CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 6

DATE: **March 26, 2019**
FROM: **City of Grand Junction Purchasing Division**
TO: **All Offerors**
RE: **2019 Monument Road Bicycle Path Trail IFB-4618-19-DH**

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Q. While setting up the bid sheet on excel, I noticed that items 37 and 44 have no description or quantities. You may have left something out or maybe just need to delete and renumber?

A. Please see attached updated Price Bid Schedule, which Contractor shall utilize when submitting their bid response.

2. Q. What is the location and scope of bid item 16 – Shoring (Area 1)?

A. Please see attached Revision of Section 504 – Sandstone Boulders and Revision of Section 608 – Decomposed Granite Surface Course.

3. Q. Is there a spec on boulders for bid item 32? Sheet 100 calls out the size, but is there a specific type of rock you are or are not looking for?

A. Please see attached Revision of Section 504 – Sandstone Boulders and Revision of Section 608 – Decomposed Granite Surface Course.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr., Senior Buyer
City of Grand Junction, Colorado

Bid Schedule: 2019 Monument Road Bicycle Path Trail (Addendum 6)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	104.4	Concrete Cap at 8 inch Sewer Line per Standard Detail GU-04	20.	LF	$ _____	$ _____
2	108.5	Connect to Existing Manhole (8 inch Pipe) per Standard Detail SS-08	Lump	Sum	- - -	$ _____
3	108.5	Sanitary Sewer Basic Manhole (48 inch I.D.) per Standard Detail SS-02	3.	EA	$ _____	$ _____
4	108.2	8 inch Gravity Sewer Pipe (SDR 35 PVC) includes Type A Bedding and Haunching Material and Backfilling of Trench	724.	LF	$ _____	$ _____
5	108.7	Granular Stabilization Material (Type B)	465.	TON	$ _____	$ _____
6	201-00000	Clearing and Grubbing	6.	ACRE	$ _____	$ _____
7	202	Removal of Wood Border	22.	LF	$ _____	$ _____
8	202-00220	Removal of Asphalt Mat	173.	SY	$ _____	$ _____
9	202-01000	Removal of Fence	8.	LF	$ _____	$ _____
10	202	Removal of Cable Fence	225.	LF	$ _____	$ _____
11	202-04060	Dust Abatement	Lump	Sum	- - -	$ _____
12	203-00000	Unclassified Embankment	515.	CY	$ _____	$ _____
13	206-00000	Structural Excavation	103.	CY	$ _____	$ _____
14	206-00100	Structural Backfill Material (Class 1)	111.	CY	$ _____	$ _____
15	206-00520	Filter Material (Class B) (includes 6" perforated and non-perforated drain pipe and geotextile)	4.	CY	$ _____	$ _____
16	206-01750	Shoring (Area 1)	Lump	Sum	- - -	$ _____
17	208-00002	Erosion Logs (12 Inch)	60.	LF	$ _____	$ _____
18	208-00011	Erosion Bales (Weed Free)	130.	EA	$ _____	$ _____
19	208-00035	Aggregate Bag	10.	EA	$ _____	$ _____
20	208-00045	Concrete Washout Structure	1.	EA	$ _____	$ _____
21	208-00070	Vehicle Track Pad	6.	EA	$ _____	$ _____
22	208-00300	Temporary Berms	2,910.	LF	$ _____	$ _____
23	210-01200	Reset End Anchorage	1.	EA	$ _____	$ _____
24	212-00007	Seeding(Native)(Hydraulic)	4.	ACRE	$ _____	$ _____

Bid Schedule: 2019 Monument Road Bicycle Path Trail (Addendum 6)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
25	304-03000	Aggregate Base Course (Class 3)	334.	CY	$ _____	$ _____
26	304-06000	Aggregate Base Course (Class 6) (Shoulder)	584.	CY	$ _____	$ _____
27	306-01000	Reconditioning	9,000.	SY	$ _____	$ _____
28	403-34752	Hot Mix Asphalt (Patching)(Grading SX)(75)(PG 64-22)(5" Thick)	56.	TON	$ _____	$ _____
29	503-01080	Micropile (8 Inch)	537.	LF	$ _____	$ _____
30	504	Concrete Wall (Class D) per M and S Standard M-601-20 (Wall Design Height 3' to 7' per plan). (Includes associated headwall, toe walls and toe wall attached to walk beneath D Road.) Work shall include approximately 9365 lbs. Reinforcing Steel (Epoxy Coated), Structural Concrete Coating (Exterior of wall), 87 cy Structural Backfill (Class 1) and any necessary appurtenances to complete work.	236.	CY	$ _____	$ _____
31	504	Precast Concrete Block Retaining Wall System (includes all necessary appurtenances, work, etc. to complete).	446.	FSF	$ _____	$ _____
32	506	Stone Boulders for seating at trailhead shade structures and curb stops at tailgate area	307.	LF	$ _____	$ _____
33	506-00212	Riprap (12 Inch)(includes geogrid)	105.	CY	$ _____	$ _____
34	509-15000	Prefabricated Structural Steel Bridge (110 ft long by 10 ft wide, with concrete deck)	Lump	Sum	- - -	$ _____
35	514-00042	Pedestrian Railing (42 Inch)	15.	LF	$ _____	$ _____
36	601-03040	Concrete Class D (Bridge)	55.	CY	$ _____	$ _____
37	601	Cast-in-Place Concrete Footings to support shade structures (2 ft diameter, 6 ft drilled into ground, including rebar and anchor bolts per details)	72.	LF	$ _____	$ _____
38	601-40300	Structural Concrete Coating	22.	SY	$ _____	$ _____
39	602-00010	Reinforcing Steel (Black)	6,600.	LB	$ _____	$ _____
40	602-00020	Reinforcing Steel (Epoxy Coated)	3,100.	LB	$ _____	$ _____
41	603-01125	12 Inch Reinforced Concrete Pipe (CIP)	412.	LF	$ _____	$ _____

Bid Schedule: 2019 Monument Road Bicycle Path Trail (Addendum 6)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
42	603-01185	18 Inch Reinforced Concrete Pipe (CIP)	85.	LF	$ _____	$ _____
43	603-50006	6 Inch Plastic Pipe (with Permanent Berm at Drainage Swale)	30.	EA	$ _____	$ _____
44	603-70904	9x4 Foot Concrete Box Culvert (Precast)	660.	LF	$ _____	$ _____
45	603	Large Area Inlet (24" x 36")	3.	EA	$ _____	$ _____
46	608-00006	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	2,319.	SY	$ _____	$ _____
47	608-00016	Colored Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	6,591.	SY	$ _____	$ _____
48	608	Colored Concrete Pad for Bike Racks (6 inch thick)(Includes 6 inch thick Class 6 ABC)	16.	SY	$ _____	$ _____
49	608-00010	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	50.	SY	$ _____	$ _____
50	608-00015	Detectable Warnings (Cast Iron) Wet Set (2' x 2')	10.	EA	$ _____	$ _____
51	608-01600	Decomposed Granite Surface Course (2" Minimum Thickness)	50.	CY	$ _____	$ _____
52	609	Concrete Curb (6" Wide, 14" High) to include 6" of Class 6 Aggregate Base Course.	112.	LF	$ _____	$ _____
53	609	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	290.	LF	$ _____	$ _____
54	609	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base Course.	15.	LF	$ _____	$ _____
55	620-00020	Sanitary Facility	3.	EA	$ _____	$ _____
56	625-00000	Construction Surveying	Lump	Sum	- - -	$ _____
57	626-00000	Mobilization	Lump	sum	- - -	$ _____
58	630-10005	Traffic Control	Lump	sum	- - -	$ _____
MCR		Minor Contract Revisions	- - -	- - -	- - -	$ 100,000.00
				Bid Amount:		**$** _____

Bid Amount:

_____ **dollars**

COLORADO
DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS
F171002 Monument Road Trail

The 2017 Standard Specifications for Road and Bridge Construction controls construction of this project. The following special provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications and Plans.

PROJECT SPECIAL PROVISIONS

COLORADO
DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS
F171002 Monument Road Trail
STANDARD SPECIAL PROVISIONS

Name	Date	No. of Pages
Revision of Section 206 – Removability Modulus	(October 12, 2017)	1
Revision of Section 208 – Erosion Control	(July 3, 2017)	1
Revision of Section 250 – Environmental, Health and Safety Management	(July 3, 2017)	4
Revision of Section 412 – Dowel Bars for Joints	(Dec. 12, 2018)	1
Revision of Sections 601, 701 and 711 – Structural Concrete	(Nov. 8, 2018)	3
Revision of Section 625 – Construction Surveying	(July 3, 2017)	1
Revision of Section 703 – Classification for Aggregate Base Course	(October 12, 2017)	1
Special Construction Requirements, Fire Protection Plan	(July 3, 2017)	2

REVISION OF SECTION 304
AGGREGATE BASE COURSE

Section 304 of the Standard Specifications is hereby revised for this project as follows:

Subsection 304.02 shall include the following:

Materials for the base course shall be Aggregate Base Course (Class 6) as shown in subsection 703.03

The aggregate base course (Class 6) must meet the gradation requirements and have a resistance value of at least 78 respectively when tested by the Hveem Stabilometer method.

1
REVISION OF SECTION 403
HOT MIX ASPHALT

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.02 shall include the following:

The design mix for hot mix asphalt shall conform to the following:

Table 403-1

Property	Test Method	Value For Grading
		Patching
Air Voids, percent at: N (design)	CPL 5115	3.5 – 4.5
Lab Compaction (Revolutions): N (design)	CPL 5115	75
Stability, minimum	CPL 5106	28
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45	60
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B	80
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B	205 (30)
Grade of Asphalt Cement, Top Layer		PG 64-22
Grade of Asphalt Cement, Layers below Top		PG 64-22
Voids in the Mineral Aggregate (VMA) % minimum	CP 48	See Table 403-2
Voids Filled with Asphalt (VFA), %	AI MS-2	65 - 80
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50	 0.6 - 1.2 0.8 – 1.6

Note: AI MS-2 = Asphalt Institute Manual Series 2

Note: Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.

Note: Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen.
Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen.
Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.

*Fractured face requirements for SF may be waived by RME depending on project conditions.

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REVISION OF SECTION 403
HOT MIX ASPHALT

All mix designs shall be run with a gyratory compaction angle of 1.25 degrees and properties must satisfy Table 403-1. Form 43 will establish construction targets for Asphalt Cement and all mix properties at Air Voids up to 1.0 percent below the mix design optimum. CDOT will establish the production asphalt cement and volumetric targets based on the Contractor's mix design and the relationships shown between the hot mix asphalt mixture volumetric properties and asphalt cement contents on the Form 429. CDOT may select a different AC content other than the one shown at optimum on the Contractor's mix design in order to establish the production targets as contained on the Form 43. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

Table 403-2

	Minimum Voids in the Mineral Aggregate (VMA)			
Nominal Maximum Size*, mm (inches)	***Design Air Voids **			
	3.5%	**4.0%**	**4.5%**	**5.0%**
37.5 (1½)	11.6	11.7	11.8	N/A
25.0 (1)	12.6	12.7	12.8	
19.0 (¾)	13.6	13.7	13.8	
12.5 (½)	14.6	14.7	14.8	
9.5 (⅜)	15.6	15.7	15.8	
4.75 (No. 4)	16.6	16.7	16.8	16.9
	* The Nominal Maximum Size is defined as one sieve larger than the first sieve to retain more than 10%. ** Interpolate specified VMA values for design air voids between those listed. *** Extrapolate specified VMA values for production air voids beyond those listed.			

The Contractor shall prepare a quality control plan outlining the steps taken to minimize segregation of HMA. This plan shall be submitted to the Engineer and approved prior to beginning the paving operations. When the Engineer determines that segregation is unacceptable, the paving shall stop and the cause of segregation shall be corrected before paving operations will be allowed to resume.

CDOT approved Warm Mix Asphalt (WMA) may be allowed on this project in accordance with CP 59. Unique requirements for WMA design, production and acceptance testing as documented during CDOT WMA approval shall be submitted and approved prior to creation of the Form 43 and before any WMA production on the project. Delays to the project due to WMA submittal and review will be considered within the Contractor's control and will be non-excusable.

Hot mix asphalt for patching shall conform to the gradation requirements for Hot Mix Asphalt (Grading 64-22).

Acceptance samples shall be taken at the location specified in either Method B or C of CP 41.

Subsection 403.03 shall include the following:

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REVISION OF SECTION 403
HOT MIX ASPHALT

The Contractor shall use an approved anti-stripping additive. The amount of additive used shall be a minimum of 0.5 percent by weight of the asphalt cement. The additive shall be added at the refinery or at the hot plant. If liquid anti-stripping additive is added at the plant, an approved in-line blender must be used. The blender shall be in the line from the storage tank to the drier drum or pugmill. The blender shall apply sufficient mixing action to thoroughly mix the asphalt cement and anti-stripping additive.

The Contractor shall construct the work such that all roadway pavement placed prior to the time paving operations end for the year, shall be completed to the full thickness required by the plans. The Contractor's Progress Schedule shall show the methods to be used to comply with this requirement.

Delete subsection 403.05 and replace with the following:

403.05 The accepted quantities of hot mix asphalt will be paid for in accordance with subsection 401.22, at the contract unit price per ton for the bituminous mixture.

Payment will be made under:

Pay Item	**Pay Unit**
Hot Mix Asphalt (Patching) (Grading SX)(75)(PG64-22)	Ton

Aggregate, asphalt recycling agent, asphalt cement, additives, hydrated lime, and all other work and materials necessary to complete each hot mix asphalt item will not be paid for separately, but shall be included in the unit price bid. When the pay item includes the PG binder grade, any change to the submitted mix design optimum asphalt cement content to establish production targets on the Form 43 will not be measured and paid for separately, but shall be included in the work. No additional compensation will be considered or paid for any additional asphalt cement, plant modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content.

Historically, typical asphalt cement increases reflected on the Form 43 are from 0.1 to 0.5 percent. However, the Contractor should anticipate the AC increases typical of his mixes. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411. Asphalt cement used in Hot Mix Asphalt (Patching) will not be measured and paid for separately, but shall be included in the work.

Excavation, preparation, and tack coat of areas to be patched will not be measured and paid for separately, but shall be included in the work.

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REVISION OF SECTION 503 MICROPILES

Section 503 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

503.10 The work consists of furnishing all necessary, supervision, labor, materials, and equipment to perform all work necessary to install and test the micropiles per the specifications described herein, and as shown on the design drawings. The micropile Contractor shall install a micropile system that will develop the load capacities indicated on the drawings. The micropile load capacities and measurements shall be verified by testing and as specified herein.

MATERIALS

503.11 Water. Water for mixing grout shall be potable, clean and free from substances which may be in any way deleterious to grout or steel. If water is not potable, it shall be tested in accordance with AASHTO T26 for acceptability.

503.12 Admixtures. Admixtures shall conform to the requirements of ASTM C494 (AASHTO M194). Admixtures which control bleed, improve flowability, reduce water content, and retard set may be used in the grout subject to the review and acceptance of the Engineer. Expansive admixtures shall only be added to the grout used for filling sealed encapsulations. Admixtures shall be compatible with the grout and mixed in accordance with the manufacturer's recommendations. Their use will only be permitted after appropriate field tests on fluid and set grout properties. Admixtures with chlorides shall not be permitted.

503.13 Cement. All cement shall be Portland cement conforming to ASTM C150 (AASHTO M85) Type V, or Type II modified, and shall be the product of one manufacturer. If the brand or type of cement is changed during a project, additional grout mix tests shall be conducted to ensure consistency of quality and performance in situ.

503.14 Fillers. Inert fillers such as sand may be used in the grout in special situations (e.g., presence of large voids in the ground, when grout take and travel are to be limited) as approved by the Engineer.

503.15 Bar Reinforcement. Reinforcing steel shall be deformed bars in accordance with ASTM A615 (AASHTO M31) Grade 75 or ASTM A722 (AASHTO M275) Grade 150. For cases of tensile loading, bar couplers, if required, shall develop the ultimate tensile stress of the bar, without any evidence of failure. For compressive loading, the coupler shall be compatible with efficient load transfer and overall reinforcement performance requirements.

503.16 Pipe/Casing. Shall meet the requirements of ASTM A53, Grade B.

503.17 Plates and Shapes. Structural steel plates and shapes for pile top attachments shall conform to ASTM A36 (AASHTO M183) or ASTM A 572 Grade 50 (AASHTO M183).

503.18 Centralizers. Centralizers shall be fabricated from plastic, steel, or material that is non-detrimental to the reinforcing steel. Wood shall not be used.

503.19 Corrosion Protection. Epoxy Coating: The thickness of coating applied electrostatically to the reinforcing steel shall be 7-12 mils. Epoxy coating shall be in accordance with ASTM A775/AASHTO M282 or ASTM A936. Bend test requirements shall be waived. Epoxy coating is not required on bearing plates and nuts encased in the pile concrete footing.

REVISION OF SECTION 503 MICROPILES

EXECUTION

503.20 Qualifications of the Contractor. The micropile Contractor shall be fully experienced in all aspects of micropile installation and shall furnish all necessary equipment, materials, skilled labor, and supervision to carry out the contract. The micropile Contractor shall not sublet the whole or any part of the contract without the express permission in writing of the Owner.

503.21 Control of Runoff from Installation. The micropile Contractor shall control and properly dispose of drill flush and construction related waste, including excess grout, in accordance with the standard specifications and site permits. Provide positive control and discharge of all surface water that will affect construction of the micropile installation. Provide erosion and sediment control measures to prevent discharge into Red Canyon or other drainage areas in accordance with project or site specific construction stormwater plans and permits.

503.22 Allowable Tolerances

(a) Centerline of piling shall not be more than 3 in. from indicated plan location.

(b) Pile-hole alignment shall be within 2% of design alignment.

(c) Plate elevation shall be within +3 in. to –2 in. of the design vertical elevation.

503.23 Ground Conditions. If, during installation of a pile, an obstruction is encountered that prevents the practical advancement of the hole, the hole shall be abandoned and filled with grout. A new pile shall be drilled at a location to be determined by the Engineer, although it must be acknowledged that in certain structures, relocation options may be severely limited, and further attempts at the original location with different methods may be required.

If during drilling, obstructions are encountered of a frequency, composition and location that were not portrayed, inferable, expected and/or notified at the time of preparation of the bid, the additional costs utilized in trying to overcome such obstructions shall be paid for.

503.24 Construction Submittals.

(a) The Contractor shall submit a detailed description of the construction procedures proposed for use to the Engineer for review.

(b) The Contractor shall submit certified mill test reports, properly marked, for the reinforcing steel, as the materials are delivered, to the Engineer for record purposes. The ultimate strength, yield strength, elongation, and composition shall be included. For steel pipe used as permanent casing, or core steel, the Contractor shall submit a minimum of two representative coupon tests or mill certifications (if available) on each load delivered to the project.

(c) The Contractor shall submit the grout mix designs, including details of all materials to be incorporated, and the procedure for mixing and placing the grout to the Engineer for review.

REVISION OF SECTION
503 MICROPILES

(d) The Contractor shall submit detailed plans for the method proposed for testing the micropiles to the Engineer for review and acceptance prior to beginning load tests. This shall include all necessary drawings and details to clearly describe the test method and equipment proposed.

(e) The Contractor shall submit to the Engineer calibration reports for each test jack, pressure gauge, and master pressure gauge to be used. The calibration tests shall have been performed by an independent testing laboratory and tests shall have been performed within one year of the date submitted. Testing shall not commence until the Engineer has approved the jack, pressure gauge and master pressure gauge calculations.

503.25 Installation Records. The following records will be prepared for the Engineer by the micropile Contractor. The records shall be completed within 24 hours after each pile installation is completed. The records shall include the following minimum information:

(a) Pile drilling duration and observations (e.g., flush return)

(b) Information on soil and rock encountered, including description of strata, water, etc.

(c) Approximate final tip elevation

(d) Cut-off elevation

(e) Design Loads

(f) Description of unusual installation behavior, conditions

(g) Any deviations from the intended parameters

(h) Grout pressures attained, where applicable

(i) Grout quantities pumped

(j) Pile materials and dimensions

(k) Micropile test records, analysis, and details

503.26 Utility Clearance. The micropile Contractor shall contact the utility notification center (One Call) and obtain the required documentation prior to the commencement of any drilling.

503.27 Preconstruction Meeting. A pre-construction meeting will be scheduled by the micropile Contractor prior to the start of micropile construction. Required attendees are the Engineer, micropile Contractor and the geotechnical inspector (as applicable). The bridge Contractor, excavation Contractor and Owner shall also be notified in advance of the Pre-Construction Meeting.

REVISION OF SECTION 503 MICROPILES

503.28 Installation Method. The micropile installation technique shall be such that it is consistent with the geotechnical, logistical, environmental, and load carrying conditions of the project. The micropile Contractor shall select the drilling method and the grouting procedures used for the installation of the micropiles, subject to the approval of the Engineer.

The drilling equipment and methods shall be suitable for drilling through the conditions to be encountered, with minimal disturbance to these conditions or any overlying or adjacent structure or service. The borehole must be open to the defined nominal diameter, full length, prior to placing grout and reinforcement.

All installation techniques shall be determined and scheduled such that there will be no interconnection or damage to piles in which grout has not achieved final set.

503.29 Installation of Reinforcing Bar. Centralizers shall be provided. Centralizers shall permit the free flow of grout without misalignment of the reinforcement.

The central reinforcement steel with centralizers shall be lowered into the stabilized drill holes to the desired depth without difficulty. Partially inserted reinforcing bars shall not be driven or forced into the hole such that there will be no interconnection or damage to piles in which the grout has not achieved final set.

The Contractor shall check pile top elevations and adjust all installed micropile plates to the planned elevations.

503.30. Grouting. The Contractor shall provide systems and equipment to measure the grout quality, quantity, and pumping pressure during the grouting operations. This information is to be measured and recorded by the Contractor.

After drilling, the hole shall be flushed with water and/or air to remove drill cuttings and/or other loose debris. The Contractor shall provide a stable, homogenous neat cement grout or a sand cement grout with a minimum 28-day unconfined compressive strength of 3000 psi. The grout shall not contain lumps or any other evidence of poor or incomplete mixing. Admixtures, if used, shall be mixed in accordance with manufacturer’s recommendations. The pump shall be equipped with a pressure gauge to monitor grout pressures. The pressure gauge shall be capable of measuring pressures of at least 150 psi or twice the actual grout pressures used by the Contractor, whichever is greater. The grouting equipment shall be sized to enable the grout to be pumped in one continuous operation. The grout should be kept in constant agitation prior to pumping.

The grout shall be injected from the lowest point of the drill hole (by tremie methods) until clean, pure grout flows from the top of the micropile. The tremie grout may be pumped through grout tubes, hollow stem augers, or drill rods. Subsequent to tremie grouting, all grouting operations associated with, for example, extraction of drill casing and pressure grouting, must ensure complete continuity of the grout column. The use of compressed air to directly pressurize the fluid grout is not permissible. The grout pressures and grout takes shall be controlled to prevent excessive heave in cohesive soils or fracturing of soil or rock formations. The entire pile shall be grouted to the design cut-off level.

Upon completion of grouting of piles, the grout tube may remain in the hole, but it shall be filled with grout.

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REVISION OF SECTION 503 MICROPILES

Grout within the micropiles shall be allowed to attain the minimum design strength prior to being loaded.

If the Contractor uses a post-grouting system, all relevant details including grouting pressure, volume, location and mix design, shall be submitted as part of Section 3.1.

During production, micropile grout shall be regularly tested for compressive strength. Compressive strength shall be determined in accordance with AASHTO T106 at a frequency of no less than one set of three samples from each grout plant each day of operation. The compressive strength shall be the average of the three samples tested, and shall meet or exceed the strength required in the plans. Provide grout compressive strength test results to the Engineer within 24 hours of testing.

503.31 Pile Load Tests. The Contractor shall proof test at least one micropile per abutment. The piles to be tested will be selected by the Engineer. At the Contractor's suggestion, but with the Engineer's concurrence, tension tests may be performed based on maximum DL in compression or tension for friction piles with sufficient structural tension capacity.

The test sequence shall be as follows:

STEP	LOADING	LOAD	HOLD TIME (MINUTES)
1	Apply AL		2.5
2	Load Cycle	0.15 DL	2.5
		0.30 DL	2.5
		0.45 DL	2.5
		0.60 DL	2.5
		0.75 DL	2.5
		0.90 DL	2.5
		1.00 DL	2.5
		1.15 DL	2.5
		1.30 DL	Per Step 3
3	Hold load for at least 10 minutes while recording movement at specified times. If the total movement measured during the load hold exceeds the specified maximum value below then the load hold should be extended to a total of 60 minutes.		
4		1.45 DL	2.5
		1.60 DL	2.5
5	Unload Cycle	1.30 DL	4
		1.00 DL	4
		0.75 DL	4
		0.50 DL	4
		0.25 DL	4
		AL	4
6	Remove the load and compare results to acceptance criteria.		

Notes: AL = Alignment Load, DL = Design Load

REVISION OF SECTION 503 MICROPILES

The acceptance criteria for micropile proof load tests are:

(a) The pile shall sustain the compression and tension design loads (1.0 DL) with no more than 1/2 in. total vertical movement at the top of the pile as measured relative to the pile prior to the start of testing. If an Alignment Load is used, then the allowable movement will be reduced by multiplying by a factor of (DL-AL)/DL. (This conservatively accounts for the movement in reaching AL.)

(b) Test piles shall have a creep rate at the end of the 133% DL increment which is not greater than 0.040 in./log cycle time from 1 to 10 minutes or 0.080 in./log cycle time from 6 to 60 minutes and has a linear or decreasing creep rate.

(c) Failure does not occur at the 1.60 DL maximum compression and tension load increment. Failure is defined as load at which attempts to further increase the test load simply result in continued pile movement.

If a micropile that is proof tested fails to meet the acceptance criteria, the Contractor shall be directed to proof test another micropile in the vicinity. For failed piles and further construction of other piles, the Contractor shall modify the design, the construction procedure, or both. These modifications include, but are not limited to, installing replacement micropiles, incorporating piles of reduced load capacities, modifying the installation methods, increasing the bond length, or changing the micropile type. Any modification which requires changes to the structure shall have prior review and acceptance of the Engineer. The cause for any modifications of design or construction procedures shall be decided in order to appropriately determine any additional cost implications.

MEASUREMENT AND PAYMENT

503.32 Payment will be made under:

Pay Item	**Pay Unit**
Micropile (8 inch)	Lineal Foot
Proof Testing	Incidental to work

REVISION OF SECTION 506
SANDSTONE BOULDERS

Section 506 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 506.01 shall include the following:

This work includes installation of sandstone seating boulders in the area of the trailhead improvements shown on the plans. Each feature contains a variable number of boulders from off-site sources. Work includes the selection of suitable boulders, transport, and placement of approved boulders into distinct features as shown on the plans, including:

(1) Tailgate area
(2) Seating around shade shelters

Construction shall be limited to areas as shown on the plans or as agreed to by the Engineer.

MATERIALS

Subsection 506.02 shall include the following:

Boulders for use in the trailhead improvements shall be angular or subrounded on the sides, with a flat top, and 24 inches to 36 inches in diameter (measured on the A-axis (minimum dimension), and a height of 16 inches (after installation). Exposed surface of installed boulders shall not show machine-caused scarring or breakage. Boulders are to be tan/red sandstone. Examples of this type of boulder can be seen at "The Rock Shop", 800 S 15th Street, Grand Junction – Burnt Autumn and Redstone Red boulders.

Contractor shall submit sample to Engineer prior to acquisition.

CONSTRUCTION REQUIREMENTS

Subsection 506.03 shall include the following:

Boulders are to be placed where indicated on the drawings or as approved by the Engineer. The nature of the selected rock will require excavation of a pit 1/3 to 1/2 the height of the rock in the position the rock is to be placed. Backfill following placement, and compact.

METHOD OF MEASUREMENT

Subsection 506.04 shall include the following:

Sandstone Boulders will be measured by the plan linear feet of each area installed in the field, including and all labor, materials equipment, and transportation of materials required to complete the work.

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REVISION OF SECTION 506
SANDSTONE BOULDERS

BASIS OF PAYMENT

Subsection 506.05 shall include the following:

The accepted quantities of Sandstone Boulders will be paid for at the contract unit price for each of the items listed below that appear in the bid schedule.

Pay Item	**Pay Unit**
Stone Boulders for seating at trailhead	Linear Foot

Work shall include all boulder transport, handling, and placement.

REVISION OF SECTION 509
PREFABRICATED STRUCTURAL STEEL BRIDGE

Section 509 of the Standard Specifications is hereby revised to include the following:

Subsection 509.01 shall include the following:

This work consists of fabricating the Structural Steel Bridge that includes the steel truss structure (Weathering Steel), Structural Fasteners, Anchor Bolts, Bearing Plates, furnish and installation of the Structural Steel Bridge in accordance with these specifications, and in conformity to the plans.

Add subsection 509.051 immediately following subsection 509.05 under the Materials section.

509.051 Structural Steel Bridge Materials

Bridges specified as "weathering" shall be fabricated from rolled beam or wide flange shapes designated ASTM A709 Grade 50W. Secondary weathering members may be tubular shapes carrying the ASTM A847 (50 ksi) designation; all domestically produced and provided by an AISC recognized supplier.

All bolted connections shall utilize ASTM A-325 High Strength Bolts. All bolts for weathering steel components shall be ASTM A325 Type 3. Galvanized bolts shall be A325 Type 1, hot dip galvanized in accordance with ASTM A-153 specifications.

The anchor bolts supplied with all bridge systems shall be ASTM A449 Full Thread Studs Hot Dip Galvanized as per ASTM A153. Each anchor bolt shall be provided with one A563 Galvanized Heavy Hex Nut and one F436 Galvanized Flat Washer.

The bridge must be furnished with edge deck supports and a stay-in-place galvanized steel form deck suitable for pouring a reinforced concrete slab. The form deck shall be designed to carry the dead load of the wet concrete, weight of the form decking, plus a construction load of 20 PSF uniform load or a 145 pound concentrated load on a 1'-0" wide section of deck. Edge support deflections are limited to 1/180 of the span or ¾", whichever is less.

The form deck shall be either smooth or composite. Composite decking shall not be used as reinforcing when designing for vehicular wheel loads. The form deck material shall be supplied in accordance with ASTM A653 and galvanized to a minimum G90 coating weight. The deck slab shall be constructed using normal weight concrete (145 pcf) with a minimum 28-day strength of 4,500 psi.

The bridge shall utilize the following bridge bearings: Laminated Elastomeric Bearing Pads beneath Load Plates. Laminated elastomeric bearing pads shall be custom molded from neoprene or natural rubber. Laminated pads shall be reinforced with internal steel plates and vulcanize-bonded to alternating layers of the elastomer during the molding process.

The bridge style in section shall be designed as a Pratt half through-truss (a.k.a. pony truss) as shown in the contract drawings. The elevation of each truss shall have a parallel top & bottom chord, one diagonal member in each truss panel, and plumb end vertical members. Interior vertical members shall be perpendicular to the chord faces.

The bridge shall be designed utilizing an H-Section configuration where the floor beams are placed up inside the trusses and attached to the truss verticals. The top of the top chord shall not be less than 48 inches above the deck (measured from the high point of the riding surface).

REVISION OF SECTION 509
PREFABRICATED STRUCTURAL STEEL BRIDGE

Manufacturers:

1. CONTECH Engineered Solutions, LLC
   9025 Centre Pointe Drive
   West Chester, OH 45069
2. Big-R Bridge, Inc.
   P.O. Box 1290
   Greeley, Colorado 80632
3. US Bridge
   5765 Lehigh Circle
   Nashport, OH 43830
4. Or approved equal

All other prospective manufacturers, not pre-approved by the Owner are required to submit a signed application with the following documentation supporting their ability to meet the above referenced qualifications no less than seven (7) business days prior to bid opening:

- Copy of current AISC certifications as provided below.
- Copy of Quality Assurance Programs.
- Splicing and erection procedures.
- Approved welding process procedures.
- The name and qualifications of the Manufacturer's representative designated to represent the Manufacturer for all pre-bid activities.
- The name and qualifications of the Technical Assistant that will conduct on-site assistance during field installation of the Bridge until secure and stable.
- If any part of the Bridge is to be galvanized, a copy of the written warranty issued by the galvanizer that warrants against corrosion of the superstructure (other than bridge flooring) for a period of not less than 35 years.
- List ten (10) permanent steel bridges similar in size and configuration to the Bridge, which the applicant has manufactured in the preceding five (5) years, together with drawings, calculations, project details and contact information.
- Complete list of plant, equipment, employees and others to be used by the applicant to design and manufacture the Bridge including copies of all Professional Engineering licenses for designers and welding certificates for welders.
- **AISC Certification:** The Manufacturer shall be an approved steel fabricator under the AISC Quality Management System Certification Program as an Intermediate Steel Bridge Fabricator including Fracture Critical and Sophisticated Paint System endorsements, for a period of at least five (5) continuous years immediately preceding the bid opening.

REVISION OF SECTION 509
PREFABRICATED STRUCTURAL STEEL BRIDGE

The Structural Steel Bridge shall be delivered to the site in pre-assembled sections ready for installation with no field welding of the major structure required.

Deliver anchor bolts, sleeves and anchorage devices which are to be embedded in concrete to the project site in time for installation under appropriate trades. Furnish setting drawings, templates and installation instructions as required.

Subsection 509.14(a) shall include the following:

A current copy of the AISC Program Manual describing the Bridge Manufacturer's operations and practices shall be maintained by the quality Control Manager for review by designated quality control inspectors. Copies of the AISC Certification Manual shall be made available to customers and their representatives, upon requests.

Subsection 509.15 shall include the following:

The engineering design of the Bridge shall be performed by, or under the direct supervision of a Licensed Professional Engineer in the State in which the Bridge will be erected. The design shall be completed in accordance with recognized engineering principles and design practices and with a standard of care commensurate with the Manufacturer's role in the project.

The Bridge shall be designed in accordance with AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges and AASHTO LRFD Bridge Design Specifications. The bridge structure design shall consider its own dead load (superstructure and original decking), as well as the additional loads listed below.

The pedestrian live load shall be specified as 90 pounds per square foot of bridge walkway area. The pedestrian live load shall be applied to those areas of the walkway so as to produce maximum factored load in the member being designed.

The bridge superstructure, floor system and decking shall be designed for each of the following point load conditions:

A four wheeled vehicle with the appropriate wheelbase, tire track and tire print area shall be applied. The vehicle load applied shall be an H-5 vehicle load with an 80% rear wheel distribution. A vehicle impact allowance is not required.

The bridge(s) shall be designed for a minimum wind load of 35 pounds per square foot on the full vertical projected area of the bridge as if enclosed. Wind load shall be considered in accordance with AASHTO Signs and Luminaires, but in no case will the wind load be taken as less than 35 pounds per square foot. The wind load shall be applied horizontally at right angles to the longitudinal axis of the structure.

The wind loading shall be considered both in the design of the lateral load bracing system and in the design of the truss vertical members, floor beams and their connections.

The effect of forces tending to overturn structures shall be calculated assuming that the wind direction is at right angles to the longitudinal axis of the structure. In addition, an upward force shall be applied at the windward quarter point of the transverse superstructure width. This force shall be 20 pounds per square foot of deck.

REVISION OF SECTION 509
PREFABRICATED STRUCTURAL STEEL BRIDGE

The top chord, truss verticals, and floor beams shall be designed for lateral wind loads (per section 3.1.4.1) and for any loads required to provide top chord stability as outlined in Section 3.3.6; however, in no case shall the load be less than 50 pounds per lineal foot or a 200-pound point load, whichever produces greater stresses, applied in any direction at any point along the top chord.

Calculation of the Bridge's dead and live load deflection is required. Pedestrian live load deflection of the primary members should be limited to the span-to-deflection ratio of L/360 unless otherwise specified. Dead load deflection shall be accommodated by forming camber into the unloaded geometry of the members. Profile grade curvature shall also be taken into account when determining the fabricated (or induced) camber of the members. Deflection limits due to occasional vehicular traffic shall not be considered.

Vibration of the structure shall not cause discomfort or concern to users.

The concrete deck slab shall be designed by the bridge manufacturer in accordance with the Design Specification.

The Manufacturer shall design the prefabricated bridge and prepare Drawings in accordance with the following minimum requirements. Engineering Drawings and Calculations, sealed by a Registered Professional Engineer in the state where the Bridge is to be erected, will be submitted to the Owner for Approval within (4) weeks of receipt of the Purchase Order, contingent upon receiving all scope information at the time of purchase order; and after receiving answers to requests for information (RFI). Shop Drawings will be supplied to the Owner.

Unless otherwise requested, an electronic version of the Shop Drawings will be submitted in portable document format (.PDF) via email to the Owner or the Owner's designated contact. After final approval by the Owner, the Manufacturer shall provide the Owner with two 24" x 36" paper copies of the Engineering Drawings. (2) sets of the As-Fabricated Drawings (11" x 17") shall be transmitted to the Contractor at the time of Bridge Delivery.

Subsection 509.16 shall include the following:

For all welded assemblies the inspector shall be a Certified Weld Inspector that is qualified under the AWS QC-1 program. Each inspection shall include as a minimum requirement the following: review of Shop Drawings, weld procedures, welder qualifications and weld testing reports, visual inspection of welds and verification of overall dimensions and geometry of the Bridge. Non-destructive testing of welds shall be performed both prior to and after galvanizing. All welds shall be visually inspected 100%. All welds shall be magnetic particle tested for a minimum length or 12". Welds over 12" long shall be magnetic particle tested at least 12" for every 10" of length. A report of these inspections shall be provided.

Subsection 509.19(l) shall include the following:

When the collection of water inside a structural tube is a possibility, either during construction or during service, the tube shall be provided with a drain hole at its lowest point to let water out.

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REVISION OF SECTION 509
PREFABRICATED STRUCTURAL STEEL BRIDGE

Subsection 509.20(k) shall include the following:

All bolt hole fabrication for high strength, slip critical bolted connections shall conform to the workmanship requirements of the Research Council on Structural Connections (RCSC) Specifications for Structural Joint Using A325 or A490 Bolts. Computer Numerically Controlled (CNC) drilling equipment shall be utilized as a manufacturing method as it allows for highly accurate hole location along with precise and rapid shop operations. Exceptions to CNC processing should be submitted in writing to the owner for approval, prior to commencing fabrication.

Subsection 509.20 shall include the following:

(l) *Welding Tubes.* Welding of tubular connections is covered in the AWS D1.1 Welding Code. All welding shall utilize E70 or E80 series electrodes. The weld process used shall be Flux Core Arc Welding (FCAW) or Shielded Manual Arc Welding (SMAW) per ANSI/AASHTO/AWS D1.5 “Bridge Welding Code.” Welding operators shall be properly accredited and experienced. Qualifications of welders shall be made available upon request.

Special attention shall be given to developing sufficient weld throats on tubular members. Fillet weld details shall be in accordance with AWS D1.1, Section 3.9.2. Unless determined otherwise by testing, the loss factor “Z” for heel welds shall be in accordance with AWS Table 2.9. Fillet welds which run onto the radius of a tube shall be built up to obtain the full throat thickness. The maximum root openings of fillet welds shall not exceed 3/16” in conformance with AWS D1.1, Section 5.22. Weld size or effective throat dimensions shall be increased in accordance with this same section when applicable (i.e. fit-up gaps> 1/16”).

(m) *Plate & Shape Cutting:* Plate and shape cutting shall conform to methods specified in AASHTO/AWS D1.5 Bridge Welding Code Section 3 Workmanship. Computer Numerically Controlled (CNC) cutting equipment shall be utilized as a manufacturing method as it allows for highly accurate dimensional cutting along with precise and rapid shop operations. Exceptions to CNC processing should be submitted in writing to the owner for approval, prior to commencing fabrication.

Subsection 509.24(a) shall include the following:

All Blast Cleaning shall be done in a dedicated OSHA approved indoor facility. Blast operations shall use Best Management Practices and exercise environmentally friendly blast media recovery systems.

To aid in providing a uniformly “weathered” appearance, all exposed surfaces of steel shall be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning, SSPC SP7 latest edition.

Exposed surfaces of steel shall be defined as those surfaces seen from the deck and from outside of the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below deck and bottom face of the bottom chord need not be blasted.

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REVISION OF SECTION 509
PREFABRICATED STRUCTURAL STEEL BRIDGE

Subsection 509.27 shall include the following:

Delivery of the Bridge will be within an agreed period of time after approval of Engineering Drawings (12 weeks). Bearing plates, anchor bolts and expansion joints shall be furnished in advance of the Bridge for incorporation into the abutment construction, upon receipt of a timely request by the Contractor. Delivery of the bridge shall be coordinated between the Manufacturer or their Supplier and the Contractor. The Supplier shall communicate this information to the Manufacturer depending on the agreement and subsequent responsibilities.

The Manufacturer will advise the Owner/Contractor of the attachment points and other necessary information required to install the bridge. The method and sequence of erection shall be the responsibility of the Contractor unless otherwise included in the agreement. Unloading, stabilization, splicing, bolting, and proper rigging and lifting are the responsibility of the Contractor.

The successful bidder through the Manufacturer and/or Supplier shall provide a qualified Technical Assistant at the jobsite while the primary structure components are installed. The Contractor shall notify the Manufacturer or their representative at least two weeks in advance of the planned installation. The Technical Assistant shall have at least five (5) years of experience in the installation of similar bridges.

Subsection 509.28(e) shall include the following:

Chord splices shall have loose splice plates that are inserted into the tubular chord members. The splice plates shall have a splice nut retention device consisting of a capture plate(s) with hexagonal holes held in place by either an angle on each side of the capture plate(s) or C channel(s). Tack welding of splice nuts to splice plates is not acceptable unless an approved Weld Procedure Specification (WPS) can be provided. The sections are then bolted together by bolting through the wall of the tube, nut capture assembly and nut.

Subsection 509.32 shall include the following:

Prefabricated Structural Steel Bridge will be measured and paid for by Lump Sum (LS), installed complete. Work shall include all steel, hardware, anchor bolts, bearing plates, washers, nuts, temporary shoring and other incidentals to the erection of the bridge.

Subsection 509.33 shall include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Prefabricated Structural Steel Bridge	Lump Sum

REVISION OF SECTION 608
DECOMPOSED GRANITE SURFACE COURSE

Section 608 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 608.01 shall include the following:

This work includes installation of decomposed granite surface course in the area of the trailhead improvements shown on the plans.

Construction shall be limited to areas as shown on the plans or as agreed to by the Engineer.

MATERIALS

Subsection 608.02 shall include the following:

Surface course shall meet the requirements of subsection 703.05 – Aggregate for Cover Coat Material, Type II. Aggregate shall be gray/tan in color. Examples of this type of aggregate can be seen at "The Rock Shop", 800 S 15th Street, Grand Junction – ¼ inch Colorado River Rock and ¼ inch Decomposed Red.

Contractor shall submit sample to Engineer prior to acquisition.

CONSTRUCTION REQUIREMENTS

Subsection 608.03 shall include the following:

Decomposed granite is to be placed where indicated on the drawings or as approved by the Engineer.

METHOD OF MEASUREMENT

Subsection 608.05 shall include the following:

Decomposed granite surface course will be measured by the square yard of finished surface installed in the field, including and all labor, materials equipment, and transportation of materials required to complete the work.

Subsection 608.06 shall include the following:

The accepted quantities of Decomposed Granite will be paid for at the contract unit price for each of the items listed below that appear in the bid schedule.

Pay Item	**Pay Unit**
Decomposed Granite Surface Course	Square Yard

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Department's estimate for force account items included in the Contract. The estimated amounts 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 subsection 109.04. 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.	$ 100,000.00

TRAFFIC CONTROL PLAN - GENERAL

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.10(a).

The components of the TCP for this project are included in the following:

(1) Subsection 104.04 and Section 630 of the specifications.
(2) Standard Plan S-630-1, Traffic Controls for Highway Construction and Standard Plan S-630-2.
(3) Schedule of Construction Traffic Control Devices.
(4) Signing Plans.
(5) Construction phasing details.
(6) Detour Details.
(7) Other.

Unless otherwise approved by the Engineer, the Contractor’s equipment shall follow normal and legal traffic movements. The Contractor’s ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible. Traffic control devices shall be removed by picking up the devices in a reverse sequence to that used for installation. This may require moving backwards through the work zone. When located behind barrier or at other locations shown on approved traffic control plans, equipment may operate in a direction opposite to adjacent traffic.

CDOT may have entered into operating agreements with one or more law enforcement organizations for cooperative activities. Under such agreements, at the sole discretion of CDOT, law enforcement personnel may enter the work zone for enforcement purposes and may participate in the Contractor’s traffic control activities. The responsibility under the Contract for all traffic control resides with the Contractor and any such participation by law enforcement personnel in Contractor traffic control activities will be referenced in either the Special Provisions or General Notes of the plans depending on whether the Contractor is to hire local law enforcement or if CDOT is contracting with Colorado State Patrol for uniformed traffic control. Nothing in this Contract is intended to create an entitlement, on the part of the Contractor, to the services or participation of the law enforcement organization.

Special Traffic Control Plan requirements for this project are as follows:

During the construction of this project, traffic shall use the present traveled roadway unless identified on the plans or approved by the Engineer.

The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless approved by the Engineer.

During the resurfacing work, only one lane may be closed to traffic at any time unless approved by the Engineer. Traffic shall not be delayed for more than 3 minutes or as directed by the Engineer.

At least one week prior to starting construction, the Contractor shall notify the City Engineer of the date the Contractor intends to start construction.

All costs incidental to the foregoing requirements shall be included in the original contract prices for the project.

UTILITIES

Known utilities within the limits of this project are:
Ute Water
Xcel Energy – Power & Gas
Redlands Water & Power
City of Grand Junction Sanitary Sewer

The work described in these plans and specifications requires coordination between the Contractor and the utility companies in accordance with subsection 105.11 in conducting their respective operations as necessary to complete the utility work with minimum delay to the project.

The work listed below shall be performed by the Contractor in accordance with the plans and specifications, and as directed by the Engineer. The Contractor shall keep each utility company advised of any work being done to its facility, so that the utility company can coordinate its inspections for final acceptance of the work with the Engineer.

FOR:
Xcel Energy – Tillmon McSchooler – 970-244-2695
Redlands Water & Power – Kevin Jones – 970-243-2173

The work listed below will be performed by the utility owners or their agents:

- Overhead power line – Xcel Energy will temporarily de-energize the overhead electric lines in the vicinity of the proposed pedestrian bridge to allow for the drilling of the micropiles adjacent to the wires. The Contractor shall coordinate and schedule this work with Xcel Energy. The Contractor shall comply with High Voltage Electric Transmission Line Clearance Requirements published by Xcel refer to Appendix B. An on-site patrolman may be required by Xcel, if required this shall be paid for by the Contractor.
- Redlands Water & Power – The proposed trail crosses the existing Redlands Water & Power canal siphon. The Contractor shall only work within the trail easement crossing this structure and coordinate with Redlands Water & Power if any issues arise during construction.

GENERAL:

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavation or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the day of notification, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at (8-1-1) or 1-800-922-1987 to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective company. Utility service laterals shall also be located prior to beginning excavating or grading.

The location of utility facilities as shown on the plan and profile sheets, and herein described, were obtained from the best available information.

All costs incidental to the foregoing requirements will not be paid for separately but shall be included in the work.