFACE CONDITIONS

Graphic logs of the subsurface conditions encountered at the site are shown on Figure 2. The subsoils encountered in the tank site (Borings 1 and 2) below about 3 feet of onsite fill soil in Boring 1, consist of about 7 to 9 feet of very stiff to hard, sand and clay with rock fragments probably to boulder size underlain by hard to very hard claystone bedrock down to around 22 to 32 feet where very hard, cemented sandstone was encountered to the boring depths of about 24 and 37 feet. In Boring 3, about 17 feet of sand and clay soil was encountered overlying very hard sandstone bedrock. Practical auger refusal was encountered in the sandstone at Boring 1.

Laboratory testing performed on samples obtained from the borings included natural moisture content and density, finer than sand size gradation analyses and liquid and plastic limits. Results of swell-consolidation testing performed on relatively undisturbed drive samples of the claystone, presented on Figures 4 and 5, indicate low compressibility under relatively light loading and moderate to high expansion when wetted. Results of liquid and plastic limits testing indicate the clay soils have low to medium plasticity and the claystone has medium plasticity. The laboratory testing is summarized in Table 1.

No free water was encountered in the borings at the time of drilling and the subsoils and bedrock were slightly moist.

DESIGN RECOMMENDATIONS

FOUNDATIONS

The subsurface profiles encountered at the site indicate the tank excavation will be cut down into claystone bedrock. The downhill, east part could be based in the overlying colluvial soils. The variable bearing conditions including the expansion potential of the claystone could result in excessive differential movement and mitigation measures should be taken to reduce the risk. Considering the subsurface conditions encountered in the exploratory borings and the nature of the proposed construction, we recommend the water tank floor and ring wall foundation be founded on relatively deep, compacted granular structural fill. The claystone bedrock should be sub-excavated as needed to provide at least 5 feet of structural fill below the tank floor base materials and extend to at least 5 feet beyond the tank perimeter. The structural fill should be a

relatively well graded granular material such as CDOT Class 2, 5 or 6 base course and be compacted to at least 98% of standard Proctor density at near optimum moisture content. The excavation bottom should be sloped to drain or an underdrain provided to collect potential water seepage and discharge to daylight. Recommendations for the tank support are presented below after the ground improvements have been made.

The design and construction criteria presented below should be observed for a compacted granular base foundation system.

1) The ring wall foundation should be designed for an allowable bearing pressure of 2,500 psf. The tank bottom should be placed on 4 inches of sand on 12 inches of compacted granular base (such as CDOT Class 6 aggregate base course) placed on the compacted structural fill soils. Based on experience, we expect settlement of the tank designed and constructed as discussed in this section will be up to about 1 to 2 inches.
2) The ring wall foundation should have a minimum width of 16 inches and minimum depth of 36 inches for frost protection. Lateral loading on the structure can be resisted using a sliding coefficient of 0.30 below the tank floor and bottom of the ring wall and a passive earth pressure of 450 pcf equivalent fluid unit weight against the side of the ring wall foundation. Safety factors of 1.5 and 2.0 should be used for sliding and passive earth pressure, respectively.
3) Any loose or disturbed soils should be removed down to the compacted structural fill soils. The exposed soils in tank floor or footing areas should then be moisture adjusted to near optimum and compacted.
4) Additional sub-excavated areas should be backfilled with granular soils (aggregate base course sand and gravel) compacted to at least 98% of standard Proctor density at near optimum moisture content. The base materials below the tank floor should be placed and compacted to the project specifications.
5) A representative of the geotechnical engineer should observe the tank subgrade for bearing conditions and evaluate structural fill construction for compaction.

SITE GRADING

The risk of construction-induced slope instability at the site appears low provided the tank is located as planned and the uphill cut is sloped to a stable grade or supported by a retaining wall.

We assume cut depths for the tank will be up to about 20 feet deep. Fill embankments should be limited to about 6 feet deep for future settlement considerations and should be compacted to at least 95% of the maximum standard Proctor density near optimum moisture content. Prior to fill placement, the subgrade should be carefully prepared by removing all vegetation, topsoil and existing fill and compacting to at least 95% of the maximum standard Proctor density. The fill should be benched into the portions of the hillside exceeding 20% grade.

Permanent unretained cut slopes in soil should be graded at 1½ horizontal to 1 vertical or flatter and protected against erosion by revegetation or other means. A steeper cut slope of 1H to 1V should be feasible in claystone bedrock cut areas. It appears the hillside is covered in colluvium deposits. Exploratory pits should be excavated into the hillside in the area of the proposed cut for soil conditions and design parameters. This office should review site grading plans and cut slope soil profile information for the project prior to construction.

SURFACE DRAINAGE

The following drainage precautions should be observed during construction and maintained at all times after the water tank has been completed:

1) Inundation of the foundation excavations and below tank areas should be avoided during construction.
2) Exterior backfill should be adjusted to near optimum moisture and compacted to at least 95% of the maximum standard Proctor density in pavement and slab areas and to at least 90% of the maximum standard Proctor density in landscape areas.
3) The ground surface surrounding the exterior of the tank should be sloped to drain away from the foundation in all directions. We recommend a minimum slope of 6 inches in the first 10 feet in unpaved areas and a minimum slope of 2½ inches in the first 10 feet in paved areas.

LIMITATIONS

This study has been conducted in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no warranty either express or implied. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the locations indicated on Figure 1, the proposed type of

construction and our experience in the area. Our findings include interpolation and extrapolation of the subsurface conditions identified at the exploratory borings and variations in the subsurface conditions may not become evident until excavation is performed. If conditions encountered during construction appear different from those described in this report, we should be notified so that re-evaluation of the recommendations may be made.

This report has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our information. As the project evolves, we should provide continued consultation and field services during construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications to the recommendations presented herein. We recommend on-site observation of excavations and foundation bearing strata and testing of structural fill by a representative of the geotechnical engineer.

Respectfully Submitted,

Kumar & Associates, Inc.

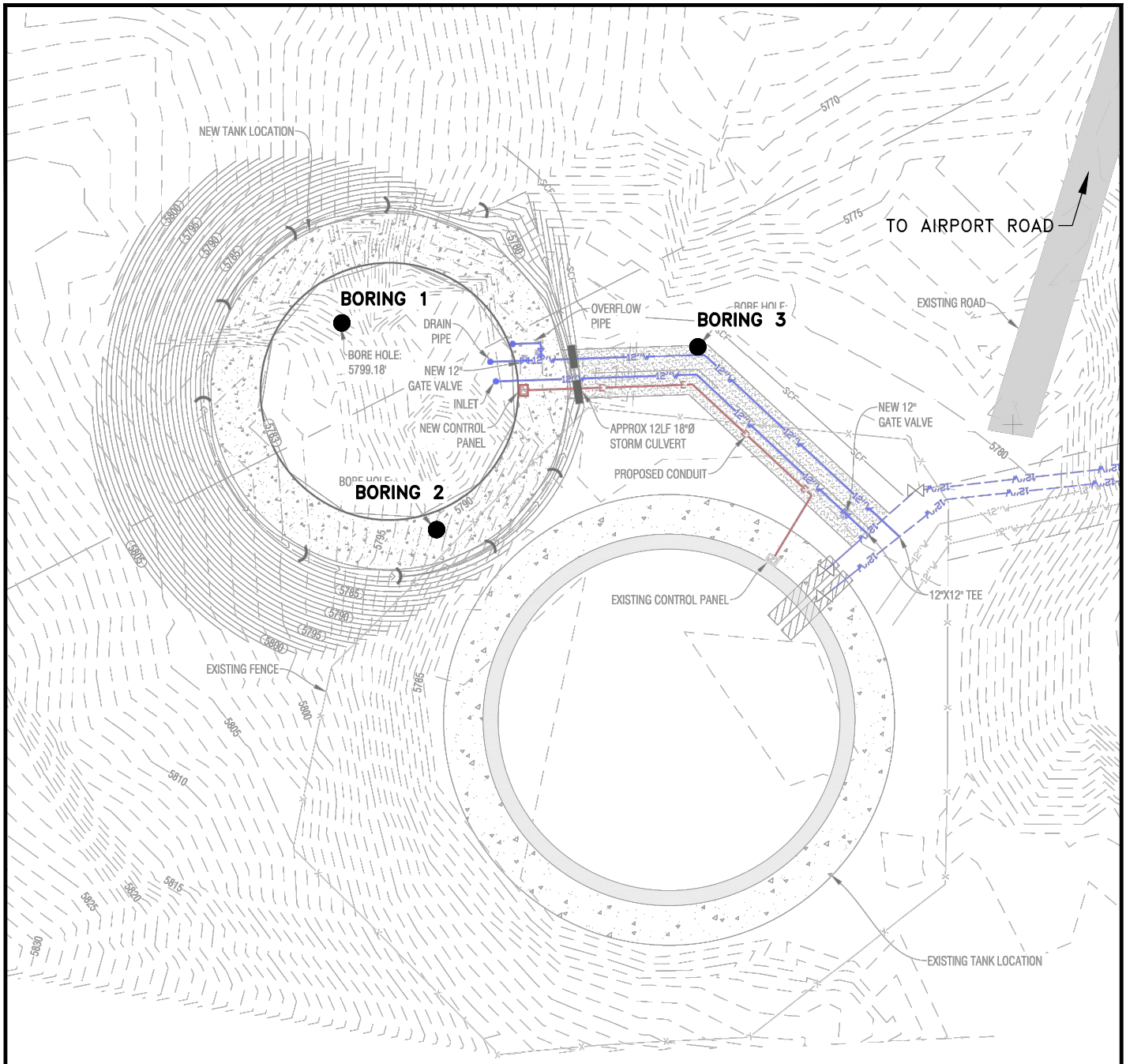
COLORADO REGISTERED
STEVEN L. PAWLAK
15222
1/22/21
PROFESSIONAL ENGINEER

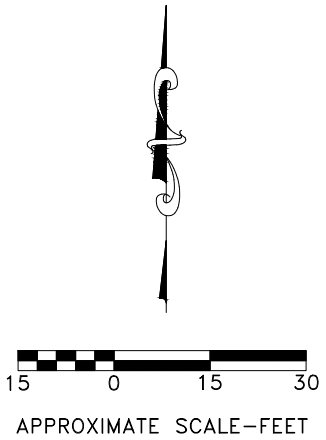
Steven L. Pawlak, P.E.

Reviewed by:

Daniel E. Hardin, P.E.

SLP/kac





20–7–616	Kumar & Associates	LOCATIONS OF EXPLORATORY BORINGS	Fig. 1

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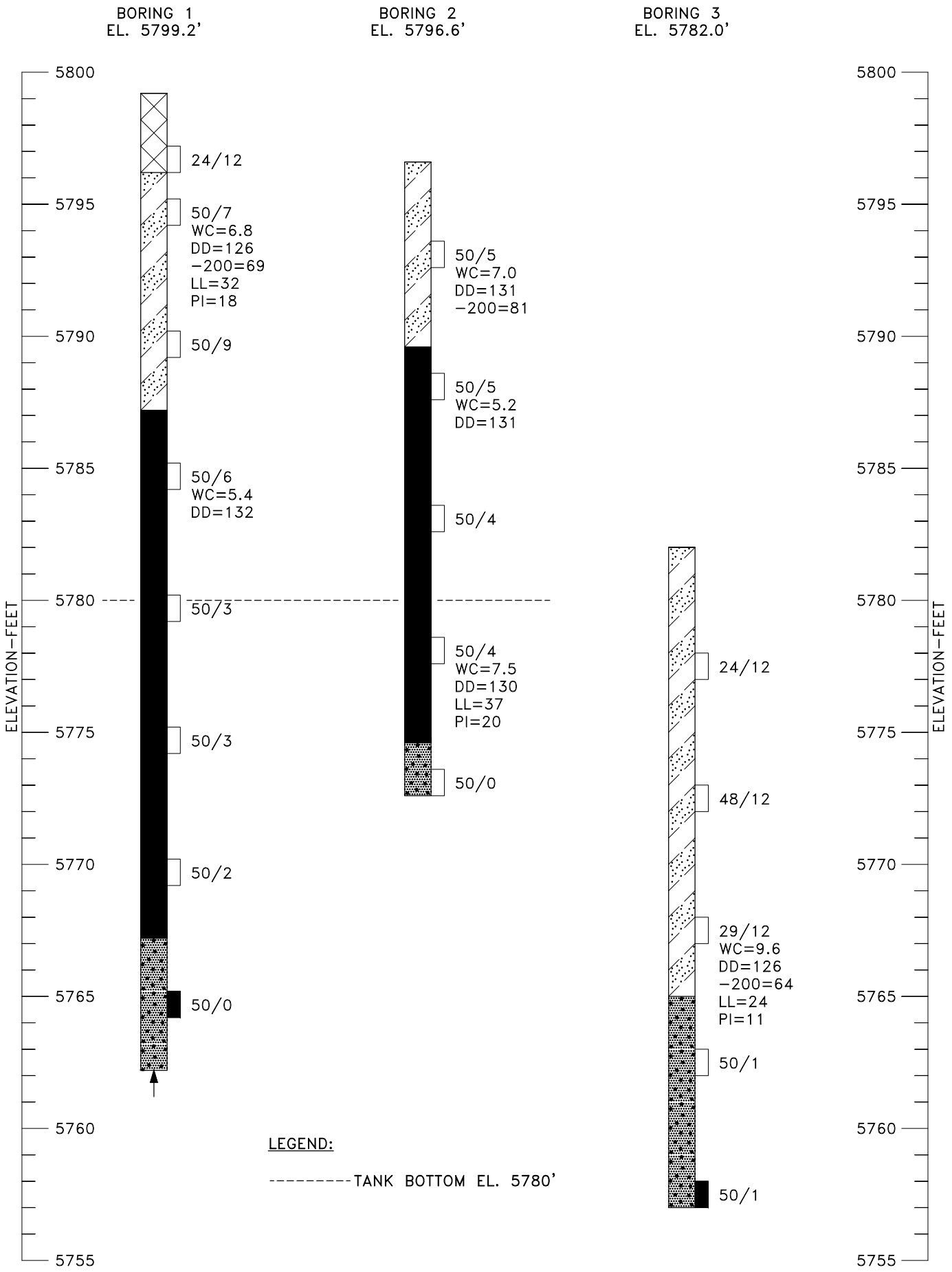

20-7-616	Kumar & Associates	LOGS OF EXPLORATORY BORINGS	Fig. 2

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LEGEND

FILL: CLAY AND SAND, SILTY, WITH ORGANIC DEBRIS, FIRM, SLIGHTLY MOIST, TAN.

SAND AND CLAY (SC-CL) WITH GRAVEL, SCATTERED COBBLES, AND PROBABLE SANDSTONE BOULDERS, VERY STIFF TO HARD, SLIGHTLY MOIST, TAN AND BROWN. LOW TO MEDIUM PLASTICITY.

CLAYSTONE BEDROCK, HARD TO VERY HARD, SLIGHTLY MOIST, PURPLE, YELLOW, AND BROWN.

SANDSTONE BEDROCK, VERY HARD, SLIGHTLY MOIST, LIGHT BROWN.

DRIVE SAMPLE, 2-INCH I.D. CALIFORNIA LINER SAMPLE.

DRIVE SAMPLE, 1 3/8-INCH I.D. SPLIT SPOON STANDARD PENETRATION TEST.

24/12 DRIVE SAMPLE BLOW COUNT. INDICATES THAT 24 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE THE SAMPLER 12 INCHES.

PRACTICAL AUGER REFUSAL.

NOTES

1. THE EXPLORATORY BORINGS WERE DRILLED ON DECEMBER 22, 2020 WITH A 4-INCH DIAMETER CONTINUOUS-FLIGHT POWER AUGER.
2. THE LOCATIONS OF THE EXPLORATORY BORINGS WERE MEASURED APPROXIMATELY BY PACING FROM FEATURES AT THE SITE THEN SURVEY LOCATED BY OTHERS.
3. THE ELEVATIONS OF THE EXPLORATORY BORINGS WERE SURVEY DETERMINED BY OTHERS.
4. THE EXPLORATORY BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
5. THE LINES BETWEEN MATERIALS SHOWN ON THE EXPLORATORY BORING LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE TRANSITIONS MAY BE GRADUAL.
6. GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING.
7. LABORATORY TEST RESULTS:
   WC = WATER CONTENT (%) (ASTM D2216);
   DD = DRY DENSITY (pcf) (ASTM D2216);
   -200= PERCENTAGE PASSING NO. 200 SIEVE (ASTM D1140);
   LL = LIQUID LIMIT (ASTM D4318);
   PI = PLASTICITY INDEX (ASTM D4318).

20-7-616	Kumar & Associates	LEGEND AND NOTES	Fig. 3

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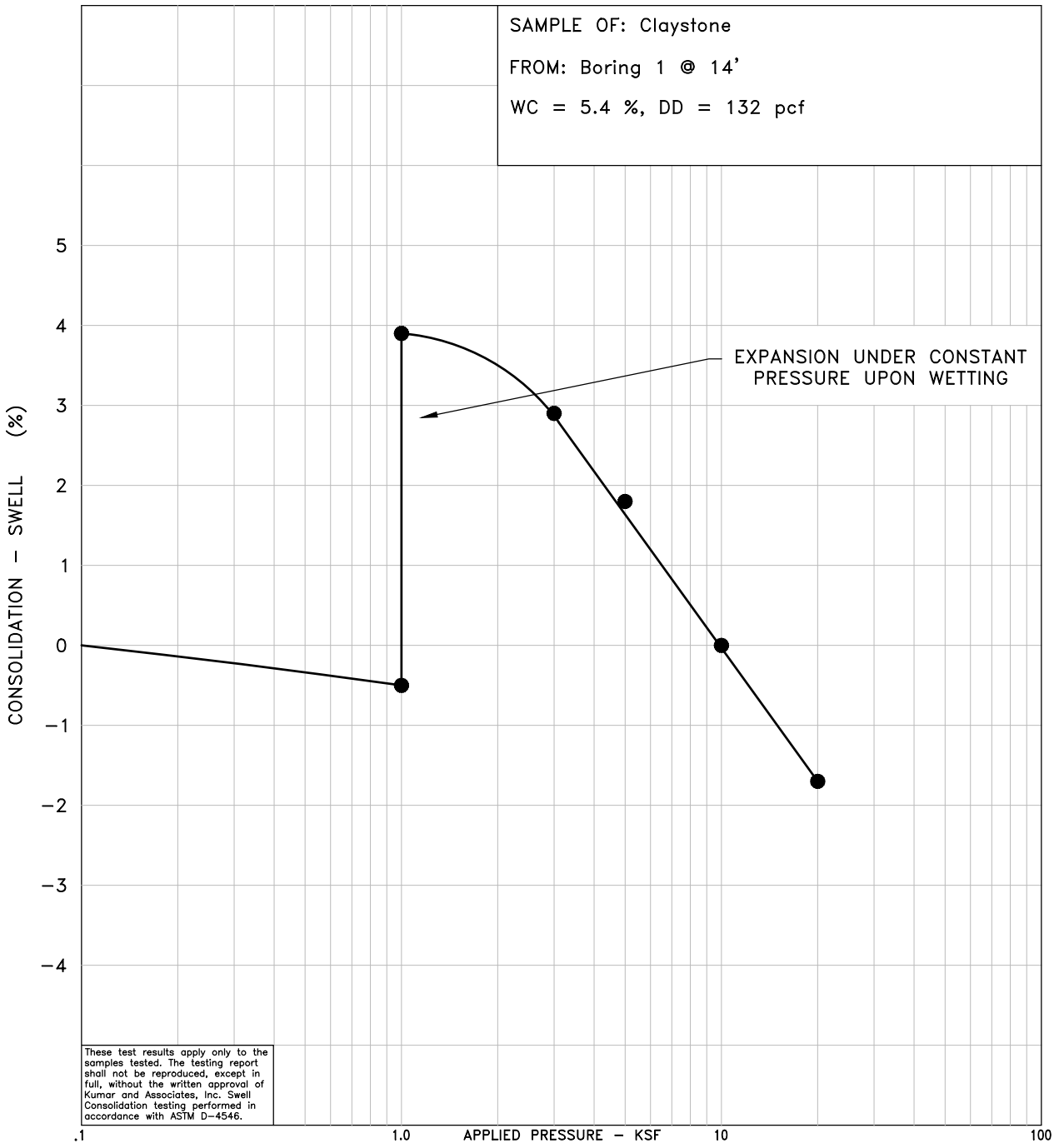

20-7-616	Kumar & Associates	SWELL-CONSOLIDATION TEST RESULTS	Fig. 4

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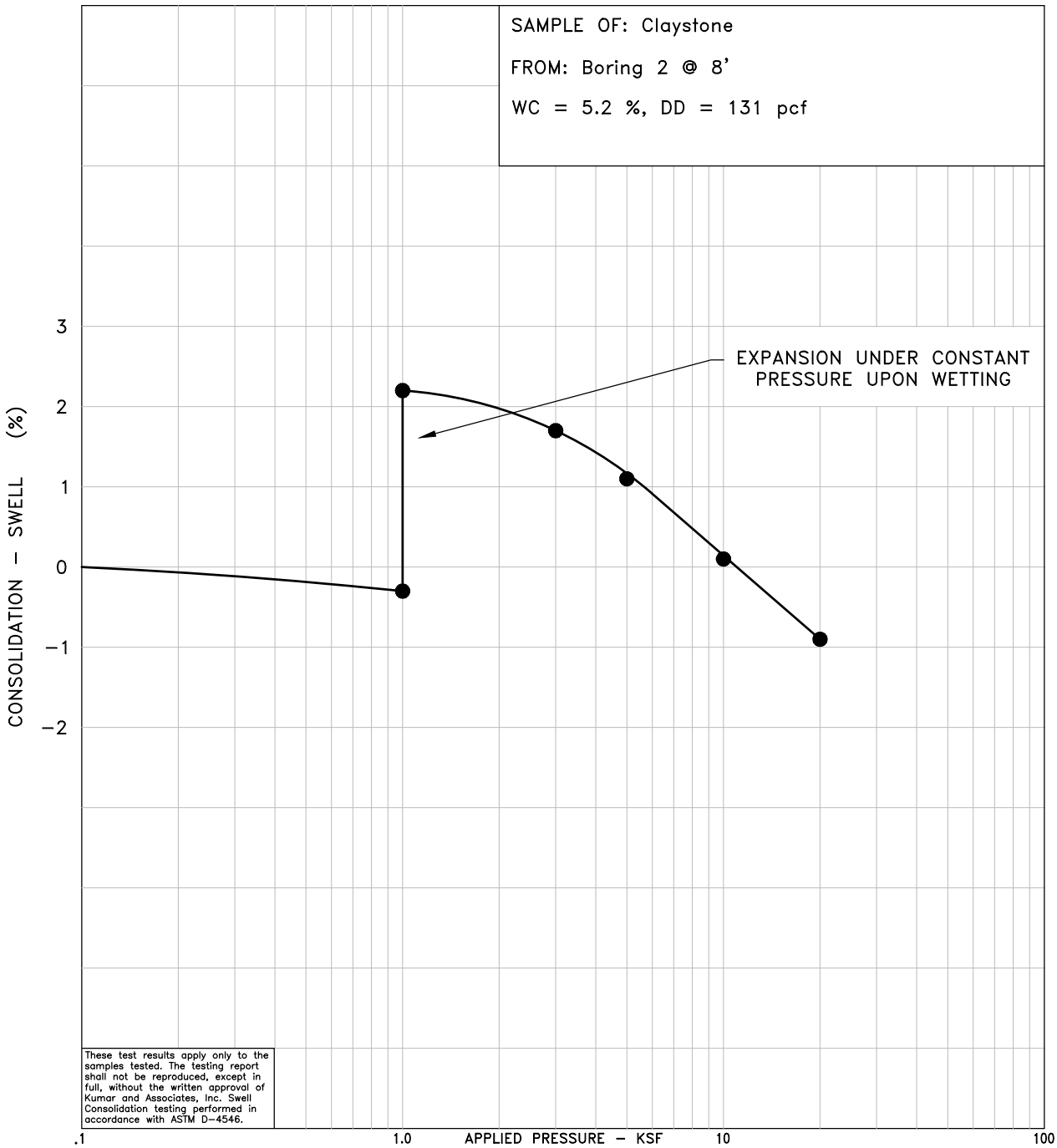

20-7-616	Kumar & Associates	SWELL-CONSOLIDATION TEST RESULTS	Fig. 5

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Kumar & Associates, Inc.®
Geotechnical and Materials Engineers
and Environmental Scientists

TABLE 1
SUMMARY OF LABORATORY TEST RESULTS

Project No. 20-7-616

SAMPLE LOCATION		NATURAL MOISTURE CONTENT	NATURAL DRY DENSITY	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH		SOIL TYPE
BORING	DEPTH (ft)	(%)	(pcf)	GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTIC INDEX (%)	(psf)		
1	4	6.8	126			69	32	18			Sandy Clay
	14	5.4	132								Claystone
2	3	7.0	131			81					Sandy Clay
	8	5.2	131								Claystone
	18	7.5	130				37	20			Claystone
3	14	9.6	126			64	24	11			Sandy Clay

ADDENDUM #2
Airport Water Tank
April 26, 2022

The following Addenda items shall be applied to the *Construction Contract Documents and Specifications* for the Airport Water Tank Project

Questions Received:

- **Q1:** Please verify that a 5% Bid Bond Required for Project.

  A*: A bid bond is required. Your surety companies standard form is acceptable.*

- **Q2:** Please verify that Bidders will have to provide their own Bid Bond Form.

  A: *Your surety companies standard form is acceptable.*

- **Q3:** Please verify that Substantial Completion within 150 Calendar days after NTP

  A: *This is correct*

- **Q4:** Please verify that Final Completion within 60 calendar days after Substantial Completion

  A: *This is correct*

- **Q5:** Please verify that proposal is due on 05/20/2022 02:00 PM MDT. Can proposal be submitted electronically

  A: *This is correct. Proposals shall be a physical submission.*

- **Q6:** Please verify that the last day for questions is April 22, 2022. Can this date be extended to May 6th?

  A: *This is extended to May 6th.*

- **Q7:** Please provide the sub-soil report by HP Geotech that is referred in SC-4.02.

  A*: Please see the attached, most recent geotechnical investigation report.*

- **Q8:** What are the anticipated dates of Award and Notice to Proceed?
  NOA, June 2, 2022

  A: *NOA is scheduled for June 2, 2022 and NTP would be no more than 10 days later.*

- **Q9:** Please confirm that this is not a prevailing wage project.

  A: *Confirmed.*

- **Q10:** Please confirm that American Iron and Steel procurements requirements do not apply to this project.

  .**A:** *Confirmed.*

- **Q11:** Who is responsible for facilitating and paying for the partnering facility and facilitator?

  A: *The prime contract holder/General contractor shall act as the facilitator of all items within the project scope as defined by the contract documents. This shall be paid under general conditions by the City to the Contractor.*

- **Q12:** What criteria will be used to evaluate the proposals and award?

  A: (1) The ability, capacity and skill of the bidder to perform the contract or provide the service or construction required;

  (2) Whether the bidder can perform the contract or provide the service or construction promptly or within the time specified, without delay or interference;

  (3) The character, integrity, reputation, judgment, experience and efficiency of the bidder;

  (4) The quality of performance of previous contracts or services;

  (5) The previous and existing compliance by the bidder with laws and ordinances relating to the contract or service;

  (6) The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service or construction;

  (7) The quality, availability and adaptability of the supplies, services or construction to the particular use required; and

  (8) The ability of the bidder to provide future maintenance and service for the use of the subject of the contract.

(9) The Local Preferences set forth herein.

Contract Amount	***Primary Preference City of Rifle Goods/Vendors***	***Secondary Preference Garfield County Goods/Vendors***
Less than $1,000	10% discount	5% discount
$1,001 to $5,000	8% discount	4% discount
$5,001 to $25,000	6% discount	3% discount
$25,001 to $100,000	5% discount	2.5% discount
$100,000 to $200,000	4% discount	2% discount
$200,001 to $500,000	3% discount	1.5% discount
$500,000 or greater	2% discount	1% discount

Q13: There are no detail drawings or specifications on the type of CP system to be provided. Should a turnkey scope and fee for design, material procurement, installation, and commissioning of the CP system be included?

A: *Yes, that is the desire.*

Q14: The project manual indicates that a solar-powered CP system should be provided, indicating an impressed current CP system is required. This will require mounting of solar panels on the tank roof(s), a battery box, and CP controller unit. Please confirm.

A: *Yes, that is the intent.*

Q15: Are there any photos, drawings, or details of the existing CP on the existing tank (1.0MG)?

A:. *No*

Q16: Are these tanks subject to freezing or icing? A submerged, IR-free, auto-potential CP system within the tank is recommended.

A: *Yes, the tanks are subject to freezing/icing.*

Q17: Is an internal CP system for both the new (0.5MG) and existing (1.0MG) to be provided

A: *A CP system is only required for the new tank.*

Q1: Has an MFL been performed on the existing tank (1.0MG) bottom to measure wall thickness and determine if active corrosion is present

A: *No*

Q18: Is a CP system required for the external surface of the tank bottoms? Does this include both the new tank (0.5MG) and the existing tank (1.

A: *Internal and external of the new tank and metal piping.*

Q19: Shall corrosion control of the 8” drain, 12” overflow, and 12” inlet/outlet be provided?

A: *This is acceptable.*

Q20: This may be difficult as these items will be welded to the new tank bottom. Recommend encasing these steel piping segments with grout/concrete and install the appropriate isolation coupling/flange outside of the tank foundation.

A: *CP only on new tank*

Q21: Could you get us CAD files for this project?

A: *Please see attached.*

Q22: Could you confirm the height of the existing fence on site that needs to be added to?

A: *6’ Chain-link on 1.75” poles at 10’ OC.*

Q23: Is topsoil required to be imported and spread on disturbed area? If yes how thick?

A: *No topsoil*

Q24: Can you confirm that all excess fill that needs to be removed can all be dumped and disposed of for no charge at the Rifle owned pond you were talking about at the prebid meeting?

A: *confirmed.*

Q25: Can you tell me what type of tank is specified for this work?

A: *a specific manufacturer is not specified*

Q26: With this project also allow all the on-site trees/brush to be dumped and disposed of at the Rifle pond?

A: *No*

Q27: Can you supply a google map showing exactly where this pond disposal site is located?

A: *See Attached*

Q28: If the 150 day schedule cannot be attained, should we still try to bid the project and add in the appropriate liquidated damages?

A: *If at any time prior to contract execution the schedule needs to be modified this should be performed. This may be done during bidding and will not effect scoring during bid selection.*

Q28: What if the painting /lining of the existing tank cannot happen till weather permits in 2023? Will the City of Rifle allow the painting of the existing tank in 2023?

A: *This would be acceptable.*

Additional Information:

Additional or revised items included on the City website (Contractor to download):

- CAD files
- Rifle Pond disposal map
- Pre-bid Sign in
- 20-7-616 (01-21-21) Subsoil Study signed
- Airport Tank Rifle CO Inspection Report 06-2010

As a reminder, the Bid submittal deadline is 2:00pm Friday, May 20th, 2022. Until May 6th, 2022. Please continue to submit all questions via email to cspaulding@rifleco.org.

CITY OF RIFLE
PURCHASE REQUEST

1.	**Vendor Name** NEW: W-9 attached ☐
	Velocity Constructors Inc.

2.	**Vendor Address**
	2107 W. College Ave,
	Englewood, CO 80110

3.	**For the Purchase of (description)**
	Construction Services of
	Airport .5MG Water Tank

4.	**Amount Requested**	**Amount Budgeted**	**Finance Director Verified Funds Avail.**
	$3,016,830.00	$1,250,000	

5.	**Dept. Name**	**General Ledger Acct #**
	Utillities	310-4333-400-733

6.		**Type of Purchase**
	x	Capital Construction
		Capital Construction – Change Order
		Capital Equipment
		Plant Equipment
		Materials, supplies, non-profession/technical services (includes computer/software maint.)
		Professional Services
		Utilities (includes equipment installation)
		Land, easements, ROW

7.		**Purchasing Process Required**
		Cooperative Purchasing
		Open Market
		Comparative Pricing
		Request for Proposal (attach bid tab)
	x	Formal Bid (attach bid tab and advertisement)
		Single Source (attach an explanation)

8.		**Authorization Required**
	x	City Manager
	x	City Council

9.	**Signatures**		
	Position	**Signature**	**Date**
	Department Director		
	City Manager		
	City Council Approval (meeting date)		
10.	**Purchase Order # assigned by Finance**		

General summary of purchasing ordinance (Section 4, Art. III)

TYPE OF CONTRACT	ESTIMATED AMOUNT	PROCESS	Purchase Order? Purchase Request?	**CITY COUNCIL APPROVAL** REQUIRED?
Capital Construction	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3) vendors/suppliers)	Purchase Request	
	$20,001-$100,000	Competitive Bid (see Code Sec 4-3-40)		
	> $100,000	Bonded Competitive Bid		
Capital Construction Change orders	< = 10% of approved contract	When total change orders to date are < 10% - Dept Head or City Manager Approval	Purchase Request	Yes if total change orders to date are greater than 10%
	> 10% of approved contract			
Capital Equipment	< $5,000	Open Market (informal evaluation by) purchasing agent)	> $5,000 - PO	Yes if over $20,000 or for any amount from Capital Fund.
	$5,000-$20,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	> $20,000	Competitive Bid (see Code Sec 4-3-40)		
Plant Equipment Replacement (purchases necessary for replacement of existing equipment that is component part of any water, wastewater, or physical plant)	< $7,500	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $75,000
	$7,500-$75,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
	>$75,000	Competitive Bid (see Code Sec 4-3-40)		
Materials, Supplies, Non-Professional Services and Technical Services (including software/hardware maintenance technical services)	< $10,000	Open Market (informal evaluation by purchasing agent)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $20,000
	>$10,000	Comparative Pricing (solicit quotes from 3 vendors/suppliers)	Purchase Request	
Professional Services (note- process for appointed positions such as auditor, attorney, engineer, or municipal judge to be determined by Council)	< $25,000	Open Market (informal evaluation by purchasing agent)	All - Purchase Request	Yes if anticipated to exceed $25,000 per year to a single vendor
	> = $25,000	Written requests for written proposals must be sent to at least 3 firms or individuals		
Utilities including installation of equipment (purchases to secure utility services such as natural gas, electricity, local telephone, water, or sewer)	any amount	Single Source (negotiations, where appropriate, after good faith determination that only one viable source exists in relevant supply area - keep records for one year)	> $5,000 - PO >= $5,000 - Purchase Request	No
Real Property Interest (including easements and rights of way)	any amount	Single Source (see above)	> $5,000 - PO >= $5,000 - Purchase Request	Yes if over $5,000.

CITY OF RIFLE
AGENDA ITEM REPORT
MEETING DATE: June 1, 2022

Agenda Item #8.a.

Agenda Item Name:
Report to City Manager

Presenter:
Tommy Klein, City Manager

Item Description:
Staff report on notable tasks completed within the individual departments.

Recommended Action:
No action necessary

Fiscal Impact:
N/A

Operational Impact:
N/A

Prior Board Motions:
N/A

Background Information:
N/A

Executive Summary:
Work Report to City Manager
05/27/2022

Notification Requirements:
N/A

Prepared By:
Misty Williams, City Clerk

Attachments:
1. Report to City Manager 05.27.2022

WORK REPORT TO CITY MANAGER

05.27.2022

PIO

- Continuing updates on website and social media on local issues and citizen concerns.
- Press releases regarding Rifle Community Foundation grants and holiday closures.
- Sal completed the video on the dos and don'ts of parking downtown.

COURT

- Handled 38 adult cases on May 18th court day.
- Held 11 telephone hearings with inmates in custody.
- Met with City Prosecutor to discuss the possibility of adding some lower level drug charges to our code now that they have been reduced to misdemeanors at the state level.

PUBLIC WORKS

- 0.5 MG Airport Water Tank: Currently in bid review and presentation to City Council June 1, 2022; CM/GC contract
- I-70 Exit 90 Gateway Beautification: construction in progress – 40% complete.
- 5th Street and Ute Avenue: moved RFQ Release to June 17,2022; pursuing Fall DOLA grant opportunity to pursue design and construction – Spring 2023 construction.
- Park Hill retaining wall for City/Frontella property boundary: received no bids; Craig is planning to release to less specialized contractors to general civil contractors; intended new bid release May 25,2022; projected Award July 7th.
- Planning for Paradise Island cleanup – targeting a September 2022 work schedule.
- In-house designs in bidding progress; projected award June 1, 2022:
    - Cemetery Roadway Improvements: Summer Construction (July-August)
    - Airport Road - East Improvements: Summer Construction (June-August)
    - W. 7th Street Repair – between Moki and Mesa Avenues - Summer
    - Re-surface of the 9th Street Bridge - Summer
- 100 Block of W. 2nd Street Rehab: projected design completion – May 27, 2022; projected Bid Award – July 7, 2022
- Safer Main Street Grant for Whiteriver Roundabout: Awarded $1.8 million

The following are CIP projects currently under construction:

- Railroad Avenue Rehabilitation project: Overhead utilities to finish by May 13, 2022; Punch List work (65% complete): landscaping & wall fascia
- I-70 Exit 90 Gateway Improvements: boring and below grade infrastructure

Fleet

- Prepared vehicles (19) for Big Iron Auctions, June 28, 2022

Operations & Maintenance

- Multiple and varied street repairs with hot asphalt
- Preparing Procurement documents for purchase: a track-steer loader, and heavy snowplow truck (dual purpose)

Two weeks look-ahead

- Closeout and acceptance of 3rd Street and Railroad Improvement project work.
- Development inspection and management of the following:
  - Pioneer Mesa, Phase II
  - North Pasture, Filing VII
  - Wapiti Commons (Habitat for Humanity)
  - I-70 Exit 90 Gateway
  - Preparation of surfaces for restoration of curb/gutter and flatwork removed and/or damaged by construction activities for correction of incorrect connection to storm water system and sanitary system at Willow Ranch II.

CITY MANAGER

- An island visioning meeting with staff, stakeholders and the vendor was held on May 25, 2022. A community survey will begin in June.
- We are working on a draft contract with the county and municipalities for the detox center. A review by Council will be required before a commitment is made.
- An MOU with CDOT regarding the park and ride project was received and signed. The document states that if Rifle builds a new park and ride, CDOT will transfer the property where the current lot is to the City. We are competing for funding from the USDOT via a RAISE grant. If we do not receive funding, I do not foresee the project moving forward in the next few years. In the event we do not receive funding, citizens will not experience a decrease in services and the current park and ride will remain in place.
- A second round of meetings is being held between staff and the manager. We intend on having a meeting every quarter.