CITY OF FRUITA
PROJECT SPECIAL PROVISIONS
KOKOPELLI RIVERFRONT TRAIL, PHASE II
CDOT Region 3 Project Reference Number: TAP M505-007
Project Code: 21397

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. When specifications or special provisions contain both English units and SI units, the English units apply and are the specification requirement.

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DOI-BLM-CO-S080-2017-0026-EA
ACOE PCN

CITY OF FRUITA

September 20, 2017

PROJECT SPECIAL PROVISIONS
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STANDARD SPECIAL PROVISIONS

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SPECIAL CONDITIONS

1. STANDARD SPECIFICATIONS AND DETAILS - All work shall be done in accordance with the most recent edition of the Colorado Department of Transportation "Standard Specifications for Road and Bridge Construction", Latest Edition.

All contractors bidding on this project are responsible for acquainting themselves thoroughly with all applicable specifications prior to submitting their bid. The successful bidder is responsible for thoroughly acquainting all of the personnel he intends to use on this project with all applicable specifications prior to the commencement of any construction.

2. PROJECT DESCRIPTION – The project consist of constructing approximately 2 miles of concrete riverfront trail. Trail construction includes the addition of retaining walls and a 52 foot single span pedestrian bridge.

3. PROJECT ENGINEER - The Engineer for the Project is Mr. Sam Atkins, PE, who can be reached at (970) 858-8377. All project notices, letters, submittals, and other communications directed to the Engineer shall be addressed and mailed or delivered to:

Sam Atkins
City of Fruita Engineer
325 East Aspen Ave.
Fruita, CO 81521

4. JOBSITE SAFETY - The Contractor shall conduct his operations in a safe manner, and is responsible for all jobsite safety measures. All OSHA regulations and all other pertinent regulations pertaining to the safe operation of construction equipment, workers, methods, and the site shall be strictly adhered to by the Contractor.

5. PERMITS – It is the responsibility of the contractor to abide by all applicable Federal, State and Local permits and codes. The contractor shall thoroughly acquaint himself with the details of each before beginning work. The following permits have been secured on behalf of the contractor during the design period and are considered part of this contract:

a. **DOI-BLM-CO-S080-2017-0026-EA (See Table 3)**
b. **U.S. Army Corps of Engineers 404 Permit**

The contractor shall address all applicable requirements of the EA and 404 permit in the SWMP. This includes the Committed Design Features (Table 3 in the EA) but is not limited to, air quality, protection of biological resources, protection of cultural resources, land use, noise pollution, treatment of noxious weeds, protection of existing undisturbed soils, waste management and protection of water resources.

All other permits required for the Project shall be obtained by the Contractor as set forth in the Standard Specifications and as listed in the following. The work and costs associated with Contractor obtained permits will not be paid for separately but shall be included in the total bid price of the Project.

a. **CDPHE Stormwater discharges associated w/ construction activities – COR030000**

6. UTILITY STRUCTURE ACCESS - The Contractor is responsible for locating all water valves, manholes, monument boxes, traffic pull boxes, etc., prior to construction. No sanitary sewer manholes or water valves may be left inaccessible at any time during the construction.

All liabilities for damage arising from any public or private utility substructures left inaccessible, or rendered inoperable during construction, will be the Contractor’s responsibility.

7. SCHEDULING/SEQUENCING REQUIREMENTS – The Contractor shall phase all work to minimize impacts to traffic and neighboring properties. The contractor shall complete all work which affects any mode of traffic in any given project area noted above before moving into the next project area. The contractor shall work diligently from the time an existing area is first disturbed to completion before moving to the next.

COMMENCEMENT AND COMPLETION OF WORK

This Project is partially funded by FHWA. Award of the contract for this project will occur only upon final FHWA funding authorization and CDOT concurrence of the apparent qualified low bidder. Anticipated date of authorization and concurrence is ?.

The Contractor shall commence work under the Contract on or before the 10th day following Contract execution, unless such time for beginning the work is changed by the Project Manager in the "Notice to Proceed". The Contractor shall substantially complete all work in 120 working days, in accordance with the "Notice to Proceed".

Section 108 of the Standard Specifications is hereby revised for this project as follows:

Subsection 108.03 shall include the following:

The Contractor's progress schedule may be a Bar Chart Schedule.

Salient features to be shown on the Contractor's Bar Chart Progress Schedule are:

1) Notice to Proceed
2) Mobilization
3) Submittals
4) Removals
5) Earthwork
6) Riprap
7) Retaining Walls
8) Micropiles
9) Abutment Forming and Placement Schedule
10) Pre-Erection Conference
11) Bridge Delivery and Placement
12) Trail Construction
13) Parking Lot Construction
14) Safety Rail
15) Signage and Striping
16) Site Restoration and Cleaning
17) Punch List

DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT GOAL

This is a federally-assisted construction project. As described in the CDOT DBE Standard Special Provision, the Bidder shall make good faith efforts to meet the following contract goal:

2.0 Percent DBE participation.

ON THE JOB TRAINING CONTRACT GOAL

The Department has determined that On the Job Training shall be provided to trainees with the goal of developing full journey workers in the types of trade or classification involved. The contract goal for On the Job Trainees working in an approved training plan in this Contract has been established as follows:

Minimum number of total On the Job Training required is 640 hours

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REVISION OF SECTION 107
SAFETY CRITICAL WORK

Add subsection 107.061 immediately following subsection 107.06 as follows:

107.061 Performance of Safety Critical Work. The following work elements are considered safety critical work for this project:

(1) Overhead girder erection
(2) Overhead structure construction
(3) Temporary works: falsework, shoring that exceeds 5 feet in height, cofferdams, and temporary bridges
(4) Work requiring the use of cranes or other heavy lifting equipment to set a bridge unit. Also when construction materials are being lifted that may fall onto active traffic lanes.
(5) Excavation and embankment adjacent to the roadway, especially if it requires shoring
(6) Work operations such as pile driving and jack hammering which may create vibration and cause debris to fall into traffic.

The Contractor shall submit, for record purposes only, an initial detailed construction plan that addresses safe construction of each of the safety critical elements. When the specifications already require an erection plan, a bridge removal plan, or a removal of portion of bridge plan, it shall be included as a part of this plan. The detailed construction plan shall be submitted two weeks prior to the safety critical element conference described below. **The detailed construction plan must be sealed by an Engineer Licensed in the State of Colorado.** The construction plan shall be stamped “Approved for Construction” and signed by the Contractor. The construction plan will not be approved by the Engineer.

The Construction Plan shall include the following:

(1) Safety Critical Element for which the plan is being prepared and submitted.
(2) Contractor or subcontractor responsible for the plan preparation and the work.
(3) Schedule, procedures, equipment, and sequence of operations, that comply with the working hour limitations
(4) Temporary works required: falsework, bracing, shoring, etc.
(5) Additional actions that will be taken to ensure that the work will be performed safely.
(6) Names and qualifications of workers who will be in responsible charge of the work:
    A. Years of experience performing similar work
    B. Training taken in performing similar work
    C. Certifications earned in performing similar work
(7) Names and qualifications of workers operating cranes or other lifting equipment
    A. Years of experience performing similar work
    B. Training taken in performing similar work
    C. Certifications earned in performing similar work
(8) The construction plan shall address how the Contractor will handle contingencies such as:
    A. Travel of emergency vehicles through project during full road closures
    B. Unplanned events (storms, traffic accidents, etc.)
    C. Structural elements that don’t fit or line up
    D. Work that cannot be completed in time for the roadway to be reopened to traffic
    E. Replacement of workers who don’t perform the work safely
    F. Equipment failure
    G. Other potential difficulties inherent in the type of work being performed
(9) Name and qualifications of Contractor’s person designated to determine and notify the Engineer in writing when it is safe to open a route to traffic after it has been closed for safety critical work.
(10) Erection plan or bridge removal plan when submitted as required elsewhere by the specifications. The erection plan shall include the following elements:
    A. A plan view showing the location of the crane and the girder pick and set location. The plan must show dimensions between the outriggers and adjacent features such as abutments, wingwalls, utilities and other important features. The plan must show the largest lift radius.
    B. Crane capacity charts.

2
REVISION OF SECTION 107
SAFETY CRITICAL WORK

C. Outrigger load charts.
D. Cribbing required to resist outrigger loads.

A safety critical element conference shall be held two weeks prior to beginning construction on each safety critical element. The Engineer, the Contractor, the safety critical element subcontractors, and the Contractor's Engineer shall attend the conference. Required pre-erection conferences or bridge removal conferences may be included as a part of this conference.

After the safety critical element conference, and prior to beginning work on the safety critical element, the Contractor shall submit a final construction plan to the Engineer for record purposes only. The Contractor's Engineer shall sign and seal temporary works, such as falsework, shoring etc., related to construction plans for the safety critical elements. The final construction plan shall be stamped "Approved for Construction" and signed by the Contractor.

The Contractor shall perform safety critical work only when the Engineer is on the project site. **The Contractor's Engineer shall be on site to inspect and provide written approval of safety critical work for which they provided signed and sealed construction details.** Unless otherwise directed or approved, the Contractor's Engineer need not be on site during the actual performance of safety critical work, but shall be present to conduct inspection for written approval of the safety critical work.

When ordered by the Engineer, the Contractor shall immediately stop safety critical work that is being performed in an unsafe manner or will result in an unsafe situation for the traveling public. Prior to stopping work, the Contractor shall make the situation safe for work stoppage. The Contractor shall submit an acceptable plan to correct the unsafe process before the Engineer will authorize resumption of the work.

When ordered by the Engineer, the Contractor shall remove workers from the project that are performing the safety critical work in a manner that creates an unsafe situation for the public in accordance with subsection 108.05.

Should an unplanned event occur or the safety critical operation deviate from the submitted plan, the Contractor shall immediately cease operations on the safety critical element, except for performing any work necessary to ensure worksite safety, and provide proper protection of the work and the traveling public. If the Contractor intends to modify the submitted plan, he shall submit a revised plan to the Engineer prior to resuming operations.

All costs associated with the preparation and implementation of each safety critical element construction plan will not be measured and paid for separately, but shall be included in the work.

Nothing in the section shall be construed to relieve the Contractor from ultimate liability for unsafe or negligent acts or to be a waiver of the Colorado Governmental Immunity Act on behalf of the Department.

REVISION OF SECTION 201
CLEARING AND GRUBBING

Section 201 of the Standard Specifications is hereby revised for this project as follows:

Subsection 201.01 shall include the following:

Clearing and Grubbing shall include the removal of all materials, natural or otherwise, that are currently in place.

Clearing and Grubbing of all areas to be excavated and other areas with slopes flatter than 3:1 (horizontal:vertical) will consist of the removal and proper disposal of all vegetation, refuse, and miscellaneous material not shown to remain within the right of way and work area including tree removal.

Clearing and Grubbing of all areas which will not be excavated with slopes steeper than 3:1 (horizontal:vertical) will consist of the removal and proper disposal of vegetation taller than 1 foot, refuse, and miscellaneous material not shown to remain within the right of way and work area including tree removal. Vegetation taller than 1 foot will be cut within 3 inches of the ground surface with minimal disturbance to the soil. Disturbed soils shall be re-seeded and protected by using best management practices which may include soil blankets or protection from direct runoff by use of erosion logs, straw bales or silt fence. The method of protection shall be submitted to the project manager for approval.

Subsection 201.04 shall include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Clearing and Grubbing	Lump Sum

REVISION OF SECTION 203
EXCAVATIONS AND EMBANKMENTS

Section 203 of the Standard Specifications is hereby revised for this project as follows:

Subsection 203.01 shall include the following:

This work consists of excavation, hauling, disposal, placement, and compaction of all material encountered within the limits of the work.

Subsection 203.04, delete paragraph 2 and replace with the following:

The Contractor shall survey necessary cross sections and deliver PLS certified survey to Engineer prior to beginning grading operations. Survey of cross sections will not be measured and paid for separately, but shall be included in the work. The Contractor shall notify the Engineer, in writing, not less than 5 days prior to beginning excavation.

Subsection 203.05, (b) shall include the following paragraphs after the second paragraph:

The Contractor shall provide a natural, contoured appearance to the newly embanked or excavated slopes. The final fill or excavation surface shall be left such that it is a stable slope which is natural in appearance and blends with certain areas of the existing slopes.

The Contractor shall maintain slope stability throughout the project, including all cut and fill areas as shown in the plans.

In Subsection 203.05, (c) delete the second sentence and replace with the following:

The excavated area shall be backfilled to the finished graded section with the unsuitable material replacement section detailed in the plans.

Subsection 203.12 shall include the following:

All labor, excavation, geotextile separator, and backfill materials required to stabilize soft subgrade in accordance with the plans at the direction of the engineer shall be incidental to pay item 203-Unsuitable Materials.

REVISION OF SECTION 206
EXCAVATION AND BACKFILL FOR STRUCTURES

Section 206 of the Standard Specifications is hereby revised for this project as follows:

Subsection 206.01 shall include the following:

The work of this section consists of controlling groundwater and storm flows during construction.

Subsection 206.03 shall include the following:

The Contractor shall provide suitable equipment and labor to remove water, and shall keep the excavation dewatered so that construction can be carried on under dry conditions where required by the Contract. Water control shall be accomplished such that no damage is done to adjacent banks or structures. The Contractor is responsible for investigating and familiarizing himself with all site conditions that may affect the work, including surface water, level of groundwater and the time of year the work is to be done. All excavations made as part of dewatering operations shall be backfilled with the same type material as was removed and compacted as required.

The Contractor shall install measures to maintain the level of groundwater below the foundation subgrade elevation and maintain sufficient bearing capacity for structures, pipelines, earthwork, and rock work. Such measures may include, but are not limited to, installation of perimeter subdrains, pumping from drilled holes or by pumping from sumps excavated below the subgrade elevation. Groundwater levels may fluctuate. The foundation bearing surfaces are to be kept dewatered and stable until the structures or other types of work are complete and backfilled. Disturbance of foundation subgrade by Contractor operations will not be considered as originally unsuitable foundation subgrade and shall be repaired at Contractor's cost. The Contractor shall coordinate ground water control measures with surface water diversions since the effectiveness of groundwater control will often depend on the amount of surface water infiltration allowed by the diversion system.

The Contractor shall coordinate, evaluate, design, construct, and maintain temporary water diversion systems. These systems shall not worsen flooding, alter major flow paths, or worsen normal flow characteristics during construction. The Contractor shall ensure that any such worsening of flooding does not occur. The Contractor shall, at all times, maintain a flow channel or route for the drainage way. Temporary structures such as berms, sandbags, pipeline diversions, etc. shall be permitted for the control of flow, as long as such measures are not a major obstruction to flood flows, do not worsen flooding, or alter historic flow routes. Existing trees and vegetation shall be preserved when not designated for removal. The Contractor shall conduct their operation in such a manner that storm waters may proceed uninterrupted along the drainage courses.

Subsection 206.07 shall include the following:

The accepted quantities for Excavation and Backfill will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Excavation for pipe, manholes, inlets and meter vaults will not be measured and paid for separately, but shall be included in the work.

Payment will be made under:

Pay Item	**Pay Unit**
Dewatering	Incidental to Work
Structure Excavation	Cubic Yard
Structure Backfill Class I	Cubic Yard
Structure Backfill Class II	Cubic Yard

REVISION OF SECTION 207
TOPSOIL

Section 207 of the Standard Specifications is hereby revised for this project as follows:

Subsection 207.03 shall include the following:

Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.

Topsoil stripping shall include all growth medium present at a site (e.g., following initial clearing of large trees), as indicated by color or texture. All stripped topsoil/growth medium will be salvaged, segregated, and stored in a manner that extends biological viability and protects it from loss. Topsoil and all growth medium will be replaced prior to seedbed preparation. No topsoil will be stripped or segregated when soils are saturated or frozen below the stripping depth.

Cleared native vegetation smaller than 4 inches in diameter shall be stockpiled, shredded, and salvaged with topsoil. Cleared vegetation larger than 4 inches in diameter shall be scattered over disturbed areas to accomplish reclamation objectives. Excessive vegetation larger than 4 inches in diameter may be removed from BLM-administered land or shredded in place to be salvaged with topsoil. A wood-cutting permit may be purchased from BLM for material removed from the site.

Topsoil stripped and stockpiled for reuse from areas where weeds are present shall be treated for weeds. Treatment for weeds will not be measured and paid for but is considered incidental to pay item 207 – Topsoil.

1
REVISION OF SECTION 208
EROSION CONTROL

Section 208 of the Standard Specifications is hereby revised for this project as follows:

Subsection 208.01 shall include the following:

This work consist of minimizing erosion, sedimentation and pollution of bodies of water.

Contractor shall obtain a Storm Water Discharge Permit from the Colorado Department of Public Health and Environment (CDPHE) and shall meet all permit requirements until permanent erosion control measures are in place. Contractor shall develop a Storm Water Management Plan (SWMP). Contractor shall construct, install, maintain, and remove, when required, erosion control measures during the life of the Contract to prevent or minimize erosion, sedimentation, and pollution of any state waters as defined in subsection 107.25, including wetlands.

For the duration of the project and the Storm Water Discharge Permit, Contractor will be responsible for the implementation and evolution of the SWMP. Modifications to the SWMP due to Contractors methods and means shall be prepared by Contractor. These modifications will not be measured or paid for separately and should be included in Contractors bid.

Delete subsections 208.11 and replace with the following:

Obtaining a CDPHE Storm Water Discharge permit; performing work to furnish, install, maintain, remove, and dispose of items using Best Management Practices as part of the implementation of the Storm Water Management Plan; preparing and implementing modifications due to Contractors methods and means; any excavation required for removal of accumulated sediment from traps, basins, areas adjacent to silt fences and erosion bales, and any other clean out excavation of accumulated sediment, and the disposal of such sediment; and all required inspection, documentation, and management shall be included in this item.

No separate measurements will be made in this item. Payment shall be made as a lump sum item for project erosion control and shall include all necessary work. Contractor shall provide a schedule of placement, construction, maintenance, and removal of items in the SWMP.

The Contractor shall be responsible for identifying and implementing all measures to prevent or minimize erosion and sedimentation both during and after construction and all work necessary to implement the Storm Water Management Plan (SWMP).

Temporary erosion and pollution control measures required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled, shall be performed at the Contractor's expense.

In the case of repeated failures on the part of the Contractor in controlling erosion, sedimentation, and/or water pollution, the Owner reserves the right to employ outside assistance to provide the necessary corrective measures. Such incurred direct costs, plus project engineering costs, will be charged to the Contractor and appropriate deduction will be made from monies due the Contractor.

Delete Subsection 208.12 and replace with the following:

The Erosion Control Measures will not be measured and will not be paid for separately but shall be paid for as a lump sum bid price. Materials for erosion control may include erosion bales, check dams, silt fence, erosion logs, silt dikes, temporary berms, temporary diversions, etc. The erosion control supervisor and management shall also be included in the lump sum bid price for erosion control.

2
REVISION OF SECTION 208
EROSION CONTROL

Payment will be made under:

Pay Item	**Pay Unit**
Erosion Control	Lump Sum

REVISION OF SECTION 210
RESET STRUCTURES (FENCES)
RELAY RIPRAP

Section 210 of the Standard Specifications is hereby revised for this project as follows:

Subsection 210.01 shall include the following:

The work of this section consists of reseting fences and relaying riprap.

In Subsection 210.04 delete first paragraph and replace with the following:

Where fences (except snow fences) are reset the Contractor shall supply and install any new materials required to restore the fence to acceptable condition. Wire in the old fence shall be salvaged and used in the reset fence.

Subsection 210.12 shall include the following:

Relaying of riprap shall include all work to excavate, sort, process and reinstall existing riprap found within the excavation for the trail. Relay Riprap will be measured as the actual number of cubic yards completed in place and accepted.

In Subsection 210.12 delete the eighth paragraph and replace with the following:

Resetting of structures, fences and related materials shall include all work necessary to remove the items from their existing location to the new location and shall include all mounting hardware, footings, and all other work necessary to complete the reset item, including new fence posts. Fence posts required and approved will not be measured and paid for separately but shall be included in the work.

Subsection 210.13 shall include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Relay Riprap	Cubic Yard

REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

Section 240 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

Subsection 240.01 This work consists of protecting migratory birds during construction.

MATERIALS AND CONSTRUCTION REQUIREMENTS

240.02 The Contractor shall schedule clearing and grubbing operations and work on structures to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Engineer for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer based on review of the biologist's qualifications.

The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records shall be submitted to the Engineer.

(a) *Vegetation Removal.* When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season which begins on April 1 and runs to August 31. All areas scheduled for clearing and grubbing between April 1 and August 31 shall first be surveyed within the work limits for active migratory bird nests. The Contractor's wildlife biologist shall also survey for active migratory bird nests within 50 feet outside work limits. Contractor personnel shall enter areas outside CDOT right of way only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all active migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

1. *Tree and Shrub Removal or Trimming.* Tree and shrub removal or trimming shall occur before April 1 or after August 31 if possible. If tree and shrub removal or trimming will occur between April 1 and August 31, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of tree and shrub removal or trimming.

   If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive.

2
SECTION 240
PROTECTION OF MIGRATORY BIRDS
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

2. *Grasses and Other Vegetation Management*. Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1 and August 31, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities.

   The undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right of way line, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.

   If birds establish a nest within the survey area, an appropriate buffer of 50 feet will be established around the nest by the CDOT biologist. This buffer dimension may be changed if determined appropriate by the CDOT biologist and approved by the Engineer. The Contractor shall install fence (plastic) at the perimeter of the buffer. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

   If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

(b) *Work on structures*. The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:

(1) The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and CDOT has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.

(2) During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.

(3) If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.

(4) Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are ¾ inch by ¾ inch or less.

If an active nest become established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

(c) *Taking of a Migratory Bird.* The taking of a migratory bird shall be reported to the Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

METHOD OF MEASUREMENT

240.03 Wildlife Biologist will be measured by the actual authorized number of hours a wildlife biologist is on site performing the required tasks.

Removal of nests will be measured by the actual number of man-hours spent removing inactive nests just prior to and during the breeding season, April 1 through August 31. During this period, the Contractor shall submit to the Engineer each week for approval a list of the workers who removed nests and the number of hours each one spent removing nests.

Netting will be measured by the square yard of material placed to keep birds from nesting on the structure. Square yards will be calculated using the length of netting measured where it is attached to the ground and the average height of the netting where it is attached to the structure.

BASIS OF PAYMENT

240.04 The accepted quantities measured as provided above will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

Pay Item	Pay Unit
Wildlife Biologist	Hour
Removal of Nests	Hour
Netting	Square Yard

Payment for Wildlife Biologist will be full compensation for all work and materials required to complete the item, including wildlife biologist, wildlife survey, and documentation (record of nest location and protection method)

Payment for Removal of Nests will be full compensation for all work and material required to complete the work.

Payment for netting will be full compensation for all work and material required to complete the item. Overlaps of netting will not be measured and paid for separately, but shall be included in the work. Maintenance and replacement, removal, and disposal of netting will not be measured and paid for separately, but shall be included in the work.

Clearing and grubbing will be measured and paid for in accordance with Section 201. Mowing will not be measured and paid for separately, but shall be included in the work.

Removal and trimming of trees will be measured and paid for in accordance with Section 202.

Fence (Plastic) will be measured and paid for in accordance with Section 607

SECTION 250
ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT

Section 250 of the Standard Specifications is hereby deleted for this projected and replaced with the following:

DESCRIPTION

250.01 This work consists of protection of the environment, persons, and property from contaminants that may be encountered on the Project. This includes monitoring the work for encounters with contaminants or suspected soil and groundwater contaminants; the management of solid, special, and hazardous waste; and management of visual emissions associated with hazardous waste, when encountered on the project.

250.02 The Contractor shall furnish all personnel, materials, equipment, laboratory services and traffic control necessary to perform the contamination monitoring, testing, and site remediation when required. Traffic control shall be in accordance with the requirements of Section 630.

Monitoring equipment used to detect flammable gas, oxygen level, and toxic gas shall be capable of detection to meet the following standards:

CONSTRUCTION REQUIREMENTS

Instrument Detection		
Constituent	**Threshold Limit**	**Increments**
Flammable Gas	1% LEL	1%
Oxygen	19%	0.1%
Toxic Gas	1 PPM	1 PPM
LEL = lower explosive limit PPM = parts per million		

250.03 General. Prospective bidders, including subcontractors, are required to review the environmental documents available for this project. These documents are listed in subsection 102.05 as revised for this project.

This project may be in the vicinity of property associated with petroleum products, heavy metal based paint, landfill, buried foundations, abandoned utility lines, industrial area or other sites which can yield hazardous substances or produce dangerous gases. These hazardous substances or gases can migrate within or into the construction area and could create hazardous conditions. The Contractor shall use appropriate methods to reduce and control known landfill, industrial gases, and visible emissions from asbestos encounters and hazardous substances which exist or migrate into the construction area. The Contractor shall follow CDOT's *Asbestos-Contaminated Soil Management Standard Operating Procedure, dated August 22, 2011* for proper handling of asbestos-contaminated soil, and follow all applicable Solid and Hazardous Waste Regulations for proper handling of soils encountered that contain any other substance mentioned above.

Encountering suspected contaminated material, including groundwater, old foundations, building materials, demolition debris, or utility lines that may contain asbestos or be contaminated by asbestos, is possible at some point during the construction of this project. When suspected contaminated material, including groundwater, is encountered or brought to the surface, the procedures under subsection 250.03(d) and 250.05 shall be followed.

Transportation of waste materials on public highways, streets and roadways shall be done in accordance with Title 49, Code of Federal Regulations (CFR). All labeling, manifesting, transportation, etc. of waste materials generated on this project shall be coordinated with the Engineer. All hazardous waste manifests for waste materials generated on this project shall list the Colorado Department of Transportation as the generator of the waste materials except as otherwise noted. If the Contractor contaminates the site, the Contractor shall be listed as the generator on the hazardous waste manifests, permits, and other documents for such material. If the project is not on a State Highway or frontage road, then the appropriate local governmental entity having jurisdiction over the transportation system facility shall be listed as the hazardous waste generator.

If waste materials must be handled in a permitted treatment, storage and disposal (TSD) facility, the facility shall be designated in writing by the Engineer. If the waste materials are the result of the Contractor's actions, the

Contractor shall designate the facility.

The hazardous waste transportation phase of the work involves insurance required by law and regulations. If the waste materials are determined to be hazardous, the Contractor must submit proof that the transportation company is covered by the appropriate type and amount of insurance required by laws and regulations governing the transportation of hazardous waste.

The Contractor alone bears the responsibility for determining that the work is accomplished in strict accordance with all applicable federal, state and local laws, regulations, standards, and codes governing special waste, petroleum and hazardous substance encounters and releases.

The Contract will list known or suspected areas of contamination. Health and Safety Officer, Monitoring Technician, and Health and Safety Plan shall be required when so stated in the Contract.

(a) *Health and Safety Officer (HSO).* The Contractor shall designate a HSO, not the project superintendent, who shall have at least two years field experience in chemical related health and safety. The HSO shall be either a certified industrial hygienist (CIH), certified hazardous materials manager (CHMM), professional engineer (PE) licensed in the State of Colorado, certified safety professional (CSP), or registered environmental manager (REM) meeting the criteria set forth in 29 CFR 1926. When asbestos is present or is suspected to be present, the HSO shall have additional training and certification in accordance with the Air Quality Control Commission Regulation No. 8 Part B. The HSO shall meet the minimum training and medical surveillance requirements established by the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) for a supervisory Site Safety Official per 29 CFR 1962.65. The Contractor shall furnish documentation to the Engineer, at the preconstruction conference, that the above requirements have been met. 250.03.

The HSO shall *be* equipped with the following:

(1) Communication equipment as required in subsection 250.03(d)2.A. and a vehicle.

(2) Monitoring and detection equipment for flammable gas, oxygen sufficiency, toxic gas, radiological screening and other hazards. This includes, as required, a combustible gas indicator, flame ionization or photo ionization detector, oxygen meter, radiation monitor with Geiger Mueller detector and other foreseeable equipment.

(3) Depth gauging equipment, sampling equipment and sampling containers.

(4) Personal protective equipment (levels C and D) when required.

The HSO shall recommend and supervise those actions which will minimize the risk of hazardous substance related injury to the workers, Department personnel, the general public, property and the environment. Hazardous substance is defined in 29 CFR 1926.32. The HSO shall prepare written procedures for the monitoring of confined space entry and working in or near excavations, including but not limited to trenches and drill holes associated with this project. The HSO shall conduct or supervise all hazardous substance and solid waste related testing, sampling, monitoring and handling for this project to ensure compliance with applicable statutes and regulations, and other applicable environmental requirements under subsections 107.01 and 107.02.

The HSO shall be available for consultation and assistance with contaminated materials related testing, sampling, and field monitoring as required by the Engineer.

The HSO shall prepare and submit a bound and indexed final site report to the Engineer at the end of the project. This site report shall include a detailed summary of all contaminated materials and contaminated water that were encountered and their final disposition.

During each week the HSO is utilized, the HSO shall prepare a daily diary which shall be submitted to the Contractor and the Engineer. This diary shall be submitted at the end of the week and shall become a part of the Department's records. The diary shall contain a chronological log of activities on the project including: dates and times on site, equipment used and calibrations, field monitoring results, visual

observations, conversations, directives both given and received, and disposition of suspected hazardous substances. The Engineer will review this submittal and approve the actual number of hours to be paid.

(b) *Monitoring Technician (MT).* The Contractor shall designate a monitoring technician to be responsible for monitoring of hazardous substances during work on the project. The MT shall have a minimum of two years of actual field experience in assessment and remediation of hazardous substances that may be encountered during highway construction projects. The MT shall be experienced in the operation of monitoring devices, identifying substances based upon experience and observation, and field sampling (for testing) of all media that may be found on the site. Completion of the 40 hour hazardous waste and 8 hour supervisory training required by OSHA and U.S. EPA rules and regulations which complies with the accreditation criteria under the provisions of the proposed 29 CFR 1910.121 is required prior to beginning work. The Contractor shall furnish documentation at the Preconstruction Conference that demonstrates these requirements have been met.

The MT shall be equipped with the following:

(1) Communication equipment as required in subsection 250.03(d)2.A. and a vehicle.

(2) Monitoring and detection equipment for flammable gas, oxygen sufficiency, toxic gas, radiological screening and other hazards. This includes, as required, a combustible gas indicator, flame ionization or photo ionization detector, oxygen meter, radiation monitor with Geiger Mueller detector and other foreseeable equipment.

(3) Personal protective equipment (levels C and D) when required.

The MT shall be present on site and perform monitoring as required by 250.03(d) when work is being performed in areas of suspected contamination and on a predetermined basis throughout other work on the project.

The MT shall monitor for compliance with regulations, the project Health and Safety Plan and the Materials Management Plan (if they exist for the project), the Contract, and the environmental documents for the project. The MT shall immediately notify the Contractor, the Engineer and the HSO of any hazardous condition.

During each week the MT is utilized, the MT shall prepare a daily monitoring diary which shall be submitted to the Contractor, HSO and the Engineer. This diary shall be submitted at the end of the week and shall become a part of the Department's records. The diary shall contain a chronological log of activities on the project including: dates and times on site, equipment used and calibrations, field monitoring results, visual observations, conversations, directives both given and received, and disposition of suspected hazardous substances. The Engineer will review this submittal and approve the actual number of hours to be paid.

(c) *Health and Safety Plan (HASP).* The HSO shall prepare a written HASP for the project, formatted as shown in Appendix B, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, DHHS (NIOSH) Publication Number 85-115, available from the Superintendent of Documents, U.S. Government Printing Office. The Contractor and the HSO shall review the environmental documents listed prior to preparation of the HASP.

Four signed copies of the HASP shall be furnished to the Engineer for acceptance. The Engineer shall have seven calendar days to review and accept or reject the proposed HASP. Within five calendar days after acceptance, the HSO shall distribute signed and stamped (or sealed) copies of the accepted HASP to each emergency response agency servicing the project area, the HASP designated emergency hospital, and five copies to the Engineer. Earth or demolition work shall not occur until after the HASP is accepted and the HASP has been distributed. The HASP shall also be available to the Contractor's employees, their representatives, and officials of OSHA, EPA, Colorado Department of Public Health and Environment (CDPHE), local government health department, Federal Highway Administration, and other appropriate agencies and officials as may be designated by the Engineer. The Engineer will distribute the accepted HASP to appropriate Department personnel. The HASP shall be kept current and shall be revised by the HSO as warranted by changes in the field conditions.

All on-site workers (Contractor's, Department's, Utilities', and others) shall be briefed by the HSO on the contents of the HASP and any revisions thereof. The HSO shall conduct briefings (group or individual) to inform new employees, subcontractors, utility companies and other on-site workers of the HASP contents prior to their entry on site. All personnel involved in excavation or other soil disturbing activities shall receive the required two-hour Asbestos Awareness training by a Certified Asbestos Inspector, when asbestos discoveries are anticipated, or discoveries are made. A signature log of all briefing attendees shall be kept and furnished to the Engineer. The Contractor shall provide, as required, eye wash equipment and stations, emergency showers, hand and face washing facilities and first aid equipment.

The Contractor shall provide, as required, decontamination facilities for personnel and equipment employed in the work. The exact procedure for decontamination and frequency shall be included in the accepted HASP. Decontamination facilities shall meet the criteria set forth in the Code of Federal Regulations (29 CFR and 40 CFR).

(d) *Precautions and Procedures.* The following minimum precautions and procedures shall be followed during the construction of the project:

1. General construction precautions:

   A. All monitoring and piezometer wells and test borings shall be established or abandoned by the Contractor as regulated by the State Engineer's Office. Copies of all required permits, notification, and abandonment documents shall be submitted to the Engineer prior to payment approval.

   B. Hazardous substance related activities shall have a work plan for each work phase which shall be coordinated with the Engineer at least three working days prior to commencement of each phase of the work.

   C. The Contractor shall properly handle all investigation derived waste generated by this project. Documentation shall be submitted to the Engineer of all tests performed for Treatment, Storage and Disposal (TSD) determination; classification of waste; hauling records; TSD acceptance; manifest (if required); etc. in accordance with applicable laws and regulations.

   D. When the work may involve air emissions, the Contractor shall contact the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division to ascertain if an air pollution emission notice (APEN) or permit is required for this operation. The Contractor shall be responsible for filing the APEN and obtaining said permit, if required. The processing of air pollution permits, if required, in non-attainment areas or where public hearings are required, likely will take more than 90 days.

2. For construction on a known or potentially contaminated site, the following conditions shall apply, in addition to those listed in subsection 250.03(d)1:

   A. The HSO shall be on site or readily available by radio, telephone or pager at all times during the work. When on site, the HSO shall have an operational portable or mobile cellular telephone available for immediate use in areas where such service is available. When on site in cellular telephone non-service areas, the HSO shall have available, for immediate use, radio access to a site with telephone service. The HSO shall be notified at least 24 hours prior to the start of confined space entry, storage tank removal, drilling, excavation, trenching, or dewatering operations.

   B. The HSO shall designate the onsite monitoring equipment for flammable gases, oxygen deficient or enriched atmosphere, and toxic gases, such as but not limited to, a flame ionization detector, photoionization detector, combustible gas indicator, and oxygen meter. This designated equipment shall be on site during all construction operations and be utilized during trenching, drilling, excavating, confined space entry, underground storage tank removal, and other appropriate construction operations. The exact equipment to fulfill this requirement shall be specified in the accepted HASP. The HSO shall conduct or supervise the monitoring. The monitoring equipment shall be calibrated as recommended by the manufacturer.

C. When drilling, trenching, or excavating in the presence of detectable concentrations of explosive gases, the soil shall be wetted and the operating equipment shall be provided with spark proof exhausts.

D. The Contractor, through the HSO, is responsible for ensuring that 29 CFR 1926 is fully complied with during the construction of the project.

E. Affected excavation operations shall be discontinued and personnel shall be removed from the affected excavation sites where any of the following levels are detected:

(1) 20.0 percent or more LEL flammable gas, or 10.0 percent in an underground or confined space,

(2) Permissible Exposure Limit (PEL) of any toxic gas,

(3) 19.5 percent or less oxygen,

(4) 25.0 percent or more oxygen,

(5) Greater than 2 mrem/hr. (Beta particle & photon radioactivity),

(6) Greater than 15 pCi/L (Gross alpha particle activity), or

(7) Other action levels as determined by the HSO.

(8) Uncovering of suspect Asbestos Containing Material (ACM), including but not limited to, buried facility components, active or abandoned utility lines, buried foundations and demolition debris, or miscellaneous ACM dispersed in the soil. The Contractor shall follow the procedures outlined in the HASP and 29 CFR 1926 to address these conditions. Work shall resume in these areas when approved by the Engineer.

F. Personnel shall be issued and utilize appropriate Health and Safety equipment as determined by the HSO, who shall provide the Engineer with a written explanation of what personal protective equipment (PPE) shall be worn, when, and by which personnel. Except in emergency cases, the Engineer shall be advised by the HSO of changes in the degree of PPE prior to implementation.

G. Personnel shall avoid the area immediately downwind of any excavation unless the excavation is monitored and declared safe.

H. The operators of excavating, trenching, or drilling equipment shall wear appropriate PPE as required in the HASP.

I. Exhaust blowers shall be present at the location where required in the accepted HASP.

J. The Contractor shall accomplish the work with employees who have been trained and equipped as required by the HASP and applicable provisions of 29 CFR 1910 and 29 CFR 1926.

K. Fire extinguishers, electrical equipment and wiring shall conform to the applicable requirements of 29 CFR 1926 and 49 CFR.

L. Smoking shall not be permitted within 50 feet of any excavation.

3. For construction within 1000 feet of a known or potentially contaminated site, the following conditions, in addition to those listed in subsection 250.03(d) 1. shall apply:

A. The areas under construction shall be checked with a combustible gas indicator before excavation begins to determine if flammable or combustible gas is in the area.

B. Excavations, trenches and drill holes shall be monitored by the HSO for flammable gas, toxic gas and oxygen deficiency or enrichment. This shall be carried out continuously unless the presence of flammable, combustible or toxic gas, or oxygen deficiency or enrichment in the area can be ruled out by the HSO. The recommendation to discontinue monitoring must be agreed to by the Engineer and the Contractor. Prior to implementation, this agreement shall be written, and shall contain specific conditions that will require re-evaluation of the area.

C. When flammable or toxic gas is found in the area, those precautions and procedures in subsection

250.03(d)2 shall apply.

4. The following procedures shall be followed if the level of contamination as documented in the environmental documents referenced in subsection 102.05 as revised for this project is exceeded, or if previously unidentified contaminated air, soil or water, is encountered during the construction of the project:

   A. Work in the immediate area of the release or discovery of contamination shall cease. The Engineer shall be immediately notified.

   B. If no HSO is required by the Contract, the Contractor shall designate an HSO as directed, in accordance with subsection 250.03(a).

   C. The Engineer may direct the HSO to evaluate the material for potential hazardous substance or other contamination or unsafe conditions. This evaluation may include, but is not limited to, on site field monitoring, on site testing, and on or off site laboratory analysis. Removal of storage tanks and surrounding contaminated soils shall be in accordance with applicable laws, regulations and established procedures. If the contaminated material cannot be placed in the embankment or remediated on site, it must be removed to an appropriate TSD facility, as designated in writing by the Engineer. The HSO shall supervise the necessary testing required to make appropriate TSD determinations. Disposal of the unsuitable material shall be considered as remediation work as described in subsection 250.03(d)4.D and 250.03(d)4.E.

   D. If this site is determined to be contaminated with petroleum products, hazardous substances or other solid waste in excess of that indicated in the above listed site investigation documents, a thorough Site Investigation and Waste Management Plan shall be accomplished under the supervision of the HSO The Site Investigation and Waste Management Plan shall be submitted to the Engineer for approval and shall determine the extent of contamination and propose at least three types of remedial action for the contaminated area as required by applicable statutes and regulations. The HSO shall be available to assist the Engineer in explaining this study to the regulatory agencies. When requested by the Engineer, the Contractor shall prepare a Remediation Plan based on the selected remedial method, and shall submit this to the Engineer for approval. The time required for the Engineer's review of the Remediation Plan, including all necessary drawings, calculations, specifications, and other documentation will not exceed four weeks after a complete submittal is received. This work shall not be done unless authorized in writing by the Engineer.

   E. If the site is determined to be contaminated with petroleum products; hazardous chemicals, materials, or wastes; or other solid wastes, and is required to be remediated, the HSO or other qualified individuals will supervise the Remediation Plan implementation as concurred to by the regulatory agencies, as directed. Hazardous Waste generated by remedial activities shall list the Colorado Department of Transportation as the hazardous waste generator on the required paperwork for projects on State Highways and their associated frontage roads. If this project is not on a State Highway or frontage road, then the appropriate local governmental entity having jurisdiction over the transportation system facility shall be listed as the hazardous waste generator. If the waste disturbed or produced was caused by Contractor negligence, the Contractor shall be listed as the hazardous waste generator. Remediation work shall be done only when authorized by the Engineer in writing.

250.04 Heavy Metal Based Paint Management. When the work includes the removal of paint or items covered with paint which may contain lead, chromium or other heavy metals, the requirements of this subsection shall apply in addition to the requirements of subsection 250.03.

SECTION 250
ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT

The requirements of the HASP shall be in accordance with OSHA Publication Number 3142, *Working with Lead in the Construction Industry.*

Paint Removal and Waste Disposal work shall be performed in accordance with 29 CFR 1926.62, State and local air quality regulations, the Steel Structures Painting Council (SSPC) Guide for Containing Debris Generated During Paint Removal Operations, the *Industrial Lead Paint Removal Handbook* (SSPC 91-18), and the references contained therein.

The following minimum precautions and procedures shall be followed unless modified in the approved HASP or its updates:

(a) The Contractor shall contact the CDPHE, Air Pollution Control Division to ascertain if an air pollution permit is required for the cleaning or demolition work. If an air pollution permit is required, the Contractor shall obtain the permit. The Contractor shall furnish the Engineer with a copy of the permit application and the permit issued prior to starting cleaning or demolition activities. A copy of the Air Pollution Emission Notice [APEN] shall be provided to the Engineer, if such notice is required under the Colorado Air Quality Control Commission's regulations. The processing of air pollution permits in non-attainment areas, or where public hearings are required, likely will take more than 90 days.

(b) The Contractor shall contain paint chips, corrosion residues, and spent abrasives, herein referred to as waste materials, resulting from the cleaning or demolition operations. The Contractor shall not deposit or release waste material into the water, air or onto the ground below or adjacent to the structure. The Contractor shall conduct cleaning operations to minimize the waste materials produced. Prior to beginning the work, the Contractor shall submit to the Engineer for acceptance, a detailed methods statement for capturing, testing, and disposing of the removed materials. The Engineer will have seven calendar days to review, and accept or reject this methods statement.

(c) Abrasives utilized for blast cleaning shall be low-dusting and low waste. Unless approved otherwise, vacuum blasting or wheel blasting shall be used.

(d) The HSO shall sample and test the waste material for lead, chromium, and other paint associated heavy metals using the Toxicity Characteristic Leaching Procedure (TCLP) Test, Method 1311 of the EPA publication, Test Methods for Evaluating Solid Waste 846. Sample collection methodology and frequency shall be recommended by the HSO and accepted by the Engineer with an adequate number of samples taken to be representative of all waste material collected. If the waste material does not pass the TCLP test, it shall be disposed of in a permitted TSD facility as designated in writing by the Engineer. The waste materials handling decision shall be documented by a report (five copies) submitted to the Engineer. This documentation shall include a description of sample collection methodology, testing performed, test results and comparison of test results with hazardous waste requirements. The waste material shall not be held at an unpermitted TSD facility site in excess of Resource Conservation and Recovery Act (RCRA) temporary storage time limits.

(e) When an item coated with paint is removed, all loose paint shall be removed and collected from the item within 24 hours of the time it is removed or placed onto the ground. All loose paint shall be removed and collected from a painted item before it is removed from the site. The Contractor shall contain loose paint until it is removed and collected. Loose paint is defined as that which can be removed by manual scraping methods. Over waterways, the Contractor shall capture all paint debris by the method specified in the methods statement. The paint debris shall be collected on a daily basis and shall be stored in a properly labeled, tightly sealed container and placed in a secured location at the end of each working day.

(f) All painted steel components which are not designated to be salvaged shall be recycled. Contractor possession of the steel for future use shall be considered a form of recycling. Prior to transport of the components off-site, the Contractor shall obtain a letter from the recipients of the painted steel components stating that they have been fully informed of the contents of the paint and are capable of handling the paint. If the Contractor is to maintain future possession of the steel, the Contractor shall supply this letter. If there will

be more than one recipient of the painted material, one letter shall be obtained from each recipient. The Contractor shall provide a copy of each letter to the Engineer. If the painted steel components will be recycled by melting, the letter from the recipient is not required. The Contractor shall submit a letter stating the destination of the painted steel components and that they will be melted.

(g) When the work consists of the removal of a bridge or components of a bridge coated with paint which has been assumed to contain lead, chromium, other heavy metals, or a combination thereof the Contractor shall capture paint debris which is dislodged during removal operations. The Contractor may choose any method for dismantling the bridge, subject to the following required construction sequence limitations:

(1) The concrete deck shall be removed prior to removal of the steel superstructure.

(2) If the methods statement indicates that girders will be dropped to the ground during dismantling, all debris from the concrete deck removal operation shall be removed from the area below the bridge before any girders are dropped into this area.

(3) Girders may be cut and dropped only if the span is located entirely over land.

250.05 Material Handling. This work consists of the additional handling of groundwater and soils to be excavated for construction of the project which are suspected or known to be contaminated. This work also includes stockpiling or containerization, analytical sampling and testing, and final disposition of contaminated groundwater and soils requiring special handling.

The Contractor shall maintain vertical trench walls for the work in the specified areas of known or potential contamination, as shown on the plans. Shoring may be necessary to meet this requirement. The Contractor shall confine the removal of contaminated groundwater and soils encountered as a result of the excavation activities in the specified areas to the vertical and horizontal limits of structure excavation specified in the Contract. The Contractor shall be responsible for any contaminated materials generated beyond the limits of excavation. This shall include any sampling, analysis, and disposal required, and the costs thereof. The Contractor shall be listed as the generator of any such material. The limits of excavation shall be determined as 18 inches outside of structures, including sewers, water lines, inlets, manholes, and other underground structures to be constructed, or as directed.

Specific areas of known or potential contamination have been identified in the project plans. There is the potential of encountering contaminated groundwater and soil, which has not been summarized in the plans or specifications, at unknown locations on the site. Suspected contaminated soil and groundwater shall be handled by one of three methods as follows:

(a) *Materials Handling (Stockpile& Containerization).* When recommended by the HSO and authorized by the Engineer, material shall be stockpiled or containerized for analysis and characterization for proper handling and, disposal, or both. Sampling and testing of materials shall be as described in the Contract. If analysis indicates that soil samples are designated as uncontaminated, as determined by the criteria shown in the Contract or as determined by the CDPHE, the associated soils will not require any special handling and will become the property of the Contractor and may be used on site, subject to other requirements of the Contract. Health and safety monitoring and strict fugitive dust control shall be conducted during the placement of these soils. If analysis indicates that groundwater samples are designated as uncontaminated, as determined by the criteria shown in the Contract or as determined by the CDPHE, the groundwater shall be handled in accordance with subsection 107.25.

Stockpiled and containerized materials shall be secured in compliance with the following provisions until they are determined to be uncontaminated:

1. The Contractor shall not store the material for more than 90 days.
2. The Contractor shall prevent any runoff from infiltrating the ground or running out of the containment area.

3. Soils and groundwater containing different contaminants shall be placed in separate containers or stockpiles.
4. The Contractor shall prevent the dispersion of materials or the dilution or mixing of containers and stockpiles.
5. The ground surface on which the contaminated soils will be placed shall be covered with plastic sheeting which will withstand the placement and removal of stockpiled materials without breaching.
6. The ground surface shall be graded to drain toward the edge of the soil piles and the berm or trench around them shall be covered by plastic sheeting.
7. Proper security shall be provided in accordance with 40 CFR.

(b) *Solid Waste Disposal.* Soils determined to be contaminated, but not hazardous, as established by criteria in the Contract or as determined by CDPHE or other regulatory agencies having jurisdiction, shall be handled and disposed of, or both as recommended by the HSO and approved by the Engineer. The Contractor shall haul this material to a solid waste disposal facility.

(c) *Contaminated Groundwater Disposal*. Groundwater determined to be contaminated, but not hazardous, as established by criteria in the Contract or as determined by CDPHE or other regulatory agencies having jurisdiction, shall be handled and disposed of, or both as recommended by the HSO and approved by the Engineer. *The* Contractor shall prepare a dewatering plan proposing at least three types of treatment and/or disposal options of contaminated groundwater as required by applicable statutes and regulations. One of the treatment options shall include permitting and onsite treatment prior to discharge or disposal. The dewatering plan shall be submitted to the Engineer for approval four weeks before dewatering activities begin.

(d) *Hazardous Waste Disposal.* Soils and groundwater that are designated or suspected to be hazardous shall be containerized *immediately* upon excavation or upon discovery. Hazardous material shall be labeled and transported to a permitted treatment, storage and disposal (TSD) facility or to a hazardous waste disposal facility approved by the Engineer.

(e) *Additional Requirements.* Stockpiled or containerized material characterized as uncontaminated, contaminated or hazardous shall be stored and disposed of in a manner consistent with current established federal, state, and local regulations for waste materials.

Materials with contaminants not specifically regulated shall be disposed of by the Contractor as directed, in consultation with CDPHE. All areas where wastes are generated shall be reviewed by the HSO to identify potential contaminant sources that may result in a contaminated waste stream.

Contaminated groundwater and soils, which have been identified as solid waste or hazardous waste, requiring disposal according to federal, state, and local regulations, shall be transported in accordance with 49 CFR by the Contractor to an appropriately permitted treatment facility, landfill, incinerator or asphalt plant or other facility approved to accept the waste. CDPHE and the landfill or other treatment or disposal facility shall be notified by the HSO of the material to be disposed of and the corresponding analytical test results prior to shipment. Potentially contaminated water collected from the lined trench of a stockpile shall be treated as required by Colorado Wastewater Discharge Permit System (CDPS) permits, 29 CFR and 40 CFR and reimbursed separately in accordance with Contract requirements.

250.06 Sample delivery. This work consists of the collection, containerization and delivery of material samples for analysis to the testing facility designated in the Contract.

Environmental Protection Agency (EPA) protocol and standards shall be followed in the collection, containerization and transport of samples to be analyzed, including the documentation of the proper chain of custody of all samples. The Contractor shall collect sufficient sample material to perform the required analysis and is responsible for ensuring that appropriate climate control has been provided for sample transport. Sample delivery shall be made within the maximum allowable holding time for each sample type, not to exceed 24 hours,

excluding weekends. The time period required for sample collection and delivery to the testing facility will not be considered an excusable delay. The analysis to be completed and turnaround time shall be approved by the Engineer.

The Contractor shall provide the Engineer with a copy of documentation indicating that proper chain of custody requirements have been followed for all samples.

Quality control samples shall be provided by the Contractor in accordance with the quality control requirements of the testing facility designated in the Contract (quality control requirements are available from the Engineer). The Contractor shall prepare, label and transport these samples to the testing facility in conjunction with the delivery of other samples authorized for analysis by the Engineer, at no additional cost.

The Engineer may request splits of samples, in advance of collection, which shall be provided at no additional cost by the Contractor.

250.07 Asbestos-Containing Material Management. Environmental documents or plans listed in the special provisions should include known or suspected locations that could involve encounters with ACM during excavation and other soil disturbing construction activities. Unexpected discoveries of ACM may be made during excavation and soil disturbing construction activities. Asbestos contaminated soil, shall be properly managed or remediated, in accordance with subsection 250.07(a).

All asbestos related activities shall be performed by Colorado certified asbestos professionals, contractors, or consultants. Certifications are issued by the Colorado Department of Public Health and Environment (CDPHE), Indoor Air Quality Unit. A Colorado Certified Asbestos professional shall manage the management and disposal of asbestos contaminated soil and other ACM. The Indoor Air Quality Unit within CDPHE is the only unit that certifies such professionals. The Contactor shall furnish a copy of the license to the Engineer.

(a) *Regulatory Compliance.* Asbestos contaminated soil management is governed by 6 CCR 1007-2, Section 5, which includes and references regulatory compliance with Asbestos Hazard Emergency Response Act (AHERA) Colorado *Regulation* 8; Inspection and reporting protocol and demolition standards are governed by AHERA; Demolition and notification standards are governed by National Emission Standards for Hazardous Air Pollutants (NESHAPS); Colorado Regulation 8 governs all asbestos activities, demolition, permitting, and certification of Certified Asbestos Professionals in the State of Colorado. Colorado Regulation 8 is more stringent than AHERA and NESHAPS and supersedes federal regulations. Conflicting regulatory requirements between AHERA and NESHAPS, if not specifically addressed in Colorado Regulation 8, shall be addressed and approved protocol negotiated with CDPHE. The Contractor shall conform to all current regulations, policy directives, or both, issued by the EPA, CDPHE, and the Department.

(b) *Asbestos Management and Visual Inspections* Asbestos management must be performed by a certified asbestos professional. Final Inspections of the area of asbestos contaminated soil removal shall be performed by an Asbestos Consultant to determine what, if any, controls must be instituted to allow future activity in the excavation area. All final visual inspections shall be conducted only when soil is dry.

(c) *Permitting and Notification.* The CDPHE requires notification of any soil disturbing activity where asbestos is known, suspected, or discovered. A 24-hour notification to CDPHE is required prior to any soil disturbing activity of an unplanned asbestos discovery. A 10 working day notification to CDPHE is required prior to any soil disturbing activity in an area with known or potential material suspected of containing asbestos in or on the soil or asbestos-contaminated soil. Removal of asbestos-containing material on a facility component, that is located on or in soil that will be disturbed, with asbestos quantities above the following trigger levels must be permitted and abated in accordance with the requirements of Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B):

(1) 260 linear feet on pipes,

(2) 160 square feet on other surfaces, or

(3) The volume of a 55-gallon drum.

All permit applications shall be submitted to the Colorado Department of Public Health and Environment a minimum of 10 days prior to start of work for approval. The permit application and notification shall be submitted simultaneously. The Contractor shall obtain all required State and local permits and shall be responsible for all associated fees. Permit application, notification, and waiver request forms shall be submitted to:

Colorado Department of Public Health and Environment Permit Coordinator/APCD - SS - B1 4300 Cherry Creek Drive South Denver, CO 80246-1530 Phone: (303) 692-3100 Fax: (303) 782-0278

Application and waiver forms are available on the CDPHE website: asbestos@state.co.us

(d) *CDOT's Asbestos-Contaminated Soil Management Standard Operating Procedure, dated August 22, 2011.* Asbestos contaminated soil shall be managed in accordance with 6 CCR 1007-2, Section 5, Asbestos Waste Management Regulations. Regulations apply only upon discovery of asbestos materials during excavation and soil disturbing activities on construction projects, or when asbestos encounters are expected during construction. The contractor shall comply with procedures detailed in the CDPHE's Asbestos-Contaminated Soil Guidance Document and CDOT's approved *Asbestos-Contaminated Soil Management Standard Operating Procedure, dated August 22, 2011*, including the following minimum requirements:

(1) Immediate actions and implementation of interim controls to prevent visible emissions, exposure, and asbestos contamination in surrounding areas.

(2) Soil Characterization.

(3) Training required for all personnel involved in excavation and other soil disturbing activities, once asbestos is encountered during construction or on projects where asbestos encounters are expected. Asbestos Awareness Training shall be given by a qualified and certified Asbestos Building Inspector with a minimum of six months experience inspecting asbestos contaminated soil.

(4) Assessment for the presence and extent, within the proposed area of disturbance, of asbestos discoveries, whether expected or unexpected, by a Certified Asbestos Inspector.

(5) Investigation and sampling required for risk assessment and management. Investigation, if required, shall be conducted by a Certified Asbestos Inspector.

(6) Risk assessment and determinations for further management or abatement.

(i) Risk assessment and determinations must be made by a Certified Asbestos Inspector, and coordinated with the Engineer.

(ii) Soil remediation is not necessarily required, depending on the circumstances.

(7) Submit 24-hour Notification of Unplanned Asbestos Discovery.

(8) Submit 10-day Notification of Planned Asbestos Management.

(9) Submit 24-hour Notification of Unplanned Asbestos Discovery.

(10) Submit 10-day Notification of Planned Asbestos Management.

(e) *Risk Assessment and Determinations for Further Management Or Remediation.* Risk assessment and determinations for further management or remediation must be closely coordinated with the Project Engineer and Project Manager of the Statewide Management Plan.

250.08 Methamphetamine Lab Sites. Demolition of former Methamphetamine (meth) labs is enforced by the Governing Authority, which varies from county to county. The Contractor shall demolish all buildings that are identified as former meth labs, as listed in public listings by the Governing Authority. The Contractor shall provide evidence of demolition to the Governing Authority, obtain receipt of such evidence by the Governing Authority, and shall submit these to Engineer immediately following demolition.

Septic tank removal at known meth lab sites shall undergo preliminary assessment by an Industrial Hygienist or Certified Industrial Hygienist to determine proper removal and disposal. Work shall proceed in accordance with the recommendations of the Hygienist.

METHOD OF MEASUREMENT

250.09 Environmental Health and Safety Management will not be measured, but will be paid for on a lump sum basis. This will include all work, materials, and hourly time charges by the HSO and other personnel required to accomplish the following:

(1) Preparation, submittal and briefing of the initial HASP

(2) Preparation and submittal of the Waste Management Plan

1. Preparation and Submittal of the Dewatering Plan
2. Preparation and Submittal of the Remediation Plan

(3) Procedures and equipment specified in subsections 250.03 - 250.07

(4) PPE (levels C and D) for Contractor's personnel for any contamination identified in the preconstruction investigations

(5) Preparation and submittal of the final site report

The quantity to be measured for Health and Safety Officer will be the total number of hours that the Health and Safety Officer is actually used, as authorized, for the following work:

(1) Field monitoring necessary to ensure the safety of workers on the site;

(2) Hours in excess of the items listed under Environmental Health and Safety Management;

(3) Hours that are necessary due to unforeseen site conditions; and

(4) Hours of additional consultation or field work that is requested by the Engineer.

Equipment specified in subsection 250.03(a), preparation and submittal of the daily HSO diary, travel to and from the project site, and PPE (Levels C and D) required for use by the HSO will not be measured and paid for separately, but shall be included in the hourly cost of the HSO.
The quantity to be measured for Monitoring Technician will be the total number of hours that Monitoring Technician is actually used as authorized. Equipment specified in subsection 250.03(b), supervision of the MT, preparation and submittal of the daily monitoring diary, travel to and from the project site, and PPE required for use by the MT (Levels C & D) will not be measured and paid for separately, but shall be included in the hourly cost of the MT.

Solid stockpiled materials will be measured by the cubic yard computed from cross sections by the average end area or other requirements acceptable method. Disposal of solid waste and solid hazardous waste materials will be measured by the cubic yard in the disposal container.

Materials Sampling and Delivery will be measured by the actual number of samples collected, containerized and transported to the testing facility indicated in the Contract.

SECTION 250
ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT

Additional environmental health and safety management work required and authorized by the Engineer, but not included in the items listed above, will be considered extra work to be paid for in accordance with subsection 109.04, unless such work is caused by the Contractor's action.

BASIS OF PAYMENT

250.10 Partial payment for Environmental Health and Safety Management, as determined by the Engineer, will be made as the work progresses. The Contractor shall submit a schedule of environmental related Health and Safety Management work before the first partial payment is made. The schedule shall indicate the environmental related Health and Safety Management time for each work item that requires Contractor environmental related Health and Safety Management effort and the total time for the project.

The accepted quantity for Health and Safety Officer will be the number of hours actually used and approved for payment by the Engineer and will be paid for at the contract unit bid price.

The accepted quantity for Monitoring Technician will be the number of hours of onsite monitoring as approved by the Engineer and will be paid at the Contract unit price.

Environmental Health and Safety Management, Health and Safety Officer and Monitoring Technician bid items shall include vehicles, phone charges, supplies, printing, postage, office support, and all other miscellaneous costs associated with the work.

Payment for Groundwater Handling (Containerization & Analysis) will be paid for in accordance with subsection 109.04. Payment for Soil Handling (Stockpile) will be made at the contract unit price for all excavated material required to be stockpiled for analysis. The contract unit price will be full compensation for furnishing all materials, labor, equipment and incidentals necessary to complete this work, and all handling of the material prior to disposal. This includes haul, stockpile, and security. Payment for this work will be in addition to any payment made under other bid items for excavation, embankment or backfill on the project, or waste disposal of this material.
Payment for Solid Waste Disposal and Solid Hazardous Waste Disposal will be made at the appropriate contract unit price for the disposal of material determined to be either solid waste or solid hazardous waste. The contract unit prices will be full compensation for furnishing all materials, labor, equipment, tools, storage containers for transport, containerization of material for up to 60 days, and incidentals necessary to complete this work. This includes all handling of the material, loading for disposal, unloading for disposal, and borrow material required for replacement of excavated material disposed of offsite. It does not include stockpiling or containerization required for analysis which is included in the item Materials Handling (Stockpile & Containerization) paid for as described above. Payment for waste disposal fees and transport of hazardous waste will be made as shown below. Payment for this work will be in addition to any payment made under other bid items for excavation, embankment, backfill or material handling (stockpile & containerization) on the project.

(1) *Solid Waste.* Transport costs to the disposal facility and disposal fees will be included in the contract unit price for this work.

(2) *Solid Hazardous Waste.* Transport, Disposal and /or Treatment costs will be paid for by planned force account in accordance with subsection 109.04.

(3) *Liquid Hazardous Waste.* Transport, Disposal and /or Treatment costs will paid for by planned force account in accordance with subsection 109.04.

The cost of shoring required to limit the removal of contaminated materials to the specified limits shall be included in the bid unit prices for any excavation to be performed. Such shoring ordered by the Engineer in areas other than the specified areas of known or potential contamination, as shown in the plans, will be paid for in accordance with subsection 109.04.

Payment for Materials Sampling and Delivery will be made at the contract unit price for each material sample collected, containerized and transported to the laboratory testing facility as designated in the Contract. The Contract unit price will be full compensation for furnishing all materials, labor, equipment, tools and incidentals

necessary to complete this work including required sampling kits, containers, sample splits and quality control samples.

The Contractor shall be responsible for damage caused by Contractor negligence to the environment, persons, or property. Expenditures associated with actions of the Contractor shall be borne by the Contractor at no cost to the project.

Contaminated groundwater containerized, treated or disposed under the requirements of this specification will be paid for by planned force account in accordance with subsection 109.04.

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

Pay Item	**Pay Unit**
Environmental Health and Safety Management	Lump Sum
Health and Safety Officer	Hour
Monitoring Technician	Hour
Materials Sampling and Delivery	Each
Materials Handling (Stockpile)	Cubic Yard
Solid Waste Disposal	Cubic Yard

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. Piping and Casings 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. The thickness of epoxy coatings 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 percent of design alignment.

(c) Plate elevation shall be within +3 inches to –2 inches 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 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.

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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 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.

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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 perform a sacrificial verification test one micropile per abutment. The vicinity of the verification test pile shall be determined by the Engineer as shown on the plans. The purpose of the sacrificial verification test is to determine in-situ ground-to-grout bond stresses, creep, and constructability for design of production piles. The length of the production piles will be evaluated by the engineer based on the results of the sacrificial verification test. All costs associated with sacrificial verification testing is incidental to the work of installing production piles. The sacrificial verification test sequence shall be as follows:

STEP	LOADING	LOAD	HOLD TIME (MINUTES)
1	Apply AL		2.5
2	Cycle 1	0.15DL	2.5
		0.30DL	2.5
		0.45DL	2.5
		AL	1
3	Cycle 2	0.15DL	1
		0.45DL	1
		0.60DL	2.5
		0.75DL	2.5
		0.90DL	2.5
		1.00DL	2.5
		AL	1
4	Cycle 3	0.15DL	1
		1.00DL	1
		1.15DL	2.5
		1.30DL	Per Step 5
5	Hold load for at least 10 minutes while recording movement at one minute intervals.		
6	Cycle 3 cont'd.	1.45DL	2.5
		AL	1
7	Cycle 4	0.15DL	1
		1.45DL	1
		1.60DL	1
		1.75DL	2.5
		1.90DL	2.5
		2.00DL	10
		1.50DL	5
		1.00DL	5
		0.50DL	5
		AL	5
8	Remove the load and compare results to acceptance criteria.		

Notes: AL = Alignment Load, DL = Design Load

The Contractor shall proof test at least one production 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 proof 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

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.

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REVISION OF SECTION 503
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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 (6 inch)	Lineal Feet
Sacrificial Verification Testing	Incidental to work
Proof Testing	Incidental to work

REVISION OF SECTION 504
LARGE BLOCK RETAINING WALL

Section 504 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

504.06 This work consists of constructing a permanent large block gravity retaining wall at the locations shown in the plans, to support the hillside and roadway. The Contractor shall furnish all labor and other materials and equipment required to construct the wall in accordance with the contract documents. The large block retaining wall is a wall that is textured on only one face and is intended to retain soil.

MATERIALS

504.07 Components.

(a) The cementations materials for block units shall be Portland cement that conforms to the requirements of ASTM C150. Fly ash may be used but shall not exceed 20% by weight of the total cement content and shall conform to the requirements of ASTM C 618.
(b) Aggregates used in the manufacture of the units shall conform to the requirements of ASTM C33 for normal weight concrete aggregate.
(c) A polymer water-repellant additive such as WR Grace Dry Block, Addiment Block Plus, or approved equal, shall be used in concrete block.

504.08 Appearance. All exposed portions of the wall shall be Stained and Sealed with color approved by the owner. Sealer used shall be Legacy Magnum Seal, or equal, in accordance with Section 601. Stain shall attempt to match cured shotcrete coloring, such as Federal Standard 20206, 20227 or similar. Contractor to apply stain to test panel until desired color is achieved/approved by Engineer.

504.09 Backfill. Backfill shall conform with native materials.

504.10 Required Submittals. The Contractor shall submit the following submittals at least ten days prior to beginning construction of the wall:

(a) **Wall Layouts**. Wall layouts shall conform to the lines and grades on the plans including start, corner, and end stations, leveling pad step breaks, total number of blocks and top and bottom of wall elevations. The construction batter required to achieve the batter shown on the plans shall be shown on the shop drawings. If temporary walls are required for the construction of permanent walls, the permanent wall vendor shall provide the shop drawings and certified material test reports for temporary walls.

(b) **Wall Elevations**. Except for the top of the leveling pad, wall elevations given on the plans are based on an 18 inch nominal block height.

504.11. Contractor's Experience Requirements. The Contractor shall be regularly engaged in the construction of permanent large block retaining walls. The Contractor shall have completed, within the past 3 years, a total of at least 10,000 square feet of wall face.

The job site foreman for the wall crew shall have experience in the construction of at least 5 successfully completed permanent large block retaining walls within the last 3 years. He shall be on site 100 percent of the time during which the work is being done.

The Contractor shall submit the experience qualifications and details for the construction projects and designs used to qualify under this specification at the pre-construction conference. The submittal shall include a brief project description with the owner's name and current phone number. Experience, qualifications and references for the job site foreman shall be included. Upon receipt of the experience

qualifications submittal, the Engineer will have 10 calendar days to approve or reject the proposed Contractor.

CONSTRUCTION REQUIREMENTS

504.12 Construction Requirements. The large block wall shall be constructed in accordance with the contract documents.

The Contractor shall provide independent quality control inspection and materials testing for all work in these wall systems. This testing information shall be provided to the Engineer within 24 hours of the test. The County will conduct Quality Assurance testing and inspection. The County also reserves the right to test and inspect to ensure the implementation of the Designer of Record's Quality Control Plan.

Should the excavation for the wall expose an unsatisfactory bearing material inconsistent with the geological investigation, the Engineer may require removal and replacement of that material.

504.13 Tolerances. The wall shall have a planned face batter per the design plans. The Contractor shall be responsible for conforming the bottom of wall location to curbs, barriers, utilities or other appurtenances shown in the plans.

The Contractor shall take whatever means necessary to ensure that the wall stays within the tolerances listed below both during and after construction. Areas of the wall that are not within the stated tolerances shall be removed and corrected at the Contractor's expense regardless of their location in the wall.

(a) The front side of the top of wall shall not deviate from its planned horizontal or vertical location by more than 1.0 inch.

(b) No point on the front face of the wall shall deviate from a vertical 10-foot straight edge by more than 1 inch. No point on the front face of the wall shall deviate from the planned theoretical curve by more than 1 inch.

(c) Horizontal lines formed by rows of block shall not deviate from straightness by more than 0.25 inches in 10 feet as measured with a 10-foot straight edge.

(d) The vertical gap between the front face of the blocks shall not exceed 0.5 inches in width.

(e) The Engineer shall determine the percentage of unacceptable block which has been incorporated in the wall. Unacceptable blocks are those that are cracked, chipped, damaged, or otherwise defective. The wall shall be rejected if this percentage exceeds 2 percent of the total number of blocks in that wall. Visible efflorescence of the blocks before final acceptance of the project shall be cause for rejection.

504.14 Instrumentation. The Engineer may install and monitor instrumentation in and around the wall to facilitate assessment of the wall performance, settlement and stability. The Contractor shall fully cooperate in the installation and monitoring of this instrumentation. The Engineer shall make an effort to minimize the impact of the installation and monitoring on the Contractor's operations. The Contractor shall take whatever measures necessary to prevent damage to the instrumentation due to his operations. If any of the instrumentation is damaged the Contractor shall immediately replace or repair it to the satisfaction of the Engineer, at the Contractor's expense.

The Engineer will make adjustments to the quantity or location of the instrumentation in response to conditions encountered in the field. The Engineer will monitor the walls until completion of the project.

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REVISION OF SECTION 504
LARGE BLOCK RETAINING WALL

504.15 Performance and Acceptance of Structures. The performance of the walls will be evaluated based on instrumentation values and visual observations indicating that a stable wall system has been achieved. The Engineer will use the Designer of Record's estimated deformations, the design references, and engineering judgment to make his determination. The Engineer will not make this determination prior to 6 weeks after completion of the structural portions of the wall. This determination will be made to establish payment for "Acceptance of Performance". This acceptance does not relieve the Contractor of his obligations under Section 105.12 of the Standard Specification for Road and Bridge Construction.

MEASUREMENT AND PAYMENT

504.16 Payment will be made under:

Pay Item	**Pay Unit**
Large Block Retaining Wall	Square Feet

Payment for Large Block Retaining Wall will be full compensation for all work and materials required to complete the walls. This work shall include, but is not limited to, block units, geotextile separator fabrics, backfill materials, drainage systems, founding materials and incidentals necessary to acceptably fabricate and construct the Large Block Retaining Walls. Removal of the unsatisfactory material shall be paid for under Pay Item 203 – Muck Excavation.

REVISION OF SECTION 504
SOIL NAIL WALL

Section 504 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

504.17 This work consists of constructing a permanent soil nail wall (also referred to as ground nail wall) as specified herein, as shown on the plans. Temporary soil nail walls are not covered in this specification. The work includes:

(a) Excavating staged lifts in accordance with the plans and approved submittals.

(b) Drilling soil nail holes to the diameter and length shown on the plans.

(c) Installing soil nails including placement and grouting.

(d) Performing soil nail testing and providing test results to the Engineer.

(e) Providing and installing the specified drainage features.

(f) Providing and installing bearing plates, washers, nuts, couplers, and other required miscellaneous materials.

(g) Constructing the shotcrete face.

MATERIALS

504.18 Materials shall meet the following requirements:

(a) Concrete shall be Class D, conforming to the requirements of Section 601.

(b) Reinforcing Steel shall conform to the requirements of Section 602.

(c) Shotcrete shall conform to the requirements of Section 641.

(d) Forms and falsework shall conform to the requirements of subsections 601.09 and 601.11.

(e) Geocomposite strip drains shall comply with Section 712.12.

(f) Underdrains and pipes shall comply with Sections 712.11 and 712.13.

504.19 Soil Nails

(a) *Solid Bar Soil Nail.* Bars shall conform to AASHTO M31 for Grade 75 or ASTM A 722 for Grade 150. Bars shall be deformed, continuous without splices or welds, new, straight, undamaged, or epoxy-coated, or encapsulated as shown on the plans. Bars shall be threaded a minimum of 6 inches on the wall anchorage end to allow proper attachment of bearing plate and nut. Threading may be continuous spiral deformed ribbing provided by the bar deformations (continuous thread bars) or may be cut into a reinforcing bar. If threads are cut into a reinforcing bar, the next-larger bar number designation from that shown on the plans shall be provided at no additional cost.

(b) *Hollow Bar Soil Nail.* Bars shall conform to the properties specified in tables A.2-A.4 of Appendix A, from the Federal Highway Administrations' publication number FHWA-NHI-14-007 *Soil Nail Walls Reference Manual*.

(c) *Bar Coupler.* Bar couplers shall develop the full ultimate tensile strength of the bar as certified by the manufacturer.

(d) *Fusion Bonded Epoxy Coating.* Epoxy coating shall conform to ASTM A775 or A934. The minimum thickness shall be 0.012 inch and shall be electrostatically applied. Bend test requirements are waived. Coating at the wall anchorage end of epoxy-coated bars may be omitted over the length provided for threading the nut against the bearing plate. Coating at the end of the bar of epoxy-coated bars may be omitted over the length provided for threading a coupler if bars are to be joined. Galvanization may be substituted for epoxy. Bars should be galvanized according to ASTM A767/A767M. A minimum galvanization coating of 3.4-mil thickness is required. Galvanization shall be applied in accordance with ASTM A153 for nuts, plates, and other hardware.

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REVISION OF SECTION 504
SOIL NAIL WALL

(e) *Encapsulation.* Encapsulation shall be a sheathing of either corrugated HDPE tube with a minimum 0.06-inch thickness conforming to AASHTO M252 or corrugated PVC tube with a minimum 0.04-inch thickness conforming to ASTM D1784, Class 13464-B.

(f) *Centralizer*. Centralizers shall be manufactured from Schedule 40 PVC pipe or tube, or other material not detrimental to the soil nail steel or corrosion protection. Wood shall not be used. Centralizers shall be

(1) Securely attached to the soil nail bar.
(2) Sized to position the soil nail bar within 1 inch of the center of the drill hole.
(3) Sized to allow tremie pipe insertion along the full length of the drill hole.
(4) Sized to allow grout to freely flow up the drill hole.

(g) *Soil Nail Grout.* The minimum compressive strength for grout should be 1,500 pounds per square inch (psi) at 3 days, and 3,000 psi at 28 days, as tested in accordance with AASHTO T106/ASTM C109. If sand is used in the grout mixture, it shall meet the requirements of subsection 703.2. The water/cement ratio and specific gravity can be used as a primary quality control of the neat cement grout mix if Contractor can demonstrate the materials and mix design consistently produce a grout of the minimum specified strength. Neat cement grout cubes shall be molded and tested on the grout used in production soil nails and the adjacent test soil nail. Additional neat cement grout cubes may still be molded and tested periodically as needed as verification of grout compressive strength as determined by the Engineer.

(h) *Fine Aggregate.* Fine aggregate shall conform to subsection 703.2.

(i) *Portland Cement.* Portland Cement shall conform to AASHTO M85, Type II modified or V and shall be the product of one manufacturer. If the brand or type of cement is changed during the project, additional grout mix tests shall be conducted to ensure consistency of quality and performance in situ. The type of cement used for shotcrete and grout shall be based on Table 601-2 based on the highest measured water-soluble sulfate content of the retained soil. The cement used for shotcrete and grout shall meet the sulfate resistance requirements of subsection 601.04.

(j) *Admixtures.* Admixtures shall conform to Section 711. Admixtures that control bleed, improve flowability, reduce water content, reduce washout, and retard set may be used in the grout as approved by the Engineer. Accelerators are not permitted. Expansive admixtures may be used only in grout used for filling sealed encapsulations. Admixtures shall be compatible with the grout and mixed in accordance with the manufacturer's recommendations.

(k) *Film Protection.* Polyethylene film for moisture loss control shall conform to AASHTO M171.

504.20 Bearing Plates, Washers, Nuts, and Headed Studs.

(a) *Bearing Plates.* Bearing plates shall conform to AASHTO M183/ASTM A36.

(b) *Beveled Washers*. Beveled washers shall conform to ASTM F436, with an angle matching the inclination of the soil nail to provide uniform bearing.

Nuts. Nuts shall be hexagonal and fitted with beveled washer or spherical seat to provide uniform bearing to develop the full ultimate tensile strength of the bar as certified by the manufacturer and conform to AASHTO M292/ASTM A194.

(c) *Headed Studs*. Headed studs on the bearing plate shall consist of headed studs and conform to requirements of Section 509.12.

504.21 Welded Wire Fabric. Welded Wire Fabric shall conform to AASHTO M55, AASHTO M221, or ASTM A1064.

504.22 Initial Shotcrete Facing. The Contractor shall submit for review and acceptance all materials, methods, and control procedures for this work.

CONSTRUCTION REQUIREMENTS

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REVISION OF SECTION 504
SOIL NAIL WALL

504.23 Contractor Qualifications. The Contractor shall provide on-site supervisors and drill operators with experience installing permanent soil nails on at least 3 permanent soil nail retaining wall projects during the past 3 years totaling at least 10,000 square feet of wall face area and at least 500 permanent soil nails.

504.24 Submittals. The following documents shall be submitted in accordance with subsection 105.02. No work relating to soil nail wall construction including ordering materials shall be performed before the following submittals have been reviewed and approved by the Engineer.

(a) *Qualifications*. The soil nailing Contractor shall submit a brief description of at least 3 completed projects, including the owning agency's name, address, current phone number, location of project, project contract value, square foot of wall, number of nails, scheduled completion date, and actual completion date for the project.

(b) *Personnel*. At least 14 calendar days before starting soil nail work, the soil nailing Contractor shall identify on-site supervisors, and drill operators assigned to the project, and submit a summary of each individual's experience. Only those individuals designated as meeting the qualifications requirements shall be used for the project. The soil nailing Contractor shall not substitute for any of these individuals without written approval of the Engineer. The Engineer will approve or reject the soil nailing Contractor qualifications and staff within 15 working days after receipt of the submission. The Engineer may suspend the work if the soil nailing Contractor substitutes unqualified personnel for approved personnel during construction. If work is suspended due to the substitution of unqualified personnel, the Contractor shall be fully liable for additional costs resulting from the suspension of work and no adjustment in contract time resulting from the suspension of the work will be allowed.

(c) *Construction Plan*. At least 14 days before starting soil nail work, the soil nailing Contractor shall submit a Construction Plan to the Engineer that includes the following:

(1) The start and finish date and proposed detailed wall construction sequence. Include schedule entries and anticipated durations for each lift excavation, soil nail installation for each lift, grout curing, soil nail testing, and shotcrete placement.

(2) Drilling and grouting methods and equipment, including the drill hole diameter proposed to achieve the specified pullout resistance values shown on the plans and any variation of these along the wall alignment.

(3) Soil nail grout mix design, including compressive strength test results supplied by a qualified independent testing lab verifying the specified minimum 3-day and 28-day grout compressive strengths. Previous test results for the same grout mix completed within one year of the start of grouting may be submitted for verification of the required compressive strengths.

(4) Soil nail grout placement procedures and equipment.

(5) Shotcrete materials and methods including methods to address soil fall out, perched water, and anti-washout as needed based on review of the Geotechnical Report.

(6) All materials, methods, and control procedures for the initial shotcrete facing for review and acceptance for this work.

(7) Soil nail testing methods and equipment setup.

(8) Identification number and certified calibration records for each test jack, pressure gauges, and load cell to be used. Jack, load cell, and pressure gauge shall be calibrated as a unit. Calibration records shall include the date tested, the device identification number, and the calibration test results and shall be certified for an accuracy of at least 2 percent of the applied certification loads by a qualified independent testing laboratory within 6 months prior to submittal.

(9) Certificates of Compliance for:

a. The soil nail yield or ultimate tensile strength.
b. Soil nail bar steel type.
c. Portland cement used for grout
d. Soil nail centralizers.
e. Bearing plates, washers, nuts, and couplers.
f. Corrosion protection.
g. Geocomposite strip drain and underdrain material.

The Engineer will approve or reject the soil nailing Contractor's Construction Plan within 10 working days after the submission. Approval of the Construction Plan does not relieve the Contractor of responsibility for the successful completion of the work.

504.25 Protection and Cleanup. During work operations, the Contractor shall take such precautions as may be necessary to prevent shotcrete overspray, drill cuttings, equipment exhaust, oil, wash water, and other materials from defacing or damaging private and public property including adjacent landscaping in accordance with subsections 107.12 and 107.25. The Contractor shall furnish all equipment as may be necessary to handle waste water and material from the operations, and clean up all waste resulting from the operations. The Contractor is responsible for the stability of the highway facility, traffic control, and other nearby structures.

504.26 Storage and Handling. Soil nail bars shall be stored and handled in a manner to avoid damage, excessive bending, permanent deformation, or corrosion. Bars exhibiting abrasions, cuts, welds, weld splatter, corrosion, or pitting shall be replaced. Bars exhibiting damage to encapsulation or epoxy coating shall be replaced. Repaired epoxy coating areas shall have a minimum 0.012-inch thick coating. Bars exhibiting damage shall be repaired or replaced at the Contractor's expense.

504.27 Excavation. The Contractor shall be responsible for providing the necessary survey and alignment control during the excavation for each lift, locating drill holes, and verifying limits of the soil nail wall installation. Prior to any excavation, surface water controls shall be installed around the wall area as needed to prevent surface water, seepage, or springs from flowing within or into the excavation or as determined by the Engineer. The Engineer shall be notified 14 days prior to the beginning of excavation to allow to observe the excavation and drilling as needed. The Engineer shall be contacted immediately if the Contractor encounters any ground or materials during the excavation or drilling that is not shown on the plan set or unanticipated seepage, springs, or other sources of groundwater to allow for review of the design. The Contractor shall reference the Geotechnical Report for additional information concerning the ground conditions that are anticipated during excavation.

Excavation not associated with the soil nail wall construction shall not be performed within a horizontal distance equal to the total height of the final soil nail wall face excavation. The height of the exposed unsupported final excavation face cut shall not exceed the vertical soil nail spacing plus the required reinforcing lap or the short-term stand-up height of the ground, whichever is less. Excavation shall be completed to the final wall excavation line and shotcrete applied in the same work shift, unless otherwise approved by the Engineer. Application of the shotcrete may be delayed up to 24 hours if the Contractor can demonstrate that the delay will not adversely affect the excavation face stability.

During the construction of the soil nail wall, the Contractor shall modify excavation procedures and soil nail wall installation procedures to prevent the loss of material from the excavation face or from behind the previously installed shotcrete lift (chimneying). This may require adjustments to the sequencing between excavation, soil nail drilling and shotcreting to shorten the time the excavation lift is unsupported, drilling and installing the soil nails through temporary berms prior to final excavation and/or installing the initial shotcrete prior to drilling the soil nails. All voids that develop behind the shotcrete shall be filled with grout at no additional cost to the Department.

Excavation of the next-lower lift shall not proceed until soil nail installation, initial shotcrete face placement, attachment of bearing plates and nuts, and soil nail testing have been completed and accepted in the current lift. Soil nail grout and shotcrete shall have a working strength of 1000 psi before excavation of the next underlying lift.
Where the Contractor's excavation and installation methods result in a discontinuous wall along any soil nail row, the ends of the upper lift excavation shall extend beyond the ends of the next lower excavation lift by at least 10 feet. Slopes at these discontinuities shall be constructed to prevent sloughing or failure of the temporary slopes. If sections of the wall are to be constructed at different times, the Contractor shall prevent sloughing or failure of the temporary slopes at the end of each wall section.

The Contractor shall remove all or portions of cobbles, boulders, rubble or other subsurface obstruction encountered at the cut line which will protrude in to the shotcrete facing. The Contractor shall determine the method of removal of face protrusions, including

method to safely secure remnant pieces left behind the excavation face, and method for promptly backfilling voids resulting from removal of protrusions extending behind the excavation face. Voids over-break or over-excavation beyond the plan wall excavation line resulting from the removal of face protrusions or excavation operation shall be backfilled with shotcrete, concrete, pr grout.

504.28 Soil Nail Installation. Soil nail length and drill hole diameter used shall be those necessary to develop the specified load capacity to satisfy the acceptance criteria, but not less than the lengths or diameters shown on the plans. The Contractor shall modify their drilling procedures, as needed, such as increasing the drill hole diameter or improving the roughness of the drill hole to achieve the required soil nail pullout resistance specified in the plans. All work required to achieve the required soil nail pullout resistance including modifications to the drilling procedures will not be measured separately but shall be included in the unit price of the work. Holes shall be drilled for the soil nails at the locations, elevations, orientations, and minimum lengths shown on the plans. Drilling equipment and methods shall be suitable for the ground conditions and conform to the accepted installation methods submitted by the soil nailing Contractor. Drilling muds or other fluids shall not be used to remove cuttings. If caving ground is encountered, cased drilling methods shall be used to support the sides of the drill holes. Self-drilling soil nail bars (also known as hollow, self-grouting or pressure grouted soil nail bars) shall not be used unless indicated on the plans. Soil nail bars shall be as shown on the plans. Provide centralizers per Section 504.03 (e).

504.29 Grouting. The drill hole shall be grouted after installation of the soil nail bar and within 2 hours of completion of drilling. The grout shall be injected at the lowest point of each drill hole through a grout tube or casing. The outlet end of the grout tube or casing shall be kept below the surface of the grout as the conduit is withdrawn to prevent the creation of voids. The drill hole shall be completely filled in one continuous operation. Cold joints in the grout column are not allowed except at the top of the test bond length of proof tested production soil nails. Excessive grout take is defined as twice the theoretical grout volume to grout the drill hole. The Engineer shall be notified of excessive grout take to allow for needed modification is wall design and construction. Maintain the temporary unbonded length of proof test soil nails open for subsequent grouting. If the unbonded test length of production proof test soil nails cannot be satisfactorily grouted subsequent to testing, the Contractor shall install a new soil nail in its place.

In some granular soils with an open matrix with no cohesion, the potential for drill hole collapse or grout leakage may be large. In this case, the use of a grout "sock" may be used as approval by the Engineer to prevent the collapse of the drill hole and to reduce grout flow into the highly-permeable soil.

504.30 Underdrain. The underdrain shall be installed in accordance with Section 605.03. The underdrain should be installed as part of the soil nail wall construction. If the underdrain is to be installed at a time after construction of the soil nail wall, the Contractor shall notify the Engineer to review any excavation at the foot of the wall for stability.

SOIL NAIL TESTING

504.31 Both verification and proof testing of designated test soil nails shall be performed. Proof tests shall be performed on production soil nails at locations selected by the Engineer or as shown on the plans. Testing of a soil nail shall not be performed until the soil nail grout and shotcrete facing have cured for at least 72 hours or attained their specified 3-day compressive strength.

The Contractor shall provide all necessary equipment to perform the soil nail. The Contractor shall also have calibrated back up gauges and equipment to minimize down time due to testing equipment failure. The pressure gauge shall be graduated in 100 psi increments or less. The soil nail head movement shall be measured with a minimum of 2 dial gauges capable of measuring to 0.001 inch.

Preliminary results shall be submitted to the Engineer within 24 hours of the test completion. A full report containing test load results shall be submitted to the Engineer within 5 working days of the test completion.

504.32 Verification Testing Of Sacrificial Soil Nails. Verification testing shall be performed on sacrificial test soil nails as shown on the plans. Verification testing shall be performed prior to installation of production soil nails to confirm the appropriateness of the Contractor's drilling and installation methods, and verify the required soil nail pullout resistance.

Verification test soil nails shall be placed and constructed to mimic production nails.

Verification tests are conducted according to the loading schedule of Table 504-1. Each load increment is held for at least 10 minutes. The Contractor must record soil nail movements at each load increment and the time intervals shown in the table for each load step. Creep tests are performed at 0.75 times the verification test load (VTL). The alignment load (AL) should be the minimum load

required to align the testing apparatus and shall not exceed 5 percent of the VTL. Set dial gauges to "zero" after applying the alignment load. Following application of the maximum load, reduce the load to the alignment load and record the permanent set.

Hold each load increment for at least 10 minutes. Monitor the verification test soil nail for creep at the 0.75 VTL load increment by measuring and recording soil nail movement. Maintain the load during the creep test within 2 percent of the intended load by use of the load cell. The test results shall be presented in a report with cover letter and stamped by a Colorado registered Professional Engineer for the Engineers review and acceptance prior to production. The Engineer shall have 10 working days to review the report and based on the results, design modifications may be required.

Table 504-1
VERIFCATION TEST LOADING SCHEDULE

Load	Hold Time (minutes)[2]
AL(1)	1
0.13 VTL	10 (recorded at 1, 2, 4, 5, 10)
0.25 VTL	10 (recorded at 1, 2, 4, 5, 10)
0.38 VTL	10 (recorded at 1, 2, 4, 5, 10)
0.50 VTL	10 (recorded at 1, 2, 4, 5, 10)
0.63 VTL	10 (recorded at 1, 2, 4, 5, 10)
0.75 VTL (Creep Test)[3]	60 (recorded at 1, 2, 4, 5, 6, 10, 20, 30, 50, 60)
0.88 VTL	10
1.00 VTL[4]	10
AL	1[5]

Notes:
(1) AL = alignment load, which is less than or equal to 0.05 VTL.
(2) Soil nail movement must be measured after each load increment has been achieved and at each time step.
(3) Maintain the load during the creep test within 2 percent of the intended load by use of the load cell.
(4) The Engineer may allow loading to failure to determine nominal soil conditions.
(5) Permanent soil nail movement must also be recorded.

504.33 Proof Testing Of Production Soil Nails. Successful proof testing shall be performed on the production soil nails as indicated by the Engineer. The Engineer will determine the locations and number of proof tests prior to soil nail installation unless otherwise shown on the plans.

Proof tests are conducted according to the loading schedule of Table 504-2. Unless the soil is susceptible to creep per subsection 504.31, each load increment is held until readings are stable as defined by three readings within 0.005 inches taken one per minute over three minutes. The Contractor shall record soil nail movements at each load increment and the time intervals shown in the table for each load step. Creep tests shall be performed at 1.00 PTL. The alignment load (AL) shall be the minimum load required to align the testing apparatus and shall not exceed 5 percent of the PTL. Set dial gauges to "zero" after applying the alignment load. Following application of the maximum load, reduce the load to the alignment load and record the permanent set.

The creep period shall start as soon as the maximum test load (1.0 PTL) is applied and the soil nail movement shall be measured and recorded at 1 minute, 2, 3, 5, 6, and 10 minutes. Where the soil nail movement between 1 minute and 10 minutes exceeds 0.04 inch, the maximum test load shall be maintained for an additional 50 minutes and movements recorded at 20 minutes, 30, 50, and 60 minutes. All load increments shall be maintained within 5 percent of the intended load.

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REVISION OF SECTION 504
SOIL NAIL WALL

Table 504-2
PROOF TEST LOADING SCHEDULE

Load	Hold Time (minutes)[2]
AL[1]	1
0.17 PTL	Until Movement Stabilizes[3]
0.33 PTL	Until Movement Stabilizes
0.50 PTL	Until Movement Stabilizes
0.67 PTL	Until Movement Stabilizes
0.83 PTL	Until Movement Stabilizes
1.0 PTL (Creep Test)[4]	10 (recorded at 1, 2, 4, 5, 6, and 10)
AL	1

Notes:
(1) AL = alignment load, which is less than or equal to 0.05 PTL.
(2) Times are measured after the target load has been achieved in each increment.
(3) If the soils reinforced with soil nails are relatively susceptible to deformation of creep, it is recommended to hold each load increment for 10 minutes and to record the soil nail movement at 1, 2, 5, and 10 minutes.
(4) If the soil nail movement measured between 1 and 10 minutes exceeds 0.04 in., PTL must be maintained for 50 additional minutes and movements must be recorded at 20, 30, 50, and 60 minutes. The permanent soil movement must also be recorded.

504.34 Test Soil Nail Acceptance Criteria. A test soil nail shall be considered acceptable when the following criteria are met.

(a) *Verification testing*. The following criteria shall be met for acceptance of the soil nail:

(1) Pullout shall not occur at loads less than 1.00 VTL.

(2) The creep movement between the 1 and 10 minute readings at 0.75 VTL shall be less than 0.04 in.

(3) The creep movement between the 6 and 60 minute readings at 0.75 VTL shall be less than 0.08 in.

(4) The creep rate shall be linear or decreasing throughout the creep test load-hold period.

(b) *Proof testing*. The following criteria shall be met to acceptance of the soil nail:

(1) No pullout occurs.

(2) The creep movement shall be less than 0.04 in. between the 1 and 10 minute readings.

(3) If this movement is exceeded, PTL shall be maintained for an additional 50 minutes with readings recorded at 20, 30, 50, and 60 minutes.

(4) If the creep test is extended, the creep movement between the 6 and 60 minute readings shall be less than 0.08 in.

504.35 Test Soil Nail Rejection. If a test soil nail does not satisfy the acceptance criterion in Subsection 504.18:

(a) *Verification test soil nails*. The Engineer will evaluate the results of each verification test. Installation methods that do not satisfy the soil nail testing requirements will be rejected. The Contractor shall propose and provide plans and calculations for alternative methods for review and acceptance by the Engineer and shall install replacement verification test soil nails. Replacement test soil nails shall be installed and tested at the Contractor's expense. The production soil nails shall be installed using the same installation procedures (drill equipment, drill tooling, drill hole diameter, grouting, etc.) used to provide successful verification tests at no additional cost to the Department.

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(b) *Proof test soil nails*. The Engineer may require the Contractor to replace some or all of the installed production soil nails between a failed proof test soil nail and the adjacent passing proof test soil nail. Alternatively, the Engineer may require the installation and testing of additional proof test soil nails to verify that adjacent previously installed production soil nails have sufficient load carrying capacity. Installation and testing of additional proof test soil nails or installation of additional or modified soil nails as a result of proof test soil nail failures shall be at the Contractor's expense.

WALL FACING

504.36 Wall Drainage Network. All elements of the wall drainage network shall be installed and secured as shown on the plans. The drainage network shall consist of installing geocomposite drain strips, PVC connection pipes, wall footing drains, and weepholes as shown on the plans. Exclusive of the wall footing drains, all elements of the drainage network in the current lift shall be installed prior to shotcreting.

(a) *Geocomposite Drain Strips.* Geocomposite drain strips shall be centered between the columns of soil nails as shown on the Plans. The drain strips shall be at least 12 inches wide and placed with the geotextile side against the ground. The strips shall be secured to the excavation face and shotcrete prevented from contaminating the geotextile. Drain strips shall be vertically continuous. Splices shall be made with a 12 inch minimum overlap such that the flow of water is not impeded. Drain plate and connector pipe shall be installed at the base of each strip as shown on the plans. Damage to the geocomposite drain strip which may interrupt the flow of water shall be repaired.

(b) *Footing Drains.* Footing drains shall collect groundwater from the drainage system and be installed at the bottom of each wall as shown on the plans. The drainage geotextile shall envelope the footing drain aggregate and pipe and conform to the dimensions of the trench. The drainage geotextile shall overlap on top of the drainage aggregate as shown on the plans. Damaged or defective drainage geotextile shall be repaired or replaced.

504.37 Shotcrete Facing. The initial shotcrete facing and final shotcrete facing (if required) shall be installed in accordance with Section 641. Membrane curing compound shall not be used. Maturity meters shall be used to monitor all shotcrete in accordance with subsection 641.05.

(a) *Initial Face Finish.* Shotcrete finish shall be either an undisturbed gun finish as applied from the nozzle or a rod, broom, wood float, rubber float, steel trowel or rough screeded finish as shown on the Plans.

(b) *Attachment of Soil Nail Head Bearing Plate and Nut.* Bearing plate, washers, and nut shall be attached to each soil nail head as shown on the plans. While the initial shotcrete facing is still plastic and before its initial set, the plate shall be uniformly seated on the shotcrete by hand-wrench tightening the nut. Where uniform contact between the plate and the shotcrete cannot be provided, the plate shall be set in a bed of grout. After grout has set for 24 hours, the nut shall be hand-wrench tightened. Bearing plates and headed studs shall be located within the tolerances shown on the Plans.

(c) *Final Face Finish*. Shotcrete finish shall be either an undisturbed gun finish as applied from the nozzle.

(d) *Shotcrete Facing Tolerances.* Construction tolerances for the shotcrete facing from plan location and plan dimensions shall be as shown in Table 504-3.

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Table 504-3
SHOTCRETE FACING TOLERANCE

Item	Tolerance
Horizontal location of welded wire mesh, reinforcing bars, and headed studs measured horizontally from wall face	3/8 in.
Location of headed-studs on bearing plate	1/4 in.
Spacing between reinforcing bars	1 in.
Reinforcing lap length	1 in.
Thickness of shotcrete, if troweled or screeded	9/16 in. [approximation of 0.6 in.]
Thickness of shotcrete, if left as shot	1-1/8 in. [approximation of 1.2 in.]
Planeness of finish face surface, gap under 10-ft straightedge, if troweled or screeded	9/16 in. [approximation of 0.6 in.]
Planeness of finish face surface, gap under 10-ft straightedge, if left as shot	1-1/8 in. [approximation of 1.2 in.]
Soil nail head bearing plate deviation from parallel to wall face	10 degrees

504.38 Forms And Falsework. Forms and falsework shall conform to subsections 601.09 and 601.11 respectively.

504.39 Reinforcing Steel. Reinforcing steel shall be installed in accordance with Section 602.

504.40 Structural Concrete. Structural concrete shall be placed in accordance with Section 601.

504.41 Acceptance. Material for the soil nail retaining wall will be accepted based on the manufacturer production certification or from production records. Construction of the soil nail retaining wall will be accepted based on survey, visual inspection, and the relevant production testing records.

METHOD OF MEASUREMENT

504.42 Soil nail retaining walls will be calculated and paid by the number of nails by length. Tiered and stepped walls shall be considered separate walls. The final pay quantity will be the design quantity increased or decreased by any changes authorized by the Engineer. Additional earthwork outside of excavation for the wall installation and backfilling prior to or post wall construction is not included. Soil nails must be installed, tested, and accepted to be considered complete.

BASIS OF PAYMENT

504.43 The accepted quantity, measured as provided above, will be paid for at the contract unit price per square foot for the pay item listed below that is shown on the bid schedule. The pay item Soil Nail (20 foot) shall include, but is not limited to, the following items and labor associated therein: nail bars, grout, centralizers, washers, nuts, bearing plates and headed studs. The pay item Shotcrete Facing shall include, but is not limited, to the following items and labor associated therein: shotcrete, welded-wire fabric, reinforcing bars, drain boards and components of weep holes. Excavation associated with work will be paid for under bid item 203-00010, Unclassified Excavation (Complete in Place). Pockets and voids that must be filled will not be paid for separately, but will be incidental to the work. Over-excavation will not be paid for.

Payment will be made under:

Pay Item	Pay Unit
Soil Nail (20 Foot)	Each
Shotcrete Facing	Square foot
Verification Testing	Incidental to Work

REVISION OF SECTION 506
RIPRAP

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

Subsection 506.01 shall include the following:

This work consists of construction of riprap within 100 – year floodplain of the Colorado River and Reed Wash.

Subsection 506.02 shall include the following:

Riprap installed within Reed Wash (D_{50} = 9”) shall be graded to minimize the existence of void spaces within the riprap matrix while meeting gradation requirements given in Table 506-2. Control of gradation will be by visual inspection. The Contractor will be required to field verify gradation by dumping a minimum of two truck loads during installation.

All riprap installed within Reed Wash shall be covered with a minimum 3” native soils. Location and type of native soils to be stockpiled for covering riprap will be identified by the Biological Monitor during the biological preconstruction survey. Native soils stockpiled for use on riprap shall not be treated for weeds. Native soils will not be measured and paid for but is considered incidental to pay item 506 – Riprap.

REVISION OF SECTION 514
PEDESTRIAN AND BIKEWAY RAILING

Section 514 of the Standard Specifications is hereby revised for this project as follows:

Subsection 514.01 shall include the following:

This work consist of the construction of pedestrian or safety railing in accordance with these specifications and in conformity with the details, lines and grades shown on the plans.

Subsection 514.03 (1) shall include weathering steel conforming to the requirements of ASTM A847 or A588.

Subsection 514.08 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Safety Railing	Linear Foot

REVISION OF SECTION 603
CULVERTS AND SEWERS

Section 603 of the Standard Specifications is hereby revised for this project as follows:

Subsection 603.01 shall include the following:

This work consist of the construction of culverts and storm drains.

Subsection 603.04 shall include the following:

The Contractor shall leave no open trench for storm drains or sanitary sewer, or irrigation culvert, exposed during non-working hours. Any trench excavation that is made in advance of pipe or structure installation shall be utilized by placing pipe and backfilling during the same working shift. If any open trench remains after pipe laying or structure construction takes place, the trench shall be backfilled prior to the time that the Contractor's work stops and the site is vacated. An open trench may be covered with a minimum of one inch thick steel plate to protect from pedestrian or vehicular traffic by barricades, fence or other means as approved by the Engineer.

In subsection 603.12, delete the third paragraph and replace with the following:

Structure excavation, structure backfill and bedding, for storm drain lines, sanitary sewers and irrigation lines, and utility pipes will not be measured and paid for separately, but shall be included in the work.

REVISION OF SECTION 604
MANHOLES, INLETS, AND METER VAULTS

Section 604 of the Standard Specifications is hereby revised for this project as follows:

Subsection 604.01 shall include the following:

This work consist of the construction of special inlets and inlet boxes.

Subsection 604.05 shall include the following:

The Contractor shall leave no open excavation for manholes, inlets, and vaults, exposed during non-working hours. Any excavation that is made in advance of structure installation shall be utilized by placing structure and backfilling during the same working shift. If any open excavation remains after structure construction takes place, the excavation shall be backfilled prior to the time that the Contractor's work stops and the site is vacated. An open excavation may be covered with a minimum of 1" thick steel plate to protect from pedestrian or vehicular traffic by barricades, fence or other means as approved by the Engineer.

In subsection 604.07, shall include the following:

Pay Item	**Pay Unit**
Inlet, Special (___Foot)	Each

REVISION OF SECTION 607
FENCES

Section 607 of the Standard Specifications is hereby revised for this project as follows:

Subsection 607.01 delete paragraph one and replace with the following:

The work consists of construction of fences, including post and cable fence, gates, and removal of temporary plastic fence in accordance with these specifications and in conformity with the lines and grades shown on the plans or established.

Subsection 607.04 shall include the following:

Trail closure gates will be measured as complete units of the size and type specified.

Post and cable fence shall be furnished as complete-in-place and measured by the lineal foot. Line posts, cable, and hardware will not be measure and paid for separately but shall be included in the contract unit price for new fence.

In Subsection 607.04 delete the third paragraph and replace with the following:

End posts, corner posts and line brace posts for chain link fence, barbed wire and combination wire fence will not be measured and paid for separately, but shall be included in the work.

In Subsection 607.04 delete the fifth paragraph and replace with the following:

Line posts required for reset fence will not be measured and paid for separately, but shall be included in the work.

Subsection 607.05 shall include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Fence (Special) (Post and Cable)	Linear foot
(___Foot) Gate (Special)	Each

REVISION OF SECTION 625
CONSTRUCTION SURVEYING

Section 625 of the Standard Specifications is hereby revised for this project as follows:

Subsection 625.01 shall include the following:

This work consists of construction surveying in conformance with the CDOT Survey Manual.

Delete subsection 625.04 and replace with the following:

The Contractor shall be responsible for engaging the services of a qualified surveyor who is experienced and competent in construction surveying to perform construction surveying including calculations, layouts and staking. It shall be the responsibility of the Contractor's Surveyor to provide the Contractor and subcontractors with all construction staking, cut/fill sheets and any other information required for construction of the project.

Construction stakes shall be provided wherever necessary to insure that all construction is to proper location, evaluation and grade.

The City of Fruita will provide the necessary information for the Contractor's Surveyor to determine proper horizontal and vertical control necessary to construct the improvements. The Contractor and/or his Surveyor shall be responsible for marking and staying within the right of way, provided by the County.

Upon request, the City of Fruita will provide an electronic copy in an AutoCAD compatible format, to the Contractor's Surveyor to assist in project staking.

The bid item is included for these services and the lump sum payment for "Construction Surveying" shall be full compensation for this work.

Subsection 625.13 shall include the following:

No additional payment will be made for re-staking changes made by Change Orders or other changes which may occur unless such additional payment is approved in advance by the City.

REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Section 628 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

628.01 This work consists of the design, fabrication, and erection of a simple span, welded steel, truss pedestrian bridge with a concrete deck in accordance with the specifications and plan details.

628.02 Structural Steel. All structural steel shall be new (unused) material. The Contractor shall provide the Engineer with copies of all certified mill test reports for all structural steel and bolts. Floor beams, stringers, and members of each Half-through truss (upper and lower chords, diagonals, end posts and vertical posts) utilized in the bridges shall meet a longitudinal Charpy V-notch (CVN) value of 25 feet. pounds. at 40 degrees Fahrenheit. Testing shall be in accordance with AASHTO T 243 (ASTM A673). The H frequency of heat testing shall be used. The Contractor shall provide the Engineer with certified copies of all CVN test reports.

All anchor bolts, washers and nuts shall be galvanized in accordance with the requirements of ASTM A153. Each anchor bolt shall be provided with two nuts for jamming.

628.03 Concrete. All concrete shall conform to CDOT Class D requirements.

CONSTRUCTION REQUIREMENTS

628.04 Design. The *AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges* (AASHTO Guide Specifications) and the *AASHTO LRFD Bridge Design Specifications* (AASHTO Bridge Specifications) and shall govern the design.

The superstructure of the pedestrian bridge shall consist of two parallel Half-through trusses with at least one diagonal per panel. The trusses shall be the main load-carrying members of the bridge.

The members of each Half-through truss (upper and lower chords, diagonals, end posts, and vertical posts) shall be fabricated from square and rectangular structural steel tubing.

Floor beams and stringers shall be fabricated from structural steel shapes or square and rectangular structural steel tubing.

The structure shall conform to the clear span, clear width, structure depth, deck location and camber requirements shown on the plans.

Each pedestrian bridge shall be designed for the following loads and loading conditions:

1. Dead load shall be as defined in Section 3.5 of the AASHTO Bridge Specifications.

   No allowances for future wearing surface or utilities are required.

2. Live load shall be as defined in the AASHTO Guide Specifications. Distribution to the stringer and floor beams shall be in accordance with Sections 3 and 4 of the AASHTO Bridge Specifications. Deflection due to pedestrian live load and vibration limits as per the AASHTO Guide Specifications shall apply. Deflections due to occasional vehicular traffic shall not be considered.

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REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Pedestrian live load shall be 90 psf.

Vehicle live load shall be as defined herein and as shown on the plans:

The vehicle live loads shall be the AASHTO H-5 Design Vehicle

The vehicle live loads shall be combined with other loads as defined herein. These vehicle live loads are not to be combined with the pedestrian live load. The dynamic load allowance (Impact) need not be considered for these vehicular loadings.

3. Wind load shall be as defined by the AASHTO Guide Specifications, and used in combination with other loads in accordance with the AASHTO Bridge Specifications, Section 3.

   The horizontal deflections due to wind loads shall satisfy the deflection criteria in Section 5 of the AASHTO Guide Specifications.

4. Snow load shall be considered as an “Live Load” (LL) in accordance with the AASHTO Bridge Specifications, Section 3.9.6. This Live (Snow) Load shall be combined with other loads as defined by the AASHTO Bridge Specification “Strength I” Load Combination. This Live (Snow) Load shall not be applied simultaneously with the Pedestrian Live Load.

   Snow Load (LL) shall be 30 psf

5. Fatigue loading used for the fatigue and fracture limit state (Fatigue I) shall be in accordance with the AASHTO Guide Specifications. The fatigue importance factor, I_f, shall be taken as 1.0.

6. The structure shall be designed for all applicable load combinations.

5. Distribution of wheel loads on concrete deck shall be in accordance with Section 4 of the AASHTO Bridge Specifications.

Allowable loads in the structural steel members and weld metal shall be in accordance with Section 6 of the AASHTO Bridge Specifications.

Minimum thickness of structural steel shall be 3/16 of an inch.

½ inch diameter weep holes shall be drilled (flame cut holes will not be allowed) at all low points of all steel tubing members as oriented in the in-place, completed structure. In members that are level, or flat, a total of two weep holes shall be drilled, one at each end. Weep holes and their locations shall be shown on the Shop Drawings.

All welded tubular connections shall be designed in accordance with Section 2, Parts A and D (Delete Subsection 2.36.6), of the Structural Welding Code-Steel ANSI/AWS/D1.1 (Latest Edition).

Field splices shall be fully bolted and designed as slip-critical connections in accordance with Section 6 of the AASHTO Bridge Specifications.

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REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Bearings and anchor bolts shall be designed by the bridge manufacturer to satisfy the design loads and anticipated thermal movements of the superstructure. Details of the bearings and anchor bolts shall be provided to the Engineer prior to commencement of abutment construction to verify abutment design and dimensions. These details shall include the design reactions at the bearing locations.

The safety rail system shall be designed in accordance with Section 13 of the AASHTO Bridge Specifications.

Horizontal safety rails shall be placed on the structure up to a minimum height of 4'-6" above the deck surface. Safety rails shall be placed so as to prevent a 4" sphere from passing through the truss. Safety rails shall be angles welded to the inside or outside of the structure at the County's option.

The safety rail system shall be designed for an infill loading of 200 pounds, applied horizontally at right angles, to a one square foot area at any point in the system.

The Contractor shall submit five sets of Design Calculations and Shop Fabrication Details (Shop Drawings) to the Engineer. This submittal shall be in accordance with Subsection 105.02. The Design Calculations and Shop Drawings shall contain the endorsement seal of the Professional Engineer registered in the State of Colorado responsible for the design.

628.05 Shop Fabrication. Welding and fabrication of weathering steel pedestrian bridges shall conform to the requirements of the Structural Welding Code-Steel ANSI/AWS D1.1 (Latest Edition) as amended by the following:

1. As required in Subsection 4.7.3, a welding procedure shall be established by qualification in accordance with the requirements of Subsection 3.3 for the ASTM A 847 material used on the bridge. The results of the Procedure Qualification shall be recorded on Form E-1 in Annex E of AWS D 1.1.
2. The Contractor shall submit a Quality Control Plan. The Plan shall include personnel qualifications, certifications, and a Written Practice in accordance with ASNT SNT-TC-1A.
3. The quality of all welds shall be in accordance with Section 6, Table 6.1. In Table 6.1, Undercut 7(B), the criteria for primary members shall apply to the bottom chord members.
4. All Complete Joint Penetration Groove Welds in butt joints in the bottom chord members shall be 100% Magnetic Particle tested in accordance with ASTM E 709. Acceptance shall be determined in accordance with Section 6.10 and Table 6.1, using Alternating Current. In addition, complete joint penetration groove butt welds welded from one side without backing of bottom chord members shall be examined by ultrasonic testing in accordance with Section 6.11.1.
5. Magnetic Particle Testing shall be performed on 100% of all attachment welds to the bottom chord, using Alternating Current, in accordance with Section 6.10 and Table 6.1.
6. All Procedure Qualification Records and Welder Qualification Test Records shall be current within three years of the date of beginning fabrication.
7. A copy of all Procedure Qualification Records, Welder Qualification Test Records, Quality Control Plan and all visual and nondestructive test reports shall be provided to the Engineer.

REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Steel surface preparation shall be in accordance with section 509.24 of the standard specification.

628.06 Field Construction. The substructure shall be constructed in accordance with the details shown in the plans and the pedestrian bridge shop drawings. Before construction begins on the substructure, the Contractor shall determine the anchor bolt requirements and substructure dimensions needed to properly erect the structure which will be provided. The Engineer shall be provided with two copies of detail sheets delineating these requirements before work begins.

MEASUREMENT AND PAYMENT

628.07 The accepted quantity shall be paid for at the contract unit price for the pay unit listed below. Payment will be made under:

Pay Item	**Pay Unit**
Bridge Girder and Deck Unit	Each

Payment shall be full compensation for all work necessary to complete the item, which shall include design, fabrication, transportation to the bridge site, and erection. The substructure shall be measured and paid for separately, anchor bolts shall be included in the work. Payment will not be made for this item until all required reports, certifications, and forms have been submitted to the Engineer.

REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Section 628 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

628.01 This work consists of the design, fabrication, and erection of a simple span, welded steel, truss pedestrian bridge with a concrete deck in accordance with the specifications and plan details.

628.02 Structural Steel. All structural steel shall be new (unused) material. The Contractor shall provide the Engineer with copies of all certified mill test reports for all structural steel and bolts. Floor beams, stringers, and members of each Half-through truss (upper and lower chords, diagonals, end posts and vertical posts) utilized in the bridges shall meet a longitudinal Charpy V-notch (CVN) value of 25 feet. pounds. at 40 degrees Fahrenheit. Testing shall be in accordance with AASHTO T 243 (ASTM A673). The H frequency of heat testing shall be used. The Contractor shall provide the Engineer with certified copies of all CVN test reports.

All anchor bolts, washers and nuts shall be galvanized in accordance with the requirements of ASTM A153. Each anchor bolt shall be provided with two nuts for jamming.

628.03 Concrete. All concrete shall conform to CDOT Class D requirements.

CONSTRUCTION REQUIREMENTS

628.04 Design. The *AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges* (AASHTO Guide Specifications) and the *AASHTO LRFD Bridge Design Specifications* (AASHTO Bridge Specifications) and shall govern the design.

The superstructure of the pedestrian bridge shall consist of two parallel Half-through trusses with at least one diagonal per panel. The trusses shall be the main load-carrying members of the bridge.

The members of each Half-through truss (upper and lower chords, diagonals, end posts, and vertical posts) shall be fabricated from square and rectangular structural steel tubing.

Floor beams and stringers shall be fabricated from structural steel shapes or square and rectangular structural steel tubing.

The structure shall conform to the clear span, clear width, structure depth, deck location and camber requirements shown on the plans.

Each pedestrian bridge shall be designed for the following loads and loading conditions:

1. Dead load shall be as defined in Section 3.5 of the AASHTO Bridge Specifications.

   No allowances for future wearing surface or utilities are required.

2. Live load shall be as defined in the AASHTO Guide Specifications. Distribution to the stringer and floor beams shall be in accordance with Sections 3 and 4 of the AASHTO Bridge Specifications. Deflection due to pedestrian live load and vibration limits as per the AASHTO Guide Specifications shall apply. Deflections due to occasional vehicular traffic shall not be considered.

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REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Pedestrian live load shall be 90 psf.

Vehicle live load shall be as defined herein and as shown on the plans:

The vehicle live loads shall be the AASHTO H-5 Design Vehicle

The vehicle live loads shall be combined with other loads as defined herein. These vehicle live loads are not to be combined with the pedestrian live load. The dynamic load allowance (Impact) need not be considered for these vehicular loadings.

3. Wind load shall be as defined by the AASHTO Guide Specifications, and used in combination with other loads in accordance with the AASHTO Bridge Specifications, Section 3.

   The horizontal deflections due to wind loads shall satisfy the deflection criteria in Section 5 of the AASHTO Guide Specifications.

4. Snow load shall be considered as an “Live Load” (LL) in accordance with the AASHTO Bridge Specifications, Section 3.9.6. This Live (Snow) Load shall be combined with other loads as defined by the AASHTO Bridge Specification “Strength I” Load Combination. This Live (Snow) Load shall not be applied simultaneously with the Pedestrian Live Load.

   Snow Load (LL) shall be 30 psf

5. Fatigue loading used for the fatigue and fracture limit state (Fatigue I) shall be in accordance with the AASHTO Guide Specifications. The fatigue importance factor, I_f, shall be taken as 1.0.

6. The structure shall be designed for all applicable load combinations.

5. Distribution of wheel loads on concrete deck shall be in accordance with Section 4 of the AASHTO Bridge Specifications.

Allowable loads in the structural steel members and weld metal shall be in accordance with Section 6 of the AASHTO Bridge Specifications.

Minimum thickness of structural steel shall be 3/16 of an inch.

½ inch diameter weep holes shall be drilled (flame cut holes will not be allowed) at all low points of all steel tubing members as oriented in the in-place, completed structure. In members that are level, or flat, a total of two weep holes shall be drilled, one at each end. Weep holes and their locations shall be shown on the Shop Drawings.

All welded tubular connections shall be designed in accordance with Section 2, Parts A and D (Delete Subsection 2.36.6), of the Structural Welding Code-Steel ANSI/AWS/D1.1 (Latest Edition).

Field splices shall be fully bolted and designed as slip-critical connections in accordance with Section 6 of the AASHTO Bridge Specifications.

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REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Bearings and anchor bolts shall be designed by the bridge manufacturer to satisfy the design loads and anticipated thermal movements of the superstructure. Details of the bearings and anchor bolts shall be provided to the Engineer prior to commencement of abutment construction to verify abutment design and dimensions. These details shall include the design reactions at the bearing locations.

The safety rail system shall be designed in accordance with Section 13 of the AASHTO Bridge Specifications.

Horizontal safety rails shall be placed on the structure up to a minimum height of 4'-6" above the deck surface. Safety rails shall be placed so as to prevent a 4" sphere from passing through the truss. Safety rails shall be angles welded to the inside or outside of the structure at the County's option.

The safety rail system shall be designed for an infill loading of 200 pounds, applied horizontally at right angles, to a one square foot area at any point in the system.

The Contractor shall submit five sets of Design Calculations and Shop Fabrication Details (Shop Drawings) to the Engineer. This submittal shall be in accordance with Subsection 105.02. The Design Calculations and Shop Drawings shall contain the endorsement seal of the Professional Engineer registered in the State of Colorado responsible for the design.

628.05 Shop Fabrication. Welding and fabrication of weathering steel pedestrian bridges shall conform to the requirements of the Structural Welding Code-Steel ANSI/AWS D1.1 (Latest Edition) as amended by the following:

1. As required in Subsection 4.7.3, a welding procedure shall be established by qualification in accordance with the requirements of Subsection 3.3 for the ASTM A 847 material used on the bridge. The results of the Procedure Qualification shall be recorded on Form E-1 in Annex E of AWS D 1.1.
2. The Contractor shall submit a Quality Control Plan. The Plan shall include personnel qualifications, certifications, and a Written Practice in accordance with ASNT SNT-TC-1A.
3. The quality of all welds shall be in accordance with Section 6, Table 6.1. In Table 6.1, Undercut 7(B), the criteria for primary members shall apply to the bottom chord members.
4. All Complete Joint Penetration Groove Welds in butt joints in the bottom chord members shall be 100% Magnetic Particle tested in accordance with ASTM E 709. Acceptance shall be determined in accordance with Section 6.10 and Table 6.1, using Alternating Current. In addition, complete joint penetration groove butt welds welded from one side without backing of bottom chord members shall be examined by ultrasonic testing in accordance with Section 6.11.1.
5. Magnetic Particle Testing shall be performed on 100% of all attachment welds to the bottom chord, using Alternating Current, in accordance with Section 6.10 and Table 6.1.
6. All Procedure Qualification Records and Welder Qualification Test Records shall be current within three years of the date of beginning fabrication.
7. A copy of all Procedure Qualification Records, Welder Qualification Test Records, Quality Control Plan and all visual and nondestructive test reports shall be provided to the Engineer.

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REVISION OF SECTION 628
BRIDGE GIRDER AND DECK UNIT

Steel surface preparation shall be in accordance with section 509.24 of the standard specification. All exposed steel shall be painted Forrest Green. A color sample shall be submitted for approval prior to painting

628.06 Field Construction. The substructure shall be constructed in accordance with the details shown in the plans and the pedestrian bridge shop drawings. Before construction begins on the substructure, the Contractor shall determine the anchor bolt requirements and substructure dimensions needed to properly erect the structure which will be provided. The Engineer shall be provided with two copies of detail sheets delineating these requirements before work begins.

MEASUREMENT AND PAYMENT

628.07 The accepted quantity shall be paid for at the contract unit price for the pay unit listed below. Payment will be made under:

Pay Item	**Pay Unit**
Bridge Girder and Deck Unit	Each

Payment shall be full compensation for all work necessary to complete the item, which shall include design, fabrication, transportation to the bridge site, and erection. The substructure shall be measured and paid for separately, anchor bolts shall be included in the work. Payment will not be made for this item until all required reports, certifications, and forms have been submitted to the Engineer.

REVISION OF SECTION 630
CONSTRUCTION ZONE TRAFFIC CONTROL

Section 630 of the Standard Specifications is hereby revised for this project as follows:

Subsection 630.01 shall include the following:

This work consists of furnishing, installing, moving, maintaining and removing temporary traffic signs, advance warning arrow panels, flashing beacon (portable), barricades, channelizing devices, delineators and temporary traffic signals.

This work also includes Traffic Control Management, flagging and pilot car operation.

Subsection 630.16 shall include the following:

The bid item is included for these services and devices and the lump sum payment for “Construction Zone Traffic Control” shall be in full compensation for this work.

Pay Item	**Pay Unit**
Construction Zone Traffic Control	Lump Sum

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Engineer'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 subsection 109.04. Payment will constitute full compensation for all work necessary to complete the item.

Force Account Item	Estimated Quantity	Estimated Amount
F/A Minor Contract Revisions*	F.A.	$100,000
OJT Training	640 Hours	TBD

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 which is necessary to accomplish the scope of work on this contract.

On the Job Training:

See On the Job Training Standard Special Provision for details.

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SPECIAL CONSTRUCTION REQUIREMENTS
TRAFFIC CONTROL PLAN

TRAFFIC CONTROL PLAN – GENERAL

The key elements of the Contractor's Method of Handling Traffic (MHT) are outlined in subsection 630.10.

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
3) Manual of Traffic Control Devices (MUTCD).

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

The Contractor shall submit a detailed Traffic Control Plan including a Method for Handling Traffic (MHT) for each different phase of construction to the Engineer for approval at the pre-construction meeting and at least ten days prior to the start of any construction phase or prior to any changes in traffic control. The MHT's shall include as a minimum the requirements listed under 630.10 of the Standard Specifications. The MHT's shall also include the following:

- Temporary Road Closure, Detour provided
- Special construction activities

The Contractor shall endeavor to reach out to the Port of Entry and other stakeholders before and during construction to ensure smooth traffic control operations.

Construction activities shall be limited to designated staging areas. No staging shall occur on any roads or in the Loma I-70 Interchange.

The contractor shall maintain access at all times and coordinate with owner and tenant of all properties adjacent to the project**.** The Contractor shall coordinate and cooperate fully with the Port of Entry, CDOT, Mesa County, the City of Fruita, utility owners and contractors, and other contractors to assure adequate and proper traffic control is provided.

CDOT may require the Contractor to provide additional advanced warning signs and "No Parking" signs along the Frontage Road if conditions merit additional traffic control. The signs and work will not be measured and paid separately but shall be included in the Work.

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

The Contractor shall schedule all work between 7:00 AM and 7:00 PM Monday through Friday. Work at night or on weekends will be allowed only after pre-approval from the Engineer. If the Contractor finds it necessary to work outside of the above work hours, they must receive approval from the Engineer and a variance must be applied for and granted by the Engineer

During non-construction periods, all work shall be adequately protected to insure the safety of vehicular and pedestrian traffic, as detailed in the Contractor's MHT. Excavation holes shall be adequately protected at all times.

All temporary full road closures must be coordinated with the appropriate emergency management agencies. Where possible the road closure shall include provisions for the passage of emergency vehicles. Notification to each agency must include the time and duration of the road closure as well as possible detours. Contractor shall provide certification that the following agencies have been notified as well as any others that are subsequently identified:

a) Colorado State Patrol
b) Lower Valley Fire Protection District
c) Mesa County Sheriff's Department

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SPECIAL CONSTRUCTION REQUIREMENTS
TRAFFIC CONTROL PLAN

Vertical cuts or fills greater than 3 inches resulting from construction operations, including planing, adjacent to traffic lanes, shall be temporarily sloped at a 3:1 or flatter slope and delineated at 50 foot intervals immediately after grading or removal operations to safeguard the traveling public.

The Contractor and subcontractor shall equip their construction vehicles with flashing amber lights. Flashing amber lights on vehicles and equipment shall be visible from all directions, steel track equipment does not need flashing amber lights.

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

The Traffic Control Supervisor and Traffic Control Inspector shall be accessible by cellular telephones and service, and shall be available at all times while work is occurring.

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

SPECIAL CONSTRUCTION REQUIREMENTS
UTILITIES

The following utilities are within the limits of this project but are not expected to be involved.

CDOT – Region 3 Electrical
Attention: Mr. Marc Travis PH: (970) 683-7534

Emery Telecom – Fiber Optic
Attention: Mr. Mike Behling PH: (435) 749-1002

City of Fruita – Public Works
Attention: Mr. Ken Haley PH: (970) 858-9558

Century Link - Telephone
Attention: Mr. Chris Johnson PH: (970) 244-4311

The work described in these plans and specifications requires full cooperation between the Contractor and the utility owners in accordance with subsection 105.11 in conducting their respective operations so the utility work can be completed with minimum delay to the project. CDOT is not contacted when locates are requested through UNCC.

The Contractor shall be required to meet with each utility owner impacted by the work in advance of any construction operations to coordinate required utility work with the construction activity. Coordination with utility owners includes, but is not limited to, providing and periodically updating an accurate construction schedule that includes all utility work elements. Surveying and/or staking of utility relocations to be performed by the contractor shall be the responsibility of the contractor.

The Contractor shall provide traffic control for any utility work expected to be coordinated with construction operations as directed by the Engineer. However, traffic control for utility work outside of typical project work hours or outside of project limits shall be the responsibility of the utility owner. The Contractor shall be compensated for traffic control as per the bid items for traffic control as established on this project.

The Contractor shall keep each utility owner advised of any work being done to its facility so that each utility owner can coordinate its inspections for final acceptance of the work with the Engineer.

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

CDOT:

Buried electrical lines servicing the light poles are in the south side of the I-70 East Bound On-Ramp. No impacts are expected to the lines from this project. The contractor will positively locate the lines prior to any earthwork in the vicinity. It is the Contractor's responsibility to coordinate with the utility. The Contractor shall call Region 3 Electrical to request locates.

The Kiefer Extension Grand Valley Canal outfall pipe passes under the trail at centerline station 27+75. No impacts are expected to the pipe from this project. The contractor will positively locate the lines prior to any earthwork in the vicinity. It is the contractor's responsibility to coordinate with the utility.

SPECIAL CONSTRUCTION REQUIREMENTS
UTILITIES

Emory Telecom:

Work to install the fiber optic cable and casing is scheduled to begin in the Summer of 2017. The cable proposed cable alignment will cross south to north under the staging area on the Frontage Road and under the trail and I-70 at approximate trail centerline station 23+80. Once on the north side of the interstate the alignment turns east staying on the north side and within the CDOT I-70 right of way. The proposed alignment is to pass under the trail at approximate centerline station 52+20.
No impacts are expected to the facility from this project. The contractor will positively locate the lines prior to any earthwork in the vicinity. It is the contractor's responsibility to coordinate with the utility.

City of Fruita:

The City's sewer outfall pipe passes under the trail at centerline station 107+43. No impacts are expected to the lines from this project. The contractor will positively locate the lines prior to any earthwork in the vicinity. It is the contractor's responsibility to coordinate with the utility.

Century Link:

An underground telephone line passes under the trail at centerline station 100+58. No impacts are expected to the lines from this project. The contractor will positively locate the lines prior to any earthwork in the vicinity. It is the contractor's responsibility to coordinate with the utility.

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 locations of utility facilities as shown on the plan and profile sheets, and herein described, were obtained from the best available information and field surveying during the design process. Utility locates or potholing was not performed during the design process.

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

BLM

United States Department of the Interior
Bureau of Land Management

Environmental Assessment
Colorado Riverfront Trail

Grand Junction Field Office
2815 H Road
Grand Junction, Colorado 81506

DOI-BLM-CO- S080-2017-0026-EA

June 2017

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple-use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation; rangelands; timber; minerals; watershed; fish and wildlife; wilderness; air; and scenic, scientific and cultural values.

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CHAPTER 1 - INTRODUCTION

1.1 BACKGROUND

This Environmental Assessment (EA) has been prepared in response to an application filed by the City of Fruita (Fruita) for Right-of-Way (ROW) to the Bureau of Land Management (BLM) Grand Junction Field Office (GJFO) for transportation on federal lands (SF299). The ROW requested is for access across public lands for the proposed Kokopelli Section of the Colorado Riverfront Trail. This EA also addresses additional applications for ROW submitted by Fruita, and by Public Service of Colorado (PSCo), to bring existing and proposed utility infrastructure into compliance with federal ROW requirements.

The proposed Kokopelli Section of the Colorado Riverfront Trail is an extension of the regional Colorado Riverfront Trail system that has been designated by Governor Hickenlooper as "16 Trails in 2016" Colorado the Beautiful Initiative. To date, almost 23 miles of the Riverfront Trail have been constructed. The proposed trail would connect an existing trail completed in 2016 that terminates at Little Salt Wash, with the Colorado Canyons National Conservation Area "Kokopelli's Loop Trails Area" near Loma. During the ROW review process for the proposed trail, a discrepancy of ownership was discovered in "Lot 3" in Section 18. It was determined that the land was never patented and remains in federal ownership. Three utilities (listed below) exist on Lot 3 that have private easements instead of federal ROWs. Fruita also proposes to add a new force main in the future to accommodate expected population growth.

CASEFILE/PROJECT NUMBER COC77904

PROJECT NAME

Colorado Riverfront Trail

ADDITIONAL UTILITY CASEFILE/PROJECT NUMBERS - PROJECT NAMES

COC77904-01 - City of Fruita Temporary Construction Access

COC78252 - City of Fruita Force Mains

COC78241 - Public Service Overhead Electric Line

COC78242 - Public Service Gas Line

PLANNING UNIT

Grand Junction Field Office

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

LOCATION: The project area is west of Fruita, Colorado. The Universal Transverse Mercator (UTM) coordinates of the approximate center of the project area are Zone 12N, 691571mE,

4337776mN. The latitude/longitude of the project area is 39.168124°N/ 108.782512°W and is located on the Mack, Colorado U.S. Geological Survey 7.5-foot quadrangle (Figure 1)

LEGAL DESCRIPTION:

The legal locations for the project area crossing BLM land are as follows:

Ute Principal Meridian, Mesa County, Colorado

T. 1 N., R. 3 W.,

Section 10, Lot 4;

T. 1 N., R. 2 W.,

Section 18, Lot 3.

1.3 PURPOSE AND NEED

The purpose of the Proposed Action is to provide access across public land to construct, maintain, and operate a 10-foot wide concrete trail, and to resolve federal ROW compliance for existing and proposed utilities in Lot 3, Section 18 due to a discrepancy in federal land ownership for Lot 3. The need for this action is established by the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to Fruita's request for ROW grants to complete the Riverfront Trail, and to bring utility corridors into federal ROW compliance. In addition, the need for the action is established by BLM's responsibilities under Section 28 of the Mineral Leasing Act (MLA), 1920, as amended, to respond for a request to authorize an existing PSCo natural gas pipeline.

1.4 PUBLIC PARTICIPATION

Scoping is the process by which the BLM solicits internal and external input on the issues, impacts, and potential alternatives that will be addressed, along with the extent to which those issues and impacts will be analyzed in a National Environmental Policy Act (NEPA) document. Internal scoping is the use of BLM and cooperating agency staff to help determine what needs to be analyzed in a NEPA document. External scoping involves notification and opportunities for feedback from other agencies, organizations, tribes, local governments, and the public. NEPA regulations (40 CFR §1500-1508) do not require external scoping for an EA, and the BLM decided to internally scope the Proposed Action. The primary mechanism used by the BLM to invite public involvement was by posting this project on the BLM ePlanning website. The BLM did not receive any comments for the project.

Maps of the parcel and description of the Proposed Action were distributed to the GJFO Interdisciplinary Team (IDT) and discussed at IDT meetings. A meeting between Fruita and the BLM IDT occurred on January 23, 2017. In addition to meetings, multiple phone calls and e-mail correspondence have been conducted.

Issues Identified:

The IDT identified several issues and questions related to the proposed project, including the following:

- What impacts to ephemeral stream channels and to the Colorado River would occur due to project implementation?
- How would the proposed project impact critical habitat for Colorado River threatened and endangered fish?
- How would the proposed project affect known nearby Bald Eagle nests/roosts, or the Yellow-Billed Cuckoo?
- How would the proposed project impact important cultural resources in the project area?
- What is the potential effect to riparian vegetation, particularly cottonwood trees (if present/impacted) and other native vegetation?
- How would the future force main construction affect environmental resources including threatened and endangered species?
- How would parking and access be managed to limit additional congestion near the Colorado Parks and Wildlife (CPW) boat launch and existing Kokopelli Loop trailhead?

1.5 DECISION TO BE MADE

The BLM will decide whether to approve a new transportation ROW for the proposed Kokopelli Section of the Colorado Riverfront Trail project based on the analysis contained in this EA. BLM also will decide whether to approve utility ROWs to resolve the existing unauthorized uses for the PSCo underground gas line and overhead electric line, as well as Fruita's sewer force main. BLM will decide whether to approve a new proposed new sewer force main within the ROW proposed for the existing sewer force main.

The BLM may choose to: a) approve the project as proposed, b) approve the project with modifications/mitigation, c) approve an alternative to the proposed action, or d) deny the application. The Decision Record associated with this EA may not constitute the final approval for the Proposed Action. It provides the BLM Authorized Officer (AO) with an analysis from which to base the final approval for the proposed ROW amendment.

CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This Chapter describes the Proposed Action and No Action Alternatives. No other alternatives have been suggested, analyzed or disclosed in this EA.

2.1.1 Proposed Action

The Proposed Action is to issue four ROWs, two to Fruita and two to PSCo. A ROW would be issued to Fruita to construct, maintain, and operate a trail approximately 4.5 miles in length, with approximately 2,500 feet crossing public land managed by the BLM. The proposed trail would be a 10-foot wide paved public pedestrian and bicycle access trail, connecting to the existing Riverfront Trail at Little Salt Wash which was completed in 2016. After the Little Salt Wash connection, the trail would traverse parallel to I-70 and enter BLM property known as Lot 3. In Lot 3, the trail would cross over the channel of Big Salt Wash on a single span pedestrian bridge, continuing for approximately 2.5 miles, and then enter into Colorado Department of Transportation (CDOT) I-70 ROW near Reed Wash. The trail would cross Reed Wash on a single span pedestrian bridge, turn south and cross I-70 under the I-70 bridge. Once on the south side of I-70 the trail would head west entirely in I-70 ROW, crossing the BLM managed property known as Lot 4, to State Highway 139 at the Loma interchange, where it would connect with the existing Kokopelli Trail. The proposed trail would offer waysides and amenities as well as a soft-surface, single track trail alongside portions of the main trail. The recreational trail is intended to be used year-round by pedestrians and non-motorized vehicles for many years to come. A permanent gravel parking area would be constructed, in the same location as the construction staging area, at the western end of the project area, on BLM Lot 4. This parking lot would accommodate about 17 vehicles as well as a single, concrete handicapped accessible parking space. Appendix A contains design information and layouts for the facilities.

A second ROW would be issued to Fruita to bring an existing 10-inch sanitary sewer force main pipeline into federal ROW compliance and to construct a second 12-inch force main in the future to accommodate projected population growth (construction would occur between the years 2020 and 2025). The width of the requested trail ROW would be 60 feet on the west end. On the east end through Lot 3 where a wider ROW width of 80 feet would accommodate the proposed trail. The adjacent sewer force main ROW request, which would be south of the trail ROW and would accommodate both the existing and future force mains, also would have a width of 80 feet.

Construction of the proposed trail as well as the proposed future force main likely would be completed by a local contractor that would benefit the local community. Short-term job opportunities are anticipated, with potential project requirements of about 5 to 20 qualified personnel for a 4 to 6-month period.

Two additional ROWs would be issued to PSCo to bring existing utilities into federal ROW compliance, including a 15-kV overhead electric distribution line serving the City of Grand Junction (30-foot wide ROW) as well as a 6-inch high pressure gas pipeline (50-foot wide

ROW), with operating pressure of 450 to 550 PSI year-round. Table 1 summarizes ROW footprint on BLM managed lands and private land.

Table 1. Project Footprint on BLM and Private Land.

Project Component and Location[1]	Area (square feet)	Acres
BLM land (Lot 3): Recreation Trail ROW	1000 feet X 80 feet = 80,000, 80 feet X 80 feet overlap with Utility ROW = 6,400	1.98
BLM land (Lot 3): Utility ROW to City of Fruita for Force Main (existing and future)	1000 feet X 80 feet = 80,000	1.84
BLM land (Lot 3): Utility ROW to PSCo. for 15-kV overhead electric line	1000 feet X 30 feet = 30,000	0.69
BLM land (Lot 3): Utility ROW to PSCo. for 6-inch high pressure gas pipeline	1000 feet X 50 feet = 51,250	1.18
BLM land (Lot 4): Recreation Trail ROW	1500 feet X 60 feet= 90,000	2.07
BLM land (Lot 4): Recreation parking lot, tie-ins, and drainage features.	140 feet x 150 feet = 21,000	0.48
BLM land(Lot 4): Temporary access road	Approximately 9,422	0.22
Total Proposed Action on BLM land	357,250	8.46
Total on Private Land	538,402	12.36
Total Permanent Project Footprint	897,052	20.82

[1] All calculations in Table 1 are estimates based on preliminary design. Please see Parking Lot and Staging Area Exhibit in Appendix A.

The development of the trail would occur in two phases. Phase 1 would include the east half of the trail beginning at Little Salt Wash Trail north of I-70 and ending at 15 Road near Fruita's Wastewater Treatment Facility. Phase 2 would begin at 15 Road and continue traversing west to the Loma-I-70 interchange. The two phases are separated by different design teams and funding sources.

Construction access would occur at the frontage road/Hawkeye Road as well as along the ROW. A temporary access road consisting of 9,422 square feet (0.22 acres) would be granted as a short-term ROW for a three-year term.

Design Features. The bridge over Big Salt Wash and Reed Wash would be steel fabricated truss bridges spanning approximately 50 feet between two abutments anchored with H-pile footers. Bank stabilization would be required for the crossing at Big Salt Wash, affecting 0.03 acres below the ordinary high water mark. Riprap and river rock would be used for stabilization. At Big Salt Wash, gaps in the riprap bank stabilization would be filled with gravel and small (2- to

3-inch) stone size and covered with native soils. At Reed Wash, riprap would be placed in gabion baskets and lined with a drainage geotextile to keep the filler material within the baskets, eliminating exposure of any voids, and then covered with native soils derived from excavation on site. At Reed Wash, the required bank stabilization would be installed above the ordinary high water mark. Large block retaining wall, soil nail wall, and pedestrian railing would be installed for each crossing vicinity. Portions of the trail, on private land only, would include an 8-foot soft surface single track trail. The trail would include amenities such as pullouts and benches for resting. The width of the trail, drainage-crossing designs, slope, bank stabilization, scour protection, safety rails, and grades would all contribute to safety considerations on the new trail. Relevant American Association of State Highway and Transportation Officials (AASHTO) design standards applicable for this type of trail would be used, to ensure user safety.

The paved surface for the finished trail would be 10 feet in width, including a 5-foot wide gravel shoulder on either side. The tie-in from the shoulder to existing ground surface would be filled or cut to a 3:1 maximum grade, requiring surface disturbance to another approximately 3 to 10 feet from either edge of the trail, depending on site-specific topography. The trail surface would consist of a 6-inch standard concrete sidewalk. A maximum 60-foot wide BLM ROW would be required to complete trail construction, including the trail surface, gravel shoulders, temporary disturbance areas such as grading, retaining walls, fences, pullouts/resting areas per AASHTO design standards, and other trail elements. Although the trail surface is only 10 feet wide, an addition 10 feet total width of shoulders, as well as slope grading to tie in to existing topography as required, and incorporation of drainage features such as culverts. In a few locations where the gradient is steep, the Americans with Disabilities Act (ADA) requires that public facilities be designed with resting pullouts at specific intervals. These pullouts add to the maximum trail width, but in most areas the impact width would be about 20 feet (10-foot concrete trail with 5-foot gravel shoulder on either side with minor slope grading) for the trail on BLM property, including the staging and parking areas on Lot 4, would be approximately 2.55 acres (see Table 1). The trail ROW would be 2.07 acres, and the parking lot and staging area disturbance area would be 0.48 acres. Another 0.22 acres would be temporarily disturbed during construction to access the staging area/parking area; this acreage would be reclaimed at the end of the project. The ROW for the trail on Lot 3 would be 1.98 acres (Figure 2).

Aside from the Reed Wash and Big Salt Wash crossings, the topography is fairly level in the project area. Minimal excavation and surface disturbance would be needed to create level areas for the trail. In some areas, the trail would be situated on an existing 2-track access road.

Construction would be sequenced to minimize activity in environmentally and biologically sensitive areas. A Bald Eagle nesting site is located near the river channel in Phase 1. The Colorado River 100-year Floodplain is critical habitat to native endangered fish species. To reduce the disturbance to these sensitive areas, construction of both phases is anticipated to occur in the fall of 2017 and winter/spring of 2018.

The trail would be closed for user safety during high water in the Colorado River, when the trail is anticipated to be inundated. Trail closure could be between 2 or 3 days and up to 30 days when the river levels are high.

Site Preparation, Subgrade and Excess Material. Prior to construction the ROW would be cleared and grubbed, and the topsoil would be removed and stockpiled at temporary staging areas (private lands only) or within the ROW corridor, depending on the location. The topsoil would be spread on disturbed areas and on side slopes, and then seeded, mulched, and blanketed if necessary following construction.

Staging and Storage. Temporary staging for project construction would occur at an existing area approximately 140-foot by 150-foot (0.48 acre) site on BLM Lot 4, within CDOT right of way and next to the Frontage Road (Hawkeye Road). This site is located 4.5 miles west of Fruita (Figure 1). A temporary construction access road (9,422 square feet) would exist between the staging area and the trail.

Following the construction phase, the 21,000 square feet staging area would be converted to a trail head style parking lot with a gravel or cobble surface and a post and cable fence. The parking lot would accommodate parking for about 17 vehicles, plus a concrete pad parking location for handicapped access. The parking lot would include appropriate signage/kiosk, and garbage services and provide access from the Frontage Road (Hawkeye Road) to the newly constructed trail, within the CDOT ROW and on BLM property. The temporary construction access road would be reclaimed and seeded at the end of the construction project (see next section discussing reclamation).

Reclamation. Seeding would be conducted as soon as possible, preferably within 24 hours, following completion of the final seedbed preparation. Except for areas that are hydro-mulched, mulching would be applied within 24 hours following seeding.

Seeded areas would be inspected by a qualified contractor to ensure that the soil stabilization method (*e.g*. surface roughening, crimp mulch, etc.) was applied correctly and has not been compromised since application. The area would also be inspected for erosion and/or sediment deposition. Following inspection, maintenance items would include re-grading and seeding bare areas or areas of thin vegetative growth and/or adding additional Best Management Practices (BMPs) as appropriate. If seeding cannot be accomplished due to seasonal or other constraints, temporary stabilization, such as mulch and mulch tackifier would be used. This temporary stabilization would be inspected and maintained until permanent seeding is allowed. Suitable seed mixes are identified in Tables 2 and 3.

Table 2. BLM Seed Mix

Common Name	*Scientific Name*	Variety	Percent of Mix	PLS lbs/ac
Western wheatgrass	*Pascopyrum smithii*	Arriba, Rosana	35	9.5
Bottlebrush squirreltail	*Elymus elymoides*	VNS	22	5.8
Alkali sacaton	*Sporobolus airoides*	VNS	1	0.27
Sand dropseed	*Sporobolus cryptandrus*	VNS	<1	0.09
Shadscale	*Atriplex confertifolia*	VNS	17	4.5
4-wing saltbush	*Atriplex canescens*	Source N of CO-NM line or above 5,000 ft*	23	6.2
Scarlet globemallow	*Sphaeralcea coccinea*	VNS	2	0.47
TOTAL			100	26.83

*****Must be able to verify source. Double seeding rate for broadcast seeding**.**

Weed Control. Noxious weeds observed in the project area included cheatgrass, hoary cress, diffuse knapweed, bull thistle, Russian olive, halogeton, and tamarisk. The project area would be managed to control noxious weeds during the construction phase, in conformance with design features established by the BLM (see Table 3). Weed control during construction would apply to all portions of the project area (not just BLM managed land).

Maintenance. An intergovernmental agreement for trail maintenance with Mesa County, Palisade, Grand Junction and Fruita is in process. The City of Fruita is responsible for trail maintenance, including maintenance of reseeded areas, and weed control would continue following construction. Responsibility for parking lot maintenance, including weed control, signage, and trash management will be addressed in the agreement referenced above.

Maintenance for PSCo's facilities would be periodic (annual) monitoring of structure (pole) locations, which would be reviewed by traveling on the existing access route by vehicle or by foot. Poles, cross arms, insulators or other components may need to be periodically replaced because of age and/or damage. Review by "smart pig"—a small device inserted into the gas line to collect information about pipe conditions—is completed annually. If corrosion or other issues are detected, portions of the line may need to be dug up and replaced.

Maintenance of Fruita's existing force main is conducted via manholes located in the project area, which provide access to the pipeline. Annual maintenance is required under normal operating conditions. Similar maintenance requirements would apply to the new force main after its installation.

Design Features, including BMPs associated with construction are shown in Table 3.

Table 3. Applicant Committed Design Features

Aesthetics/Visual	
A-1	The contractor shall exercise care to preserve the natural landscape and shall conduct construction operations so as to prevent any unnecessary damage to, or destruction of, natural features.
A-2	Perform final reclamation recontouring of all disturbed areas to the original contour or a contour that blends with the surrounding topography.
Air Quality	
AQ-1	The contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize atmospheric emissions or discharges of air contaminants.
AQ-2	Vehicles and equipment showing excessive emission of exhaust gases due to poor engine adjustments or other inefficient operating conditions shall not be operated until corrective adjustments or repairs are made.
AQ-3	Utilize dust suppression techniques on unpaved surfaces, including water and gravel. Chemical dust suppressants will not be used due to proximity to the Colorado River and its tributaries.
AQ-4	Post and enforce speed limits to reduce airborne fugitive dust from vehicular traffic on unpaved roads.
AQ-5	Reduce unnecessary vehicle idling to reduce combustion emissions, ozone formation, visibility impacts, and fuel consumption.
AQ-6	Restrict surface disturbing activities to periods when wind speeds are less than 25 miles per hour.
Biological Resources	
BR-1	Native vegetation and soils will be protected from damage from construction, and disturbance to them will be minimized. Mature trees will be avoided as much as possible; tree removal will be limited to small (less than 4inches in diameter) trees and shrubs.
BR-2	Erosion will be controlled during construction. An erosion control plan would be provided, and includes stabilizing areas that have low potential to naturally revegetate and have high wind and soil erosion potential. Treatments include the following: a) Installing water bars and other drainage diversions along the construction corridor and other cleared areas; b) Seeding and planting with native vegetation, including temporary disturbed areas, to provide vegetative cover; c) Spreading mulch to protect bare soil and discourage runoff d) Installing erosion control structures; e) Installing channel-stabilization structures; f) Monitoring emergency stabilization and rehabilitation treatments.
BR-3	All construction materials and debris shall be removed from the project area in a timely manner.

BR-4	Pre-construction surveys shall be conducted prior to construction for the force main installation, projected to be constructed in 2020-2025.
BR-5	All trail project construction is expected to occur in the fall of 2017 and winter/spring of 2018 to avoid affecting nesting raptors and endangered fish habitat. Clearing and grubbing of vegetation will occur outside of the nesting period for migratory birds (August 31 to March 15). Construction in live water will be coordinated to occur outside of the period of July 1 through September 30 to avoid impacts to larval endangered fish in the project area. Construction is intended to occur between December through February to avoid working in live water.
BR-6	A biological monitor would be on-site during project initiation to provide information to the project foreman regarding sensitive resources. A biological monitor also may provide oversight visits and do a final review of the project area when all project activities are complete, to verify that site conditions are as planned. The biological monitor would coordinate with the BLM ecologist and biologist regarding site visits (both pre- and post-visit reporting). The biological monitor is authorized to halt construction and consult with BLM if sensitive resources are threatened by construction impacts in unauthorized locations.
BR-7	At Big Salt Wash, gaps in the riprap bank stabilization will be filled with gravel and small (2- to 3-inch) stone size and covered with native soils. At Reed Wash, riprap will be placed in gabion baskets and lined with a drainage geotextile to keep the filler material within the baskets, eliminating exposure of any voids, and then covered with native soils derived from excavation on site.
BR-8	Low water crossings and culverts will be minimized as much as possible to avoid constraining hydrologic flow.
Cultural Resources	
CR-1	The National Historic Preservation Act, as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during project implementation, work in that area must stop and the BLM Authorized Officer must be notified immediately. Within five working days, the BLM Authorized Officer will inform the proponent as to: a) Whether the materials appear eligible for the National Register of Historic Places; b) The mitigation measures the proponent will likely have to undertake before the site could be used (assuming in situ preservation is not practicable) (36 CFR 800.13); and c) A timeframe for the BLM Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Office, that the BLM Authorized Officer's findings were correct and mitigation was appropriate.
Fire Prevention/Control	
FP-1	The contractor shall maintain in all construction vehicles a current list of local emergency response providers and methods of contact/communication.

General	
G-1	An intergovernmental agreement for trail maintenance with Mesa County, Palisade, Grand Junction and Fruita will be provided to the BLM upon completion.
Land Use	
LU-1	The contractor shall limit movement of crews, vehicles and equipment on the ROW and approved access roads to minimize damage to property and disruption of normal land use activity.
LU-2	The contractor shall maintain all fences and gates during the construction period. Any fence or gate damaged during construction would be repaired immediately by the contractor.
Noise	
N-1	Noise-reduction techniques and designs will be used to reduce noise from motorized equipment.
Noxious Weeds	
NW-1	Rights-of-way and other lands and realty authorizations will contain noxious and invasive plant management terms or stipulations for all ground-disturbing actions. These will include conducting a pre-disturbance noxious weed inventory, designing to avoid or minimize vegetation removal and weed introduction or spread, managing weeds during the life of the right-of-way or authorization to prevent or minimize weed introduction or spread, and monitoring revegetation success and weed prevention and control for a reasonable number of years.
NW-2	Seed and straw mulch to be used for mulch or rehabilitation (e.g., for wattles, straw bales, and dams) shall be certified weed-free.
NW-3	Most of the project area contains noxious weeds. Weeds should be treated (if the timing is appropriate) or removed (if seeds are present) to limit weed seed production and dispersal.
NW-4	Topsoil that is removed from the site where noxious weeds are present would be treated for weeds. If topsoil is to be used in reclamation activities, it would be treated for weeds when stockpiled in the project area and before being applied to reclaimed areas if necessary.
NW-5	Locate and use weed-free project staging areas. Avoid or minimize travel through weed-infested areas, or restrict travel to periods when spread of disseminules is least likely.
NW-6	Identify sites where equipment can be cleaned. Remove mud, dirt, and plant parts from project equipment before moving it into a project area. Seeds and plant parts should be collected and incinerated when possible.
NW-7	Inspect and document all ground-disturbing activities in noxious weed-infested areas for at least three growing seasons following project completion. For ongoing projects, continue to monitor until reasonably certain that no weeds are present. Plan for follow-up treatments based on inspection results.
ROW	

R-1	Before construction begins, ROW authorization holders and private land owners shall be notified about ROW activities and construction schedule.
R-2	Construction activities should be coordinated so to not inhibit ROW authorization holders' activities.
R-3	At least 90 days prior to termination of the ROW, the City of Fruita and PSCo should contact the AO to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan should include, but is not limited to, removal of facilities, drainage structures, and removal of surface material; re-contouring, top-soiling, or seeding. The AO must approve the plan in writing prior to the holder's commencement of any termination activities.
R-4	All activities associated with the construction, operation and termination of the ROWs should be conducted within the authorized limits of the ROWs for the ROWs authorized (see Section 3.5.1).
Soils	
S-1	Restrict travel to established roads to avoid compacting soil that could hinder the recovery of desired plants. All soils compacted by movement of construction vehicles and equipment, shall be reseeded (see S-2). The specific seed mix(s) and rate(s) of application would be determined by the BLM.
S-2	Seeding Procedures a) Seeding will be conducted no more than 24 hours following completion of final seedbed preparation (see Seedbed Preparation). b) Where practical, seed will be planted by drill-seeding to a depth of 0.25- to 0.5-inch along the contour of the site. Drill seeding will be followed by culti-paction to enhance seed-to-soil contact and prevent losses of both. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25- to 0.5-inch of soil cover. Hydro-seeding and hydro-mulching may be used in temporary seeding or in areas where drill-seeding or broadcast-seeding/ raking are impracticable. Hydro-seeding and hydro-mulching must be conducted in two separate applications to ensure adequate seed-to-soil contact. c) If interim revegetation is unsuccessful, reseedings will be repeated annually until satisfactory vegetative cover has been achieved. Requirements for reseeding of temporary areas will be considered on a case-by-case basis. Seeding will be considered successful as determined by the BLM. A successful seeding may occur, for example, when the site is protected from erosion and revegetated with a vigorous, self-sustaining, and diverse cover of native (or otherwise approved) plant species. If necessary, reseeding will occur during optimal periods as much as possible.
S-3	Excavated material not used shall be transported off-site [to an approved disposal location]. Disturbed areas shall then be regraded to approximate pre-construction contours and reseeded as specified in S-2.
S-4	Seeded areas would be inspected to ensure successful revegetation and soil stabilization. Any bare or thin areas would be re-graded and re-seeded, mulched, or otherwise addressed.

S-5	When saturated soil conditions exist on access roads or location, or when road rutting becomes deeper than 3 inches, construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils, roads, and locations.
S-6	Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.
S-7	Topsoil stripping will include all growth medium present at a site (e.g., following initial clearing of large trees), as indicated by color or texture. Stripping and storage depth may be specified during the onsite inspection. All stripped topsoil/growth medium will be salvaged, segregated, and stored in a manner that extends biological viability and protects it from loss. Topsoil and all growth medium will be replaced prior to seedbed preparation. No topsoil will be stripped or segregated when soils are saturated or frozen below the stripping depth.
S-8	Cleared vegetation smaller than 4 inches in diameter will be stockpiled, shredded, and salvaged with topsoil. Cleared vegetation larger than 4 inches in diameter will be scattered over disturbed areas to accomplish reclamation objectives. Excessive vegetation larger than 4 inches in diameter may be removed from BLM-administered land or shredded in place to be salvaged with topsoil. A wood-cutting permit may be purchased from BLM for material removed from the site.
Traffic	
T-1	The contractor shall make all necessary provisions for conformance with federal, state and local traffic safety standards and shall conduct construction operations so as to offer the least possible obstruction and inconvenience to public traffic.
T-2	The City of Fruita would install signage where trail crosses the Loma Boat launch road.
Waste Management	
WM-1	The City of Fruita would comply with all applicable federal, state, and local laws and regulations regarding the use, storage and disposal of any toxic or hazardous material or solid waste.
WM-2	Construction trash and debris would be contained and confined continuously during construction so as to avoid release to public lands. All materials would be removed to the waste management facility or landfill, as appropriate, following the completion of the project.
WM-3	All refueling operations and hazardous material transfers will occur over secondary containment to contain drips and spills.
Water Resources	
WR-1	The holder shall adhere to all requirements under the Federal Water Pollution Control Act, as amended through Public Law 107-303, November 27, 2002.

WR-2	For surface-disturbing activities exceeding 1 acre, develop and implement Stormwater Pollution Prevention Plans (SWPP) and Spill Prevention, Control and Countermeasures Plan (SPCC) to include site-specific design, systematic site monitoring, installation of run-on/off controls such as ditches or berms, and installation of adaptive BMPs to reduce potential erosion and sediment production and transport, and to prevent spills. Stormwater will be dispersed to stabilized areas to slow velocity, prevent erosion, and support infiltration into soils. Stormwater BMPs identified in the State-approved SWPP shall be in place prior to any earth-disturbing activity. Additional BMPs will be installed if determined necessary by the BLM. All measures shall be maintained in good, functional condition. All temporary BMPs shall be removed once site stabilization and reclamation efforts have been deemed successful by the BLM.
WR-3	Design and construct stream crossings at right angles, in straight sections of stable reaches to handle (at a minimum) the 100-year flood, and consider culvert and bridge designs that facilitate aquatic life passage.

2.1.2 No Action Alternative

The No Action Alternative would make no changes to the project area. The Kokopelli Trail would not be connected to the Colorado Riverfront Trail. Informal use of portions of the corridor/dirt roads would continue. Utilities crossing Lot 3, including power, sewer/force main, and gas lines, would continue to be out of Federal ROW compliance.

2.2 PLAN CONFORMANCE REVIEW

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Grand Junction Field Office Approved Resource Management Plan (GJFO RMP) and Record of Decision, BLM/CO/PL-15/008

Date Approved: AUGUST, 2015

Decision Number/Page: Page 169

Decision Language: The objective (L&R-OBJ-01) of the GJFO RMP under Public Utilities Management is to "Provide for the development and operation of transportation systems, pipelines, transmission lines, communication sites, renewable energy resources, and other land use authorizations in an environmentally responsible and timely manner".

2.3 STANDARDS FOR PUBLIC LAND HEALTH

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. The BLM also incorporated the standards into the 2015 GJFO RMP and other RMPs that the BLM has revised. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands would achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action or No Action, and presents comparative analyses of the direct, indirect, and cumulative effects on the affected environment stemming from the implementation of the actions under the Proposed Action and other alternatives analyzed.

This EA draws upon information compiled in the GJFO RMP (BLM 2015). Table 4 presents a summary of resources present and affected.

3.1.1 Elements Not Affected

The following elements, identified as not being present or not affected, will not be brought forward for additional analysis:

Physical Resources:

- **Geological/Mineral Resources –** Unique geologic features and mineral resources are not present at the site, so there would be no impact to these types of resources.

Biological Resources:

- **Special Status Plants –** No special status plants occur within the project area; therefore, impacts are not expected. Best Management Practices (BMPs)/design features identified (including reclamation) would further minimize and avoid impacts.
- **Forestry –** Forest resources are not present at the site and would not be affected.

Heritage Resources and Human Environment:

- **Paleontology-** Geologic maps indicate that the Project Area is underlain by Cretaceous shales/sandstones of the Mancos Formation. For this geological unit, the BLM assigns PFYC Class 3, which means there is a moderate or unknown probability of fossil occurrence. No known fossil localities occur in the project area. The BLM GJFO does not require paleontological surveys prior to surface disturbance in areas underlain by Mancos Shale. In addition, there are no bedrock exposures in the project area.
- **Visual Resources-** The proposed action would result in new access to public lands. The project area is largely disturbed and adjacent to existing I-70 ROW. The new trail would be consistent with the existing landscape features and visual quality.
- **Transportation and Access -** The proposed action would result in new access to public lands. From Fruita, public land visitors could access the popular Kokopelli's Loop Trails Area using the new trail. The new trail alignment could introduce additional traffic to the area used by river boaters to access the Colorado River. Since the trail would be separate from and parallel to the road used by the boaters, the BLM does not expect any new safety concerns. The design features include signage where the trail crosses the Loma Boat launch access. A new parking area near the western end of the trail would provide about 19 spaces for trail users.

Land Resources:

- **Special Designations (Areas of Critical Environmental Concern [ACEC], Surface Management Areas [SMAs], Wild and Scenic River [WSR])** - There are no special designations in the project area.
- **Wilderness and Wilderness Characteristics** - There is no wilderness, nor lands with wilderness characteristics, in the project area.
- **Range Management –** There are no active grazing allotments in the project area.
- **Wild Horse and Burros -** There is no habitat or populations of wild horse and burros in the project area.

- **Fire/Fuels -** Fire/fuels issues are not anticipated due to the very low volumes of vegetation/fuel present in the salt desert scrub community.
- **Farmlands, Prime and Unique** - There are no designated Prime and Unique Farmlands located within the project area

3.1.2 Past, Present, Reasonably Foreseeable Actions

NEPA requires federal agencies to consider the cumulative effects of proposals under their review. Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations 40 CFR §1508.7 as "…the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency…or person undertakes such other actions." The CEQ states that the "cumulative effects analyses should be conducted on the scale of human communities, landscapes, watersheds, or air sheds" using the concept of "project impact zone" or more simply put, the area that might be affected by the proposed action. The area that may be affected by this project includes the 5th code watershed that contains the project area. To assess past, present, and reasonably foreseeable actions that may occur within the affected area a review of GJFO NEPA log and our field office GIS data was completed. The following list includes all past, present and reasonably foreseeable actions known to the BLM that may occur within the affected area:

Past Actions

The corridor was disturbed previously when I-70 was constructed, and commercial, industrial, and residential development has occurred along the frontage road as population has increased in the Fruita area. The I-70/Loma interchange occupies a substantial portion of the surface on the project's west end. Along the central portion of the project area a gravel pit operation was decommissioned and three constructed ponds are present. A new wastewater treatment plant is near the central portion of the project area, by 15 Road (Figure 1).

The area surrounding the proposed trail has also been subject to activity and development due to Colorado's recreation industry. In recent decades, the popularity of off-road mountain biking for recreation has grown, and the area has transitioned from agriculture and resource development, to service amenities for a growing number of visitors and locals. A growing network of non-motorized and motorized trails occur in the area, including single-track trails on dirt and more established, wider multi-use trails. Over 23 miles in trails have been constructed as part of The Colorado Riverfront Trail between Fruita and the town of Palisade, farther to the east. The Little Salt Wash trail was completed in Fruita, and the proposed trail would connect the Little Salt Wash trail to the Kokopelli trailhead west of Loma. In addition to trails, a river access and boat launch area for recreational use of the Colorado River has been developed and is maintained near the proposed project area.

Present Actions

The area surrounding Fruita, including the I-70 corridor and river corridor, will continue to support ongoing use by recreationalists, pedestrian and bicycle traffic, local traffic, and I-70 traffic, as well as industries and utilities.

Reasonably Foreseeable Actions

Continued development is expected due to population increases in the area, and associated recreational use of public lands and other amenities. Increased recreational use of nearby trails and feeder trails are expected.

Infrastructure to accommodate the increase in population will also be required. In the future, a utility company (Emery telecom) has been approved to install a utility crossing across Lot 3 and within the general trail corridor. The required trench and disturbance footprint would be minimal (less than 10 feet wide).

The City of Fruita has acquired land surrounding one of the constructed ponds, and is considering options to construct recreational amenities such as picnic tables, a parking area, and potentially other authorized uses. No plans have been drafted, finalized, or approved. [

This list of past, present, and reasonably foreseeable actions is considered in the cumulative effects analysis included in sections below.

Table 4. Potentially Impacted Resources (from NEPA notification)

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation Necessary?	BLM Evaluator Initial & Date
PHYSICAL RESOURCES					
Air and Climate	☐	☒	☐	☐	KH 5/1/17
Water (surface & subsurface, floodplains)	☐	☐	☒	☐	KH 5/1/17
Soils	☐	☐	☒	☐	KH 5/1/17
Geological/Mineral Resources	☐	☒	☐	☐	EE 2/21/17
BIOLOGICAL RESOURCES					
Special Status Plants	☒	☐	☐	☐	ARL 2/24/17
Special Status Wildlife	☐	☐	☒	☐	HLP 2/24/17
Migratory Birds	☐	☐	☒	☐	HLP 2/24/17
Other Important Wildlife Habitat	☐	☐	☒	☐	HLP 2/24/17
Vegetation	☐	☐	☒	☐	SC 2/28/17
Forestry	☒	☐	☐	☐	BP 2/24/17
Invasive, Non-native Species	☐	☐	☒	☐	MT 2/13/17
Wetlands/Riparian Zones	☐	☐	☒	☐	4/27/17
HERITAGE RESOURCES AND HUMAN ENV.					
Cultural or Historical	☐	☒	☐	☐	NFC 5/1/17
Paleontological	☐	☒	☐	☐	EE 2/13/17
Tribal& American Indian Religious Concerns	☐	☒	☐	☐	NFC 5/1/17
Visual Resources	☐	☒	☐	☐	DB 02/27/17
Social/Economic	☐	☐	☒	☐	CS 2/17/17
Transportation and Access	☐	☒	☐	☐	AW 3/1/17
Wastes, Hazardous or Solid	☐	☐	☒	☐	AK 2/14/17
LAND RESOURCES					
Recreation	☐	☒	☐	☐	AW 3/1/17
Special Designations (ACEC, SMAs, WSR)	☒	☐	☐	☐	DB 02/27/17

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation Necessary?	BLM Evaluator Initial & Date
Wilderness & Wilderness Characteristics	☒	☐	☐	☐	DB 02/27/17
Range Management	☒	☐	☐	☐	SC 2/28/17
Wild Horse and Burros	☒	☐	☐	☐	JRD 2/28/17
Land Tenure, ROW, Other Uses	☐	☐	☒	☐	JD 2/28/17
Fire/Fuels	☐	☒	☐	☐	JP 2/24/17

3.2 PHYSICAL RESOURCES

3.2.1 Air Quality and Climate Change

Current Conditions

Air quality in the project area is typical of undeveloped regions in the western United States. No designated Class I air sheds are located within Mesa County. The primary sources of air pollutants in the region are fugitive dust from the desert surrounding the planning area, unpaved roads and streets, seasonal sanding for winter travel, and emissions from motor vehicles. Seasonal wildfires throughout the western U. S. may also contribute to air pollutants and regional haze.

Air quality in the project area is considered to be good, with levels of ozone (O_3) and particulate matter less than 10 µm in diameter (PM_{10}), and particulate matter less than 2.5 µm in diameter ($PM_{2.5}$) well below the thresholds established by the EPA (EPA 2017; CDPHE 2017). The closest air monitoring station to the project area is in Grand Junction, about 12 miles to the east. The project area is outside of any non-attainment areas, and there is no air quality plan that applies.

Colorado Department of Public Health and Environment (CDPHE) sets standards for the impacts to air quality from construction activities. Most fugitive dust and total suspended particles (TSP) from construction activities are greater in size than PM_{10} and $PM_{2.5}$, but may still have an impact on the environment, including soiling and nuisances that interfere with the enjoyment of the environment (CDPHE 2017). The EPA General Conformity regulations require that an analysis (as well as a possible formal conformity determination) be performed for federally sponsored or funded actions in nonattainment areas and in designated maintenance areas when the total direct and indirect net air pollutant emissions (or their precursors) exceed specified levels. The Clean Air Act conformity regulations do not apply because the GJFO is not within a non-attainment or a maintenance area.

No Action

Direct and Indirect Effects

Under the No Action Alternative, no additional trail construction would occur. No direct or indirect impacts to air quality or climate would result.

Cumulative Effects

Cumulative effects to air quality and climate are not anticipated from the No Action Alternative as no new surface disturbance would occur.

Proposed Action

Direct and Indirect Effects

Short-term increased risk of fugitive dust from construction activities would be the primary air quality concern under the Proposed Action. No lasting impacts to air quality are anticipated with successful implementation of the Proposed Action as described in Section 2.2.1 (including BMPs/Design features (Table 3). Short term localized reductions in air quality may be associated with fugitive dust production resulting from about 17 acres of surface disturbance associated with new construction. Fugitive dust levels would return to baseline conditions within a few hours of surface disturbing actions. No new surface disturbance would be associated with the existing PSCo facilities or City of Fruita existing force main. In addition, construction for the Phase 1 and Phase 2 trail projects would not occur simultaneously, meaning only a portion of the anticipated surface disturbance would be actively disturbed at any time. The proposed City of Fruita force main construction is not anticipated to take place for at least 5 years. Dust suppression efforts and revegetation activities would minimize impacts to local air quality. Soils found in the project area have moderate to low susceptibility to wind erosion (NRCS 2016).

Cumulative Impacts

Negative cumulative impacts to air quality are not anticipated under the Proposed Action, given current travel management regulations and implementation of appropriate design, placement, construction, and maintenance of the work area.

3.2.2 Soils (includes a finding on Standard 1)

The project area, which is approximately 4,400 to 4,600 feet above sea level, comprises primarily 100-year floodplains. Soils are primarily alluvium and are well drained with moderate to low wind erosion potential. Only Sagers silty clay loam and Fruitland sand clay loam are designated as prime farmland ("Prime if irrigated"). Sagers silty clay loam is the most dominant soil in the project area, and occurs between Reed Wash and 15 Road. Geology indicates the area is underlain with Mancos Formation Cretaceous shale and sandstone. According to the NRCS web soil survey (NRCS 2016), the soil types present in the project area include:

- *Sagers silty clay loam* (55.3 percent of the project area)

These soils are alluvium derived from calcareous shale and sandstone found in 0 to 2 percent slopes on terrace and alluvial fan features. They are well drained, have low runoff potential, and are not prone to flooding or ponding. Sagers silty loam soils are considered prime farmland if irrigated. These soils occur in the central and very eastern portion of the project area.

- *Killpack-Badlands-Persayo complex (18.4 percent of the project area)*
  These soils are residuum derived from clayey shale and found in 3 to 25 percent slopes on knoll features. They are well drained, have high runoff potential, and are not prone to flooding or ponding. Killpack-Badland-Persayo complex soils are not considered prime farmland. These soils occur in the western portion of the project area.

- *Bebeevar loam* (9.5 percent of the project area)
  These soils are alluvium over sandy and gravelly alluvium derived from sandstone and shale found in 0-2 percent slopes on flood plain features. They are moderately well drained, have low runoff potential and are rarely prone to flooding and not prone to ponding. Bebeevar loam soils are not considered prime farmland. These soils occur sporadically in the central portion of the project area.

- *Fruitland sandy clay loam* (about 6.6 percent of the project area)
  These soils are alluvium derived from sandstone and shale found in 0-2 percent slopes on alluvial fan features. They are well drained, have low runoff potential and are not prone to flooding or ponding. Fruitland sandy clay soils are considered prime farmland if irrigated. These soils occur sporadically at the eastern end of the project area.

- *Bebeevar and Green River soils, and Riverwash* (about 6.1 percent of the project area)
  These soils are derived from alluvium over sandy and gravelly alluvium derived from sandstone and shale in 0-2 percent slopes on flood plain features. These soils are moderately well drained, have low runoff potential and are rarely prone to flooding and not prone to ponding. Bebeevar and Green River soils are not considered prime farmland. These soils occur sporadically in the east central portion of the project area.

- *Oxyaquic Torrifluvents* (about 2.3 percent of the project area)
  These soils are derived from alluvium derived from sandstone and shale in 0 to 2 percent slopes on floodplain features. These soils are moderately well-drained, have very low runoff potential and are prone to occasional flooding, but not to ponding. Oxyaquic Torrifluvents are not considered prime farmland. These soils occur in the vicinity of Reed Wash in the project area.

- *Killpack silty clay* (less than 1 percent of the project area)
  These soils are residuum derived from clayey shale in 2 to 5 percent slopes on hill features. They are well drained, have moderate runoff potential and are not prone

to flooding or ponding. These soils are not considered to be prime or important farmland. They occur in the very western end of the project area.

Finding for Public Land Health Standard 1 for Upland Soils

Public Land Health Standard 1 states that upland soils should exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. The majority of the project area is private property, therefore no Land Health Assessment has been completed. Some areas in the project area (portions of Lot 3 and most of Lot 4) meet this standard. There are no signs of erosion above what is appropriate for the soil types present in the area, and no signs of active erosion. In other places, the existing soils in the project area are disturbed in places from informal trail use, particularly adjacent to the constructed ponds and within the corridor of the frontage road, as well as the crossing below I-70. The majority of upland soils in the project area occur on shallow gradients, and disturbed areas are not eroding.

No Action

Direct and Indirect Impacts

Under the No Action Alternative, there would be no construction activities that would disturb soils. The proposed trail and City of Fruita force main would not be constructed, and project area use would remain the same. There would be no ground disturbing activities. It is assumed that the existing facilities would be allowed to remain in place.

Finding for Public Land Health Standard 1 for Upland Soils

Under No Action, no construction activities would take place that would displace soils. Public Land Health Standard 1 would continue to be partially met.

Cumulative Impacts

There would be no new cumulative effects to soils resulting from the No Action Alternative, as no effects to soils would occur.

Proposed Action

Direct and Indirect Effects

The Proposed Action would result in short-term and long-term soil disturbance. The Proposed Action would occur on about 8.46 acres of land managed by the BLM and approximately 20.82 acres total, including private land.

Construction of approximately 4.5 miles of 10-foot wide concrete multi-use pedestrian trail and parking lot installation would generate soil disturbance. The trail, parking lot, access road, trail tie-in to the parking lot, and the temporary access road would create new surface disturbance on about 4.75 acres soils that have a moderate to low potential for erosion.

In addition, the Proposed Action would result in installation of the new Fruita force main, within the next 5 to 10 years. The force main would be constructed within the existing disturbance footprint of the existing Fruita force main.

The existing PSCo overhead transmission line and buried gas line, as well as the existing Fruita force main, are anticipated to remain in place and would result in no new soil disturbance. If future maintenance activities are needed on these facilities, soil disturbance within a previously-disturbed foot print could occur, and would require stabilization and revegetation.

As is typical with any new surface disturbance, some level of increased erosion from disturbed areas would persist although the severity of those impacts would be minimized through design features, BMPs, and maintenance. Surface disturbance associated with trail construction would directly impact soils through removal of soil stabilizing agents and altering natural drainage patterns causing increased erosion and soil loss from and adjacent to the route. Soil impacts concerns are during construction and rehabilitation; therefore, during all phases of work, applicable BMPs listed in the RMP would be implemented (see Table 3). Effects to soils after construction would be minimal because the proposed trail would be paved and the ROW revegetated after construction. Successful implementation of applicable BMPs outlined in the 2015 RMP would further mitigate erosion and soil loss (see Table 3). Therefore, erosion and soil loss can be minimized to the extent that Public Land Health Standard 1 continues to be met within the project area.

Finding for Public Land Health Standard 1 for Upland Soils

Public Land Health Standard 1 would continue to be partially met with successful implementation of BMPs, adequate maintenance of the new alignment and ROW, and successful rehabilitation of the existing alignment.

Cumulative Effects

Under the Proposed Action, the new disturbance would be reclaimed and erosion control BMPs would be implemented to reduce and mitigate erosion from activities associated with the maintenance of the facilities. Therefore, there would be no long-term cumulative impacts from the Proposed Action.

3.2.3 Water (surface and groundwater, floodplains) (includes a finding on Standard 5)

Current conditions

The project area is located within the lower Colorado River basin, directly adjacent to the Colorado River, and the project area borders a northern channel of the river on the project's west side. Most of the project area occurs within the 100-year floodplain of the river. A shallow alluvial aquifer underlays the floodplain in some places within the project area. The Colorado River is a known traditional navigable water and jurisdictional WUS (Corps 2017). Two perennial streams that are tributary to the river are within the project area- Big Salt Wash and Reed Wash. In addition, three constructed ponds (former gravel pits) occur along the proposed

trail, and are likely be hydrologically connected (via alluvial aquifer or surface connection) to the Colorado River or to the two ephemeral streams tributary to the Colorado River (ERO 2017).

Acreage below the ordinary high water mark (OHWM) within the mapping limits—a 100-foot project corridor—totals about 2 acres. The proposed trail alignment crosses Big Salt Wash north of I-70, just before the wash flows under the interstate and meets the Colorado River within the project area. Roughly 0.223-acre of open water below the OHWM occurs within the project area corridor. The banks of the Big Salt Wash within the project area are generally steep and incised, and patches of emergent wetland fringe are present along the lower terraces consisting mainly of reed canary grass as a dominant and salt grass and barnyard grass as common associates. Generally, the banks are high above the influence of flows within the wash and support mainly invasive species including tamarisk and Russian olive. The project corridor intersects portions of three constructed ponds and wetland margins, which likely are connected by ground and/or surface water to the Colorado River.

Reed Wash is tributary to the Colorado River within the project area on the western side. The Reed Wash supports fringe wetlands with reed canary grass and salt grass. Where Reed Wash flows under I-70, the channel banks are steep and incised. This portion of Reed Wash was channelized when I-70 was constructed.

West of the confluence with Reed Wash, the Colorado River borders the project. The bank along this portion has been stabilized with boulder riprap. Vegetation along this segment includes sparse Russian olive, tamarisk, and narrow leaf willow, with minimal (less than 5 percent) herbaceous understory.

Public Land Health Standard 5 for Water Resources- Current Conditions

Public Land Health Standard 5 requires that the water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands would achieve or exceed the Water Quality Standards established by the State of Colorado. Current conditions meet this standard. The Colorado River, Big Salt Wash, Reed Wash, and ephemeral tributaries/drains to the Colorado River may have periodic and short-term impact on water quality in the drainage, during heavy precipitation events where surface water would reach the river. BLM Lot 4 does not support any water resource features. BLM Lot 3 is crossed by Big Salt Wash, and is bordered by the Colorado River on the south property boundary. Big Salt Wash was channelized when I-70 was constructed, and is a controlled/managed drainage.

No Action

Direct and Indirect Effects

Under the No Action Alternative, no trail or force main construction would occur. No direct or indirect impacts to the Colorado River or its tributaries, or to the three constructed ponds, would occur.

Finding for Public Land Health Standard 5 for Water Resources

Under the No Action Alternative, there would be no change within the watershed and no impact to Public Land Health Standard 5.

Cumulative Effects

Cumulative effects to water are not anticipated from the No Action Alternative as no new disturbance would occur.

Proposed Action

Direct and Indirect Effects

Under the proposed action, a trail would be constructed within the 100-year floodplain for the Colorado River and affect a small portion below the OHWM for Big Salt Wash (<0.01 acres). Both pedestrian bridges spanning Reed Wash and Big Salt Wash would be designed above the OHWM; however, bank stabilization likely would be required at Big Salt Wash, affecting approximately 0.029 acres below the OHWM. No portions of the trail construction would occur below the OHWM for the Colorado River or Reed Wash. Some bank stabilization may be needed for Reed Wash, but this would be placed above the OHWM. Direct effects below the OHWM within the Colorado River watershed total 0.029 acres and are considered minor. Clean bank stabilization material would be used, and placement of materials would be timed so as to minimize effects to open water (e.g., during dry periods). See design features (Table 3).

The proposed trail alignment closely borders the three constructed ponds. However, the trail would be constructed to avoid impacts to the shoreline of these features.

A total of about 17 acres of project area within the 100-year floodplain would be affected; however, due to reclamation and revegetation, effects to the river are not expected. There is a small chance of flooding during the project construction period itself and before protective vegetation is restored within the floodplain; however, the likelihood of flooding is small, and potential effects are expected to be minor, given design features to protect effects to waterways.

It is possible that future maintenance on the underground utilities to be authorized by the BLM (PSCo underground gas line and existing Fruita force main) could affect Big Salt Wash in Lot 3. In addition, installation of a new Fruita force main could affect Big Salt Wash in Lot 3. Impacts in all cases would be temporary.

Design features include using clean fill, erosion control, and conformance with SPCC plans. For example, secondary containment would be used for refueling equipment, and chemical dust suppression would not be used. Vegetation buffers that protect waterways would be established as part of the reclamation process.

Finding for Public Land Health Standard 5 for Water Resources

The proposed project is not expected to affect water quality within the Colorado River watershed, and Public Land Health Standard 5 would continue to be met. The project would conform to a SWPP, an SPCC Plan, and successful implementation of all related design features,

including revegetation areas disturbed by construction, would ensure any potential effects to water quality are avoided.

Cumulative Impacts

Negative cumulative impacts to water resources are not anticipated under this Proposed Action, given conformance with applicable regulations and implementation of appropriate design, placement, construction, and maintenance of the proposed trail.

3.3 BIOLOGICAL RESOURCES

3.3.1 Invasive, Non-native Species

Current Conditions

Seven State of Colorado (Colorado Department of Agriculture 2016) and five Mesa County listed (Mesa County 2011) noxious weeds were observed site visits (see Table 8). The State of Colorado Noxious Weed "List B" provides a plan for stopping the spread of species. List C species control and eradication is coordinated with counties where management is a priority.

Cheatgrass is pervasive throughout the project area. Halogeton occurs in the western portion, and the eastern portion of the project area is almost entirely dominated by Russian knapweed, hoary cress, bull thistle, Russian olive, and tamarisk. It appears to have been disturbed by industrial activity in the past.

Table 5. Noxious Weeds Observed in the Project Area

Common Name	*Scientific Name*	Mesa County Noxious Weed List	State of Colorado List
Cheatgrass	*Bromus tectorum*	No	C
Hoary cress	*Cardaria draba*	Yes	B
Russian knapweed	*Acroptilon repens*	Yes	B
Bull thistle	*Cirsium vulgare*	Yes	B
Russian olive	*Elaeagnus angustifolia*	Yes	B
Halogeton	*Halogeton glomeratus*	No	C
Tamarisk	Tamarix spp.	Yes	B

Source: Colorado Department of Agriculture 2016; Mesa County 2013.

No Action

Direct and Indirect Effects

Under the No Action Alternative, there would be no construction activities that would displace soils. The realignment would not be constructed, and the current road alignment would remain the same. There would be no ground disturbing activities associated with the project that would have the potential to impact the establishment or spread of noxious weeds and non-native species; however, the existing condition is one in which noxious weeds are often the dominant vegetation community.

Cumulative Effects

There would be no new cumulative effects to noxious weeds or non-native vegetation resulting from the No Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area.

Proposed Action

Direct and Indirect Effects

Activities which cause surface disturbance, such as the Proposed Action, create an opportunity for the invasion or expansion of noxious weeds, particularly in areas where noxious weeds are already present. Much of the project area already supports vegetation communities dominated by noxious weeds.

The revegetation and weed management requirements identified as design features (see Table 3) for the project are designed to restore desirable vegetation to disturbed sites, and remove invasive nonnatives. For example, all construction equipment and vehicles involved in land disturbing actions would be free of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment would be cleaned prior to moving off site. Any weeds present in the construction area would be treated prior to surface disturbing activities. Topsoil that is removed from the site where noxious weeds are present would be treated for weeds. If topsoil is to be used in reclamation activities, it would be treated for weeds when stockpiled in the project area and before being applied to reclaimed areas if necessary. In following BMPs and mitigation practices, the spread of noxious weeds as a result of the project would be minimal. Given monitoring and maintenance requirements, desirable vegetation communities are expected to increase as noxious weeds decline. A long-term improvement in prevalence of noxious weeds is anticipated as a result of the proposed action.

Maintenance on the existing and proposed utility facilities could impact noxious weeds. As noted previously, required monitoring and maintenance activities would potentially reduce the dominance of weed communities in the project area.

Cumulative Effects

There would be no cumulative effects to noxious weeds or non-native vegetation resulting from the Proposed Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area.

3.3.2 Threatened, Endangered and Sensitive Species (includes a finding on Standard 4)

Current Conditions

Table 6 lists the nine federal or BLM threatened, endangered, proposed, or candidate (TEPC) species that have the potential to occur in the project area, along with habitat descriptions (ERO, 2017; FWS-IPAC, 2016). Based on existing habitat within the project area and known habitat preferences for listed species, it is not likely that the yellow-billed cuckoo (*Coccyzus*

americanus), Mexican spotted owl (*Strix occidentalis lucida*), or North American wolverine (*Gulo luscus*) would occur within the project area.

The yellow-billed cuckoo was recently listed as threatened under the Endangered Species Act. There is no proposed critical habitat in the project area. Due to the developed nature of the project area, and the lack of adequate canopy and structure to support cuckoo habitat, cuckoo use is highly unlikely. No habitat for the proposed threatened North American wolverine, or the Mexican spotted owls was observed within the project area and these species have no potential to occur in the project area. The endangered Colorado River fish species, (see Table 6 below) may occur in the project area. The Colorado River 100-year floodplain is designated critical habitat for the Colorado pikeminnow and the razorback sucker within the project area.

The western end of the project area has potential habitat for the threatened Colorado Hookless Cactus (CHC, *Sclerocactus glaucus*). This species grows on exposed gravelly clay hills within saltbrush and sagebrush flats or in pinyon-juniper woodlands. In May 2016, habitat in the project area was surveyed for sensitive plant species including CHC and no individuals or suitable habitat were found.

Table 6. Special status species with potential to occur in the project area.

Common Name (*Scientific Name*)	**Status**	**Habitat description**	**Potential to occur in project area**
Mexican spotted owl (*Stix occidentalis lucida*)	Threatened	In Western Colorado, nests in steep-walled canyons with riparian components.	None
Yellow-billed cuckoo (*Coccyzus americanus*)	Threatened	Deciduous riparian woodlands, with dense cottonwood and willow, and sometimes tamarisk.	No nesting habitat; low probability of foraging
Bonytail chub (*Gila elegans*)	Endangered	Found within the Colorado River and its tributaries.	Yes
Colorado pikeminnow (=squawfish) (*Ptychocheilus Lucius*)	Endangered	Found within the Colorado River and its tributaries.	Critical habitat within the 100-year floodplain
Greenback cutthroat trout (*Oncorhynchus clarki stomias*)	Threatened	Mid- to high-elevation mountain streams	None
Humpback chub (*Gila cypha*)	Endangered	Found within the Colorado River and its tributaries.	Yes
Razorback sucker (*Xyrauchen texanus*)	Endangered	Found within the Colorado River and its tributaries.	Critical habitat within the 100-year floodplain

Common Name (*Scientific Name*)	Status	Habitat description	Potential to occur in project area
Colorado hookless cactus (*Sclerocactus glaucus*)	Threatened	On exposed, gravel-covered clay hills; in saltbrush or sagebrush flats; or in pinyon-juniper woodlands.	Potential habitat on western end of project area
North American wolverine (*Gulo luscus*)	Threatened	In alpine conifer forests, tundra, and remote grasslands and shrublands.	None

Source: FWS-IPaC 2016; NatureServe 2016

Finding for Public Land Health Standard 4 for Special Status Species

Public Land Health Standard 4 states that special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats should be maintained or enhanced by sustaining healthy, native plant and animal communities. The current condition of the project area is developed and disturbed, and does not provide suitable habitat for TECP species with the exception of critical habitat within the 100-year floodplain of the Colorado River (Colorado pikeminnow and razorback sucker) on Lot 3. Lot 4 was surveyed for possible suitable habitat for the CHC, but none was identified due to the weedy, disturbed nature of the project area.

No Action

Direct and Indirect Effects

Under the No Action Alternative, the trail would not be constructed, and there would be no ground disturbing activities that would have the potential to impact TECP species or habitat in the project area.

Finding for Public Land Health Standard 4 for Special Status Species

Under the No Action alternative there would be no impact to the areas ability to meet Public Land Health Standard 4.

Cumulative Effects

There would be no cumulative effects to TECP species resulting from the No Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area.

Proposed Action

Direct and Indirect Effects

The Proposed Action would result in ground disturbance and removal of topsoil, as discussed above. Other potential effects would include an increase in weed spread due to construction and maintenance activities; however, prevalence of weeds is anticipated to decline due to maintenance and monitoring requirements. About 17 acres of disturbance to the 100-year floodplain—which is critical habitat for the endangered Colorado River fishes—is anticipated from the project. The BLM currently is conducting ESA Section 7 consultation with the USFWS. Meetings between the agencies in 2016 identified impacts to the 100-year floodplain, and particularly changes in hydrological connectivity, as a primary concern. However, design features such as potential use of low water crossings rather than culverts in some locations, as well as the existing degraded nature of the project area, would minimize effects to the species. The USFWS has provided input construction timing, as well as treatment of riprap (see Table 3, applicant committed design feature B-7). The specific treatment of riprap defined by USFWS prevents creation of small mouth bass nursery habitat. The small mouth bass is a predatory non-native fish impacting the endangered Colorado River fish populations in the Colorado River. Smallmouth bass are very aggressive and tend to utilize riprap of all sizes, especially as brood rearing habitat. Gradation requirements will eliminate the opportunities for brood rearing habitat. Based on inclusion of the design features in Table 3, the USFWS has concurred with the finding of "Not Likely to Adversely Affect" (USFWS 2017).

Cumulative Effects

Design features to minimize effects to Colorado's endangered fish would be implemented as part of the proposed action, and no cumulative effects to TECP species are expected from the project.

3.3.3 Vegetation (grasslands, forest management) (includes a finding on Standard 3)

Current Conditions

Dominant vegetation communities within the project area were documented during 2015-2016 field surveys. The primary vegetation community types in the project area are disturbed grass/shrublands (dominated by nonnative species and invasive/noxious weeds and including 2-track roads in several locations); salt-desert scrub, dominated by big sagebrush, rabbitbrush, and various annual and perennial forbs; and wetland/riparian fringes along perennial water sources, dominated primarily by greasewood, tamarisk, salt grass and reed canary grass. Disturbed areas are significant due to existing CDOT ROW and 2-track access roads. Noxious weeds are pervasive throughout the project area.

Dominant plant species found in the vegetation communities are listed in Table 7.

Table 7. Common vegetation observed in the project area

Common Name	***Scientific Name***	**Wetland Indicator Status****
Crested wheatgrass	*Agropyron cristatum*	UPL

Common Name	***Scientific Name***	**Wetland Indicator Status****
Spike bentgrass	*Agrostis exerata*	FACW
Big sagebrush	*Artemesia tridentate*	UPL
Kochia	*Bassia prostrata*	UPL
Alkali bulrush	*Schoenoplectus maritimus*	OBL
Smooth brome	*Bromus inermis*	FACU
Cheatgrass*	*Bromus tectorum*	UPL
Hoary cress*	*Cardaria draba*	UPL
Russian knapweed*	*Acroptilon repens*	UPL
Lamb's quarters	*Chenopodium album*	FACU
Salt grass	*Distichlis spicata*	FACW
Russian olive*	*Elaeagnus angustifolia*	FAC
Rubber rabbitbrush	*Ericameria nauseosa*	UPL
Broom snakeweed	*Gutierrezia sarothrae*	UPL
Foxtail barley	*Hordeum jubatum*	FAC
Pale evening primrose	*Oenothera pallida*	UPL
Western wheatgrass	*Pascopyrum smithii*	FACU
Reed canary grass	*Phalaris arundinaceae*	FACW
Rabbitsfoot grass	*Polypogon monspeliensis*	FACW
Slimflower scurfpea	*Psoralidium tenuiflorum*	UPL
Russian thistle	*Salsola tragus*	FACU
Greasewood	*Sarcobatus vermiculatus*	FACU
Three-square bulrush	*Schoenoplectus pungens*	OBL
Red tinged bulrush	*Scirpus microcarpus*	OBL
Pale bulrush	*Scirpus pallidus*	OBL
Narrow leaf willow	*Salix exigua*	FACW
Small flower tamarisk*	*Tamarix parviflora*	FAC
Intermediate wheatgrass	*Thinopyrum intermedium*	UPL
Cattail	*Typha sp.*	OBL

*Noxious weed
** UPL = obligate upland, FAC = facultative (equally likely to occur in wetland or non-wetland), FACU = facultative upland, FACW = facultative wetland, OBL = obligate wetland
Source: USDA 2017; Ackerfield 2015

Finding on Public Land Heath Standard 3 for Productive Plant Communities

Public Land Health Standard 3 states that healthy, productive plant and animal communities of native and other desirable species should be maintained at viable population levels commensurate with the species and habitat's potential. The current conditions in the project area are substantially degraded, with prevalence of invasive and noxious weed species. A Land Health Assessment has not been completed by the BLM for the project area due to the limited amount of public land.

No Action

Direct and Indirect Effects

Under the No Action Alternative, there would be no construction activities associated with the project that would displace vegetation communities. The proposed trail would not be constructed, and the project area use would not change. No ground disturbing activities that would have the potential to impact vegetation communities in the project area would occur. No weed management to control existing noxious weeds would occur.

Finding on Public Land Heath Standard 3 for Productive Plant Communities

No effects to plants would occur for the No Action Alternative; therefore, Public Health Standard 3 conditions would remain the same.

Cumulative Effects

There would be no new cumulative effects to vegetation communities resulting from the No Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area.

Proposed Action

Direct and Indirect Effects

The Proposed Action would result in construction of approximately 4.5 miles of multi-use pedestrian trail on BLM-managed lands and CDOT ROW, and would result in a permanent footprint of about 4.53 acres. A temporary construction access road would disturb another 0.22 acres; this area would be reclaimed at the end of the construction phase. In total, 4.75 acres would be affected on BLM-managed lands for the multi-use pedestrian trail. Construction would impact vegetation resources by replacing vegetation communities with a hard-surface trail and gravel shoulders. The trail would primarily displace disturbed grass/shrublands. In addition, about ½ of the project length would occur on existing 2-track roads.

The Proposed Action also includes existing utility facilities, and a proposed new Fruita force main occupying 3.71 total acres on BLM-managed lands (see Table 1). The new force main is proposed to be placed within the disturbance footprint of the existing force main, which traverses through existing disturbed areas and industrial land uses.

Finding on Public Land Heath Standard 3 for Productive Plant Communities

Land Health Standard 3 conditions likely would improve with reclamation work focused on improving vegetation conditions through weed management and native seeding.

Cumulative Effects

Other phases of the Colorado Riverfront Trail and other developments in the area have also resulted in minor disturbance to vegetation communities. These project phases have resulted in minor, short-term (several months to a year) and long-term impacts (several years to 15 years), and cumulative effects to vegetation communities resulting from the Proposed Action. However, as with the Kokopelli section of the Riverfront Trail, most of the corridor is in weedy areas disturbed areas such as industrial areas, gravel pit ponds/disturbances, and 2-track access roads. Overall, cumulative effects to vegetation communities are minor.

3.3.4 Wetlands/Riparian Zones (includes a finding on Standard 2)

Current Conditions

The project area, which is approximately 4,400 to 4,600 feet above sea level, consists primarily of 100-year floodplains adjacent to the Colorado River. Wetlands were delineated based on hydrophytic vegetation, hydric soils and indicators of wetland hydrology. Wetland types present are herbaceous fringe wetlands along Reed Wash and along a channel associated with the Colorado River, and palustrine emergent fringe along the manmade ponds and associated drainage channels, and along Big Salt Wash (ERO 2017; see Table 7 for wetland species). Some scrub-shrub fringes also are present along Reed Wash. Wetlands are anticipated to be jurisdictional Waters of the U.S. as defined by 33 CFR Part 328, and therefore regulated by the United States Army Corp of Engineers (USACE) pursuant to Section 404 of the Clean Water Act.

In general, the riparian vegetation is limited to Russian olive, tamarisk, knapweed, and other weedy species. A limited amount of sedges, rushes, willows, and narrow-leaf cottonwood trees occur within the riparian zone. Wetland vegetation occurs along the saturated pond margins and includes cattails (*Typha* sp.), three square bulrush (*Schoenoplectus pungens*), and panicle bulrush (*Scirpus microcarpus*).

Finding for Public Land Health Standard 2 for riparian systems

Public Land Health Standard 2 states riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. The riparian system including wetland areas surrounding the constructed ponds would be able to recover from fire, grazing, or 100-year floods. The ephemeral washes have very little riparian vegetation, and very little disturbance has occurred for these areas. In general, the riparian vegetation is dominated by weedy species, with very limited native riparian vegetation. Along the Colorado River, loss of riparian areas has occurred over the last 5 decades associated with development, including the construction of I-70 adjacent to the river; however, the riparian system is still intact along portions of the river adjacent to the project area, particularly the area bordering the north bank of the river on the project area's west end. A

formal Proper Functional Condition (PFC) has not been completed in the project area due to the small amount of BLM managed land in the project area.

No Action

Direct and Indirect Impacts

Under the No Action Alternative, there would be no construction activities that would impact wetlands. The proposed trail would not be constructed, and project area use would remain the same and there would be no impacts to wetlands. A new City of Fruita force main would not be installed.

Finding for Public Land Health Standard 2 for Riparian Systems

Under the No Action Alternative, no construction activities would take place that would impact wetlands. No changes to the project area's ability to meet achieve Public Land Health Standard 2 would occur under this alternative.

Cumulative Impacts

There would be no cumulative effects to wetlands resulting from the No Action Alternative.

Proposed Action

Direct and Indirect Effects

Construction of the proposed trail would result in the loss of less than 0.051 acres (2,200 square feet) of wetland communities, including temporary impacts to less than 0.03 acres (1,263 square feet). Most of the wetland impacts would occur at small drain crossings associated with the outfalls of the 3 manmade gravel lakes (0.031 acres). Small impacts would also occur at Reed Wash, where a narrow wetland fringe was mapped on both sides of the drainage (0.02 acres).

No wetlands have been delineated within the temporary disturbance footprint associated with the new Fruita force main, which would cross the Big Salt Wash on Lot 3.

Any temporarily disturbed areas would be reclaimed following construction. The proposed action involves crossings of small tributary streams where there is no reasonable alternative; however, construction of a pedestrian crossing would not cause unacceptable impacts to the riparian or wetland resource. No cottonwood trees would be impacted by the proposed action.

Finding for Public Land Health Standard 2 for Riparian Systems

The project area's ability to achieve Public Land Health Standard 2 would be unchanged with the successful implementation of BMPs, and adequate maintenance of the ROW. The project would result in the permanent loss of less than 1,263 square feet of riparian vegetation and may result in some increased sediment, surface runoff, and erosion. However, design features incorporated into the proposed action would minimize and avoid impacts to the riparian system and associated riparian corridor to the extent possible. Implementation of the proposed action would not be expected to affect the continued achievement of Standard 2.

Cumulative Effects

Under the Proposed Action, temporarily disturbed areas would be reclaimed and ROW maintenance would occur in accordance with BMPs. Therefore, there would be no cumulative impacts from the Proposed Action.

3.3.5 Wildlife (includes fish, aquatic and terrestrial) (includes a finding on Standard 3)

Current Conditions

3.3.5.1 Wildlife

The project area includes habitat for wildlife species, including cottontail (*Sylvilagus* sp.), coyote (*Canus latrans*), raccoons (*Procyon lotor*), golden-mantled ground squirrels (*Callospermophilus lateralis*), and mule deer (*Odocoileus hemionus*), as well as numerous other small mammals. Amphibians and reptiles, including snakes, lizards, frogs and toads also may occur in the project area. The existing I-70 bridge structures were examined for potential use by bats. No evidence (bats, guano or other evidence) was observed, though the project area provides potential foraging and resting habitat. The existing bridge would not be disturbed, although increased daytime recreational visitor use could affect any potential use of the structures by bats.

3.3.5.2 Migratory Birds and Birds of Conservation Concern

Species documented during the 2015-17 field surveys were common raven (*Corvus corax*), rock dove (*Columba livia)*, red-winged blackbird (*Agelaius phoeniceus*), black-billed magpie (*Pica hudsonia)*, house finch (*Haemorhous mexicanus*), and other disturbance tolerant species. Canada geese (*Branta canadensis*), red-tailed hawk (*Buteo jamaicensis*), great blue heron (*Ardea herodias*), northern flicker (*Colaptes auratus*), and bald eagle (*Haliaeetus leucocephalus*) also were observed during other site visits.

A bald eagle nest/roost site is located near the intersection of Cipolla Road and 15 ½ Road, north of I-70. The ¼ mile and ½ mile raptor conservation buffers overlap with the project area. No other raptors or "Birds of Conservation Concern" (Table 8) were observed during the 2016 field survey or the 2017 field survey which included the access road to private property (ERO 2016c). No raptor or passerine nest structures were observed within the project area. The immediate project area contains limited-to-poor nesting and foraging habitat for most raptor and migratory bird species, including accipiters. The best nesting habitat is in cottonwood trees that occur outside of the project area but in the project vicinity. Russian olive and tamarisk also occur in the project area and provide nesting habitat.

Table 8. "Birds of Conservation Concern" that have potential occur in the project area.

Common Name (*Species Name*)	Seasonal Occurrence in Project Area
Bald Eagle (*Haliaeetus leucocephalus*)	Year-round
Black Swift (*Cypseloides niger*)	Breeding
Brewer's Sparrow (*Spizella breweri*)	Breeding
Brown-capped Rosy-finch (*Leucosticte australis*)	Wintering

Common Name (*Species Name*)	Seasonal Occurrence in Project Area
Burrowing Owl (*Athene cunicularia*)	Breeding
Cassin's Finch (*Carpodacus cassinii*)	Year-round
Ferruginous Hawk (*Buteo regalis*)	Wintering
Golden Eagle (*Aquila chrysaetos*)	Year-round
Gray Vireo (*Vireo vicinior*)	Breeding
Juniper Titmouse (*Baeolophus ridgwayi*)	Year-round
Lewis's Woodpecker (*Melanerpes lewis*)	Year-round
Loggerhead Shrike (*Lanius ludovicianus*)	Year-round
Olive-sided Flycatcher (*Contopus cooperi*)	Breeding
Peregrine Falcon (*Falco peregrinus*)	Breeding
Pinyon Jay (*Gymnorhinus cyanocephalus*)	Year-round
Prairie Falcon (*Falco mexicanus*)	Year-round
Sage Thrasher (*Oreoscoptes montanus*)	Breeding
Short-eared Owl (*Asio flammeus*)	Wintering
Swainson's Hawk (*Buteo swainsoni*)	Breeding
Williamson's Sapsucker (*Sphyrapicus thyroideus*)	Breeding
Willow Flycatcher (*Empidonax traillii*)	Breeding

Source: U.S. Fish and Wildlife Service 2017.

Finding on Public Land Heath Standard 3 for Productive Animal Communities

Public Land Health Standard 3 states that healthy, productive plant and animal communities of native and other desirable species should be maintained at viable population levels commensurate with the species and habitat's potential. The current conditions in the project area meet this standard, though weedy conditions exist.

No Action

Direct and Indirect Effects

Under the No Action Alternative, there would be no construction activities that would displace or deter migratory birds, raptors, or wildlife. There would be no ground disturbing activities associated with trail or Fruita force main construction that would have the potential to impact wildlife or habitat in the project area.

Finding on Public Land Heath Standard 3 for Productive Animal Communities

Public Health Standards 3 for Productive Animal Communities is met, currently; under the No Action Alternative, there would be no change to animal communities in the project area; therefore, the project area would continue to meet Standard 3.

Cumulative Effects

There would be no cumulative effects to wildlife resulting from the No Action Alternative.

Proposed Action

Direct and Indirect Effects

The Proposed Action would result temporary and permanent disturbance associated with the new trail corridor, as well as temporary disturbance from the proposed new Fruita force main. Potential temporary disturbance from maintenance activities for PSCo and Fruita utility facilities on the site also could occur under the proposed action. Construction would initially reduce wildlife habitat by removing existing vegetation for the trail construction. The existing alignment and ROW would be reclaimed using desirable vegetation, and be recontoured to as close to the original slope as possible. Species that currently occur in the project area are tolerant of human disturbance, and likely would return to the project area following construction activities.

Due to the small size of the project footprint and existing disturbance corridor, there would be negligible impacts to the wildlife habitat and individuals from the Proposed Action. Fragmentation of habitat could result from the new alignment; however, the existing disturbance within the I-70 corridor adjacent to the project area dwarfs the new disturbance from the trail.

Due to potential migratory bird habitat and the known Bald Eagle roost/nest site, the project construction is anticipated to occur during late summer through fall; this construction season would minimize impacts to nesting and foraging migratory birds as well as wintering ungulates. Timing restrictions would be further refined in coordination with the USFWS.

Construction work conducted during the winter months may result in avoidance of the area by deer and other wildlife species; however, this is anticipated to be minor. Also see Table 3 for BMPS and design features to protect wildlife.

Finding on Public Land Heath Standard 3 for Productive Animal Communities

With the implementation of BMPs and design features, along with reclamation standards the project area would continue to meet Standard 3.

Cumulative Effects

Due to the small size of the project and the existing disturbed nature of the project corridor, negligible cumulative effects to wildlife are anticipated as a result of the Proposed Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area. Ongoing human activity along the bike path would have a small cumulative effect with the I-70 corridor; however as noted previously, the influence of the I-70 corridor far outweighs the effect of the trail.

3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.4.1 Cultural Resources

Current Conditions

A cultural resource inventory was completed for the area of potential effect, which resulted in the documentation of three previously recorded segments of linear resources (5ME4680.15, 5ME20933.1, and 5ME20956.1). Site 5ME4680.15 is a segment of the Kiefer Extension of the Grand Valley Canal. The segment is officially non-supporting of the eligibility of the resource for the National Register of Historic Places. Sites 5ME20933.1 and 5ME20956.1 are segments of drainage ditches recommended non-supporting of the eligibility of the resources. The canal and drainage ditch segments are the only cultural resources identified during pedestrian survey, and no other resources were identified during the literature review.

No Action

Direct and Indirect Effects

The No Action Alternative would result in no direct or indirect effects to cultural resources.

Cumulative Effects

The No Action Alternative would result in no cumulative effects to cultural resources.

Proposed Action

Direct and Indirect Effects

Because no eligible cultural resources were located within the project area, the Proposed Action Alternative would result in no direct or indirect effects to historic properties. ERO has recommended a determination of "no historic properties affected," pursuant to 36 CFR 800.4 of the NHPA. Consultation with the State Historic Preservation Officer (SHPO) was initiated on May 16, 2017.

Cumulative Effects

Because no eligible cultural resources exist within the project area, the Proposed Action Alternative would result in no cumulative effects to historic properties.

3.4.2 Tribal and Native American Religious Concerns

American Indian religious concerns are legislatively considered under several acts and Executive Orders, namely the American Indian Religious Freedom Act of 1978 (PL 95-341), the Native American Graves Environmental Assessment Protection and Repatriation Act of 1990 (PL 101-601), and Executive Order 13007 (1996; Indian Sacred Sites). In summary, these require, in concert with other provisions such as those found in the NHPA and Archaeological Resources Protection Act (ARPA), that the federal government carefully and proactively take into consideration traditional and religious Native American culture and life and ensure, to the degree possible, that access to sacred sites, the treatment of human remains, the possession of sacred items, the conduct of traditional religious practices, and the preservation of important cultural properties are considered and not unduly infringed upon. In some cases, these concerns are directly related to "historic properties" and "archaeological resources". In some cases, elements

of the landscape without archaeological or other human material remains may be involved. Identification of these concerns is normally completed during the land use planning efforts, reference to existing studies, or via direct consultation. Tribal consultation is the responsibility of the lead federal agency and current status is unknown. There is no known evidence that suggests the project area holds special significance for Native Americans, or is actively used to maintain any traditional practices.

No Action

Direct and Indirect Effects

Under the No Action Alternative, no cultural resources or Native American sites of religious concern would be impacted. No additional visual impacts would occur to cultural resources or Native American sites of religious concern.

Cumulative Effects

There would be no cumulative effects to cultural resources or Native American sites of religious concern.

Proposed Action

Direct and Indirect Effects

The Ute have a generalized concept of spiritual significance that is not easily transferred to Western models or definitions. As such the BLM recognizes that the Ute have identified sites that are of concern because of their association with Ute occupation of the area as part of their traditional lands. No traditional cultural properties, unique natural resources, or properties of a type previously identified as being of interest to local tribes, were identified during the cultural resources inventory of the project area. No additional Native American Indian consultation was conducted for the proposed project. The project would not alter or limit any access if there were traditional uses that are not known to the agency.

Cumulative Effects

In previous consultation, some tribes have expressed concern with landscape fragmentation from the construction of trails and roads. Newly constructed trails can contribute to overall landscape fragmentation. The project would not alter or limit any access if there were traditional uses that are not known to the agency.

3.4.3 Socioeconomics and Environmental Justice

Current Conditions

3.4.3.1 Socioeconomics

The socioeconomic environment comprises the social and economic characteristics that may be affected by the Proposed Action. It also gives the context for the Proposed Action, and provides

a description of the communities and institutions that provide the economic and social character of the area. The project area is located in western Mesa County, Colorado, just west of Grand Junction, near Fruita. Grand Junction is the largest city near the project area, and the regional economic center where social services and resources are available. Table 9 gives the current and projected populations of Colorado, Mesa County, Grand Junction, and Fruita. Colorado is included in the population and discussion of the socioeconomic environment to provide context and comparison.

Table 9. Population and Population Change, 2000 to 2015.

Location	Population 2000	Population 2010	Population 2015	Population Change 2000-2010	Population Change 2010-2015
Colorado	4,301,261	5,029,196	5,456,574	14.47%	7.83%
Mesa County	116,255	142,284	147,509	18.29%	3.54%
Grand Junction	41,986	58,566	59,945	28.31%	2.30%
Fruita	6,478	11,676	12,750	44.52	8.42%

Source: USCB 2016

Between 2000 and 2015, Colorado, Mesa County, Grand Junction and Fruita have experienced population growth commensurate with their economic growth. The population centers near the proposed trail, including Fruita and Grand Junction are expected to continue to grow over the coming years.

The workforce in Mesa County is characterized by management and business occupations (31 percent); sales and office occupations (26 percent); and natural resources, construction, and maintenance occupations (13 percent). In Fruita, the workforce is characterized by management, business, science and arts (38.6 percent), sales and office occupations (21.4 percent), production, transportation and material moving occupations (16.2 percent) and service occupations (15.0 percent). The major industries in the Grand Junction area are related to natural resources (agriculture, forestry, fishing and hunting, and mining) (22 percent), construction (14 percent), and social services (education, health care, and social assistance) (15 percent).

The economy in Mesa County is subject to the boom and bust in the energy industry, and while the economy was strong at times in the past decade, the oil and gas industry is expected to decline slightly. Mesa County and the wider Grand Junction area is expected to continue to rely on the outdoor recreation industry, and an upward trend in recreation is expected to continue as people are attracted to the area's trails, federal lands, and recreation opportunities.

Median household income (MHI) in 2014 was about $48,600 per year in Mesa County, $49,750 in Grand Junction, and $54,875 in Fruita. The state MHI is about $59,500 and the national MHI is $53,500. The project area vicinity is characterized as suburban and rural, with a greater population density and access to economic and social services east of the project area towards Grand Junction. Unemployment for 2016 is recorded as 5.36 percent in Mesa County, greater than both 3.26 percent in Colorado, 3.26 percent, and 4.6 percent for the United States (BLS, 2017). Fruita has a comparable, but slightly higher poverty rate, 13.8 percent than the state, 12.7 percent in Colorado (USCB 2016). The minority race and ethnic populations in Colorado, Mesa County, Grand Junction, and Fruita is shown in Table 10.

Table 10. Race and Ethnicity in Colorado, Mesa County, Grand Junction, and Fruita

	Colorado	Mesa County	Grand Junction	Fruita
Race*				
Black or African American	4.5 %	1.4%	2.0%	1.1 %
American Indian and Alaska Native	1.6%	1.8%	2.2%	1.4%
Ethnicity				
Hispanic or Latino (of any race)	21.3%	13.9%	15.3%	13.6%

*Population percentage is for race alone or in combination with one or more races Source: USCB 2016

3.4.3.2 Environmental Justice

Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" was issued by the President of the United States on February 11, 1994. This order established requirements to address environmental justice concerns within the context of agency operations. As part of the NEPA process, agencies are required to identify and address disproportionately high and adverse human health or environmental effects on minority or low-income communities. Federal agencies are directed to ensure that federal programs or activities do not result, either directly or indirectly, in discrimination on the basis of race, color, or national origin.

The CEQ has provided guidance on addressing environmental justice under NEPA (CEQ 1997). Under the guidance, minority populations are identified where the percentage of minorities in the affected area exceeds 50 percent, or where the minority population percentage of the affected area is meaningfully greater than the minority population percentage of a much broader area.

Within the Fruita area, there are small proportions of the population that are minority race and/or Hispanic or Latino. The communities, however, would not constitute EO 12898 populations as their Hispanic or Latino and non-White populations do not exceed 50 percent of the total population and are not meaningfully greater than Colorado's non-White and Hispanic or Latino populations. Non-white minority populations in the Fruita community are below or comparable to Colorado's and the Mesa County's non-white minority populations (Table 10).

<u>No Action</u>

Direct and Indirect Effects

Under the No Action Alternative, the proposed trail and new Fruita force main would not be constructed. The revenues for the construction of the trail and any effect on employment in the area would not take place, including potential, temporary construction-related jobs. Recreational users of the Kokopelli Trail would use the trailhead at the Loma exit. Recreational opportunities exist in the area currently, and an increase in recreational use and socioeconomic effects of that use would continue. There would be no effects to minority or low income populations.

Cumulative Effects

Cumulative effects associated with the No Action are expected to be negligible.

Proposed Action

Direct and Indirect Effects

All of the socioeconomic impacts associated with the project are expected to occur within Mesa County. Effects to socioeconomics are expected to be beneficial overall as a result of the project. Under the proposed action, the area would be more accessible for recreational users of the Kokopelli Trail and development of economic resources may occur with the connected trail route. The trail likely will not draw new users to the area, but instead may enhance resident and visitor experience. The utilities provide important infrastructure for the City of Fruita and its economy. Providing additional capacity to accommodate additional community growth is part of the City of Fruita's planning process and prevents issues caused by undersized or inadequate public facilities.

Construction of the proposed trail as well as the proposed future force main likely would be completed by a local contractor that would benefit the local community. Short-term job opportunities are anticipated, with potential project requirements of about 5 to 20 qualified personnel for a 4 to 6-month period. There is likely a qualified local workforce for the project. Construction of the new trail would increase visitor traffic in the project area due to the expansion of existing recreational opportunities, but use is not anticipated to increase dramatically. Little impact to the quality of life of residents who live in proximity to the trail is anticipated; most of the trail alignment is in proximity to industrial uses or vacant lands rather than residential areas. No effects to population are expected. Installation of the future Fruita force main would be in response to population growth.

Cumulative Effects

There would be no substantial cumulative effects to the socioeconomic environment resulting from the Proposed Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area.

Environmental Justice

No communities within the study area would be considered to have environmental justice populations. Therefore, there would be no direct, indirect, or cumulative effects on EO 12898 populations from the No Action or Proposed Action Alternatives.

3.4.4 Wastes, Hazardous or Solid

Current Conditions

There are no landfills or other known concentrations of potentially hazardous materials in the immediate project area. There are likely no hazardous materials in the project area other than what may occur at nearby homes or businesses. The gilsonite plant which historically operated north of the existing Fruita Waste Water Treatment Facility (WWTF), as well as the WWTF itself, are not known to be hazardous.

No Action

Direct and Indirect Effects

Under the No Action Alternative, no conditions associated with hazardous or solid wastes would change.

Cumulative Effects

Under the No Action Alternative, no cumulative effects to hazardous or solid wastes are expected.

Proposed Action

Direct and Indirect Effects

Under the Proposed Action, construction activities would require the use of vehicles and equipment using fuels, hydraulic fluid, and lubricants. Paving materials, including gravel and concrete, would be used. Solid waste, such as packaging and containers, excess materials, or damaged materials would be generated from construction. No impacts from hazardous or solid waste are anticipated.

Design features and BMPs that the proponent incorporated into Proposed Action to ensure solid and hazardous waste is managed to prevent effects to the environment are listed in Table 3.

Cumulative Effects

Cumulative effects are not expected as a result of the Proposed Action.

3.4.5 Recreation

Current Conditions

Overall, the State of Colorado has experienced an increase in recreational use of public lands and amenities, from local residents as well as visitors from other regions of Colorado, other states, and other countries, and use of recreational bike trails near Fruita are no exception. The wider area around Fruita has over 52 established bike trails (MTB Project 2017) making Fruita a viable alternative to Moab for bikers and families from the front range seeking weekend adventure. A very popular area is the Kokopelli's Loop trail system, which connects with the Kokopelli trail extending into Utah. In addition, the Colorado River has become a popular destination for boating and rafting, with the scenic Ruby Horsethief canyon stretch accessed from a boat launch at Loma, at the west end of the project area. To manage increased pressure on this popular stretch of river, a permit system was implemented by the BLM beginning in 2014.

No Action

Direct and Indirect Effects

Under the No Action alternative, the new trail would not be constructed and a non-motorized, pedestrian trail connection between the Colorado Riverfront Trail system and the Kokopelli trail system would not be established.

Cumulative Effects

Under the No Action Alternative, no cumulative effects would occur.

Proposed Action

Direct and Indirect Effects

The project would enhance the availability of bike and pedestrian trails in the Fruita area, and access to mountain biking amenities. The new trail would connect the Colorado Riverfront Trail system, which provides continuous trail from Palisade to Fruita, with the popular Kokopelli's Loop mountain biking area and Kokopelli Trail, which extends into Utah. The width of the trail and safety features contribute to a multi-use format, which would benefit the residents and visitors in the Fruita area. The project would have a beneficial effect on the recreational experience of bikers starting near the City of Fruita, accessing biking opportunities to the west. It is uncertain whether this new access would result in additional use at the Kokopelli's Loop trail system, but it would provide an additional access that may take some of the pressure/use from the existing Kokopelli trailhead. The new trail would provide Kokopelli trail users an alternative parking lot and trailhead access, which may indirectly increase use of the trail. Increased trail use is expected regardless of this project, as current trends in recreation and population growth are expected to continue. Although the proposed action would include additional parking adjacent to the Loma boat launch, the BLM does not expect river users to use the new parking area. The proposed project would expand access and opportunities for recreation, and effects to recreation are expected to be beneficial.

The new proposed Fruita force main, as well as maintenance of the existing PSCo and Fruita utilities in the Lot 3 area, could disrupt recreation during construction activities. Those effects are expected to be minor.

Cumulative Effects

No cumulative, negative effects are expected as a result of this project. The project would add approximately 4.5 miles to existing trail systems in the Fruita area, and to the 23 miles of Colorado Riverfront Trail. Utility ROW effects would not result in cumulative effects to recreation.

3.5 LAND RESOURCES

3.5.1 Land Tenure, Rights of Way and other Uses

Current Conditions

The Project would be located on federal lands administered by the BLM GJFO and private lands. Table 11 list the authorized ROWs in the Project Area that could be directly or indirectly affected.

Table 11. ROW and Realty Authorizations within the Proposed Project Area

Serial Number	Type	Owner
COC-077607	ROW-Fiber Optic Cable	Emery Telecom
COC-0 093944	ROW-Rail Line	Union Pacific Railroad
COC-0 122132	ROW-Rail Line	Denver Parks and Pacific Railroad
COC003881 COC009349	I-70, Fruita to Loma I-70, Mack to Loma	CDOT CDOT

No Action

Direct and Indirect Effects

Under the No Action Alternative, there would be no new realty authorizations issued and existing utility lines crossing Lot 3 would continue to be out of federal ROW compliance.

Cumulative Effects

There would be no cumulative effects to land tenure or ROWs resulting from the No Action Alternative taken in combination with reasonably foreseeable activities in the project area.

Proposed Action

The proposed action would include the following design features and BMPs (Table 3):

- Before construction begins, ROW authorization holders and private landowners shall be notified about ROW activities and construction schedule.
- Construction activities should be coordinated so to not inhibit ROW authorization holders' activities.
- At least 90 days prior to termination of the ROW, Fruita should contact the Authorized Officer to arrange a join inspection of the ROW. This inspection would be held to agree to an acceptable termination and rehabilitation plan. This plan should include, but is not limited to, removal of facilities, drainage structures, and removal of surface material; re-contouring, top-soiling, or seeding. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.
- Fruita should conduct all activities associated with the construction, operation and termination of the ROW within the authorized limits of the ROW.

Direct and Indirect Effects

Under the proposed action, a total of four ROWs would cross existing BLM authorized land; three ROWs would bring existing utilities into Federal ROW compliance. The proposed configuration would parallel or cross existing BLM authorized actions. The newly granted ROW are not expected to impact existing authorized actions. These ROWs replace private easements and agreements that were entered under erroneous title work/parcel data.

Cumulative Effects

There would be no cumulative effects to land tenure or ROWs resulting from the Proposed Action Alternative taken in combination with reasonably foreseeable activities in the proposed action area.

CHAPTER 4 – CONSULTATION AND COORDINATION

4.1 LIST OF PREPARERS AND PARTICIPANTS

INTERDISCIPLINARY REVIEW

GJFO, DENCA, MCNCA Interdisciplinary Resource Team

NAME	TITLE	AREA OF RESPONSIBILITY
Natalie Clark	Archaeologist	Cultural Resources, Native American Religious Concerns
Andy Windsor	Supervisory Outdoor Recreation Planner	Access, Transportation, Recreation
Dan Ben-Horin	National Conservation Land Specialist	Wilderness, Wild & Scenic Rivers, WSA, NHT, VRM, Wilderness Characteristics
Scott Clarke	Range Management Specialist	Vegetation, Range
Bob Price	Range Management Specialist	Forestry
Jim Dollerschell	Range Management Specialist	Wild Horse & Burro Act
Eric Eckberg	Geologist	Geology, Paleontology
Alan Kraus	Hazardous Materials Specialist	Hazardous Materials
Janet Doll	Realty Specialist	Realty Authorizations
Heidi Plank	Wildlife Biologist	T&E Species, Migratory Bird Treaty Act, Terrestrial & Aquatic Wildlife
Anna Lincoln	Ecologist	Land Health Assessment, Special Status Plants, Riparian and Wetlands
Kevin Hyatt	Hydrologist	Soils, Air Quality, Water Quality, Hydrology, Water Rights
Jeff Phillips	Fire Ecologist Natural Resource Specialist	Fire Ecology, Fuels Management
Mark (Sparky) Taber	Range Management Specialist	Weed Coordinator, Invasive, Non-Native Species
Christina Stark	Assistant Field Manager (Resources Programs / Planning & Environmental Coordination)	Environmental Justice, Socioeconomics, ACECs, Prime & Unique Farmlands, P&EC, Renewable Resources Supervisor
Wayne Werkmeister	Associate Field Manager	Non-Renewable Resource Program Supervisor

ERO Resources Corporation (3rd Party Contractor)

NAME	TITLE	AREA OF RESPONSIBILITY
Kathy Croll	Archaeologist	Cultural Resources, Native American Religious Concerns
Cassandra Shenk	Environmental Scientist	Access, Transportation, Hazardous materials, Realty Authorizations; Soils, Air Quality, Water Quality, Hydrology Socioeconomics, Environmental Justice
Emily Thorn	Natural Resources Specialist	Vegetation, Weeds, Range, T&E, Migratory Birds, Terrestrial & Aquatic Wildlife; Special Status Plants, Riparian and Wetlands
Aleta Powers	Environmental Scientist	Project Manager
Esa Crumb	Natural Resources Specialist	Vegetation, Weeds, Special Status Plants, Riparian and Wetlands
Katie Barnes	Administrative Assistant	Support, document review, formatting, and 508 compliance
Courtney Sockwell	Environmental Professional/Geologist	Hazardous waste

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

- A project meeting was held December 7, 2016 in the field with the BLM, City of Fruita, and representatives of the Corps of Engineers and U.S. Fish and Wildlife Service to review potential wetland impacts as well as impacts to species listed under the Endangered Species Act. A follow-up field meeting was held on June 7, 2017 to review Reed Wash and Big Salt Wash, particularly riprap areas, between U.S. Fish and Wildlife Service and SGM (representing the City of Fruita).
- Multiple project meetings involving the City of Fruita, CDOT, and BLM have taken place.
- BLM experts consulted with the Colorado State Historic Preservation Officer.

CHAPTER 5 – REFERENCES

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U.S. Army Corps of Engineers
South Pacific Division

Nationwide Permit Pre-Construction Notification (PCN)

This form integrates requirements of the U.S. Army Corps of Engineers (Corps) Nationwide Permit Program within the South Pacific Division (SPD). Boxes 1-10 must be completed to include all information required by General Condition 32. Box 11 (or other sufficient information to show compliance with all General Conditions) must be completed for activities in Arizona, California, Nevada, and Utah, and is recommended for activities in Colorado and New Mexico. If additional space is needed, please provide as a separate attachment. Please refer to the *Instructions for the South Pacific Division Nationwide Permit Pre-Construction Notification (PCN)* (Instructions) for instructions for completing the PCN, as well as additional information on the attachments and tables included with this PCN that may be used.

0. To be filled by the Corps

Application Number:	Date Received:	Date Complete:

1. Prospective Permittee and Agent Name and Addresses (see Instructions)

a. Prospective Permittee

First - Mr. Sam Middle - _____ Last - Atkins

Company - City of Fruita Email Address - satkins@fruita.org

Address - 325 Aspen Avenue City - Fruita State - Co Zip - 81521

Phone (Residence/Mobile) - _____ Phone (Business) - (970) 858-8377

b. Agent (if applicable)

First - Ms. Aleta Middle - _____ Last - Powers

Company - ERO Resources, Corp Email Address - apowers@eroresources.com

Address - PO Box 932 City - Hotchkiss State - CO Zip - 81419

Phone (Residence/Mobile) - _____ Phone (Business) - (970) 872-3020

c. Statement of Authorization: I hereby authorize Ms. Aleta Powers, to act in my behalf as my agent for the proposed activity. (Optional, see instructions)

Signature of Applicant

06/22/2017
Date

2. Name and Location of the Proposed Activity (see Instructions)

☐ The proposed work would involve multiple-single and complete projects. See attachment for the information required in Boxes 2 through 10, and 11, if applicable.

a. Project Name or Title:	b. County, State:
Kokopelli Pedestrian Trail	Mesa, Colorado

c. Name of Waterbody: Colorado River and tributaries Reed Wash (perennial), Big Salt Wash (intermittent), and unnamed manmade ponds

d. Coordinates:

☐ Unknown (please provide other location descriptions below)

Latitude - 39.168124° Longitude - 108.782512

e. Other Location Description (optional, see instructions):

Trail alignment along I-70 from the Loma interchange to Big Salt Wash

f. Driving Directions to the site (optional, see instructions):

N/A

3. Specific NWP(s) you want to use to authorize the proposed activity (see Instructions)

NWP 14 Linear transportation projects

4. Description of the Proposed Activity (see Instructions)

a. Complete description of the Proposed Activity:

Construction of a 10 foot wide concrete multi-use pedestrian trail, including 2 steel truss bridges and associated retaining features.

b. Purpose of the Proposed Activity:

The proposed Kokopelli Section of the Colorado Riverfront Trail is an extension of the regional Colorado Riverfront Trail system that has been designated by Governor Hickenlooper as "16 Trails in 2016" Colorado the Beautiful Initiative.
The proposed trail would connect an existing trail completed in 2016 that terminates at Little Salt Wash, with the Colorado Canyons National Conservation Area "Kokopelli's Loop Trails Area" near Loma.

c. Direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands and other waters of the U.S. expected to result from the NWP(s) activity:

Construction of the proposed trail would result in the loss of less than 0.051 acres (2,200 square feet) of wetland communities, including temporary impacts to less than 0.03 acres (1,263 square feet). Most of the wetland impacts would occur at small drain crossings associated with the outfalls of the 3 man-made gravel lakes (0.031 acres). Small impacts would also occur at Reed Wash, where a narrow wetland fringe was mapped on both sides of the drainage (0.02 acres).

Any temporarily disturbed areas would be reclaimed following construction. The proposed action involves crossings of small tributary streams where there is no reasonable alternative; however, construction of a pedestrian crossing would not cause unacceptable impacts to the riparian or wetland resource.

d. Description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity:

The project would result in the permanent loss of less than 1,263 square feet of riparian vegetation and may result in some increased sediment, surface runoff, and erosion. However, design features incorporated into the proposed action would minimize and avoid impacts to the riparian system and associated riparian corridor to the extent possible. USFWS has requested additional gravel to the riprap areas in Big Salt Wash, and all riprap at both Reed Wash and Big Salt Wash would be buried using excavated soil material from the washes.

e. Any other NWP(s), Regional/Programmatic General Permit(s) or Individual Permit(s) used or intended to be used to authorize any part of the proposed activity or any related activity:

N/A

f. Have sketches been provided containing sufficient detail to provide an illustrative description of the proposed activity?

☒ Yes, Attached ☐ No

☐ N/A; The activity is located in the Los Angeles District boundaries of Arizona and California, See Attachment 1
☐ N/A, The activity is located in the San Francisco District boundaries of California, See Attachment 2
☐ N/A, The activity is located in the Sacramento District boundaries of California, Nevada, or Utah, See Attachment 3

5. Aquatic Resource Delineation (see Instructions)

a. Has a delineation of aquatic resources been conducted in accordance with the current method required by the Corps? ☒ Yes ☐ No

If yes, please attach a copy of the delineation

Note: If no, your PCN is not complete. In accordance with General Condition 32, you may request the Corps delineate the special aquatic sites and other waters on the project site, but there may be a delay. In addition, the PCN will not be considered complete until the delineation has either been submitted to or completed by the Corps, as appropriate.

b. If a delineation has been submitted, would you like the Corps to conduct a jurisdictional determination (preliminary or approved)? ☒ Yes ☐ No

If yes, please complete, sign and return the attached *Appendix 1 – Request for Corps Jurisdictional Determination (JD)* sheet or provide a separate attachment with the information identified in Appendix 1.

6. Compensatory Mitigation (see Instructions)

a. Will the proposed activity result in the loss of greater than 1/10-acre of wetlands? ☐ Yes ☒ No

If yes, describe how you propose to compensate for the loss of each type of wetland:

Note: for the loss of less than 1/10 acre of wetlands, or if no compensatory mitigation is proposed, the Corps may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

b. Will the proposed activity result in the loss of streams or other open waters of the U.S.? ☐ Yes ☒ No

If yes, provide a description of any proposed compensatory mitigation for the loss of each type of stream or other open water:

Note: if no compensatory mitigation is proposed, the Corps may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in no more than minimal adverse environmental effects.

7. Endangered Species Act (ESA) Compliance (see Instructions)

a. For non-Federal permittees (if Federal permittee, check N/A and skip to 7(d)): ☒ N/A

(1) Is there any Federally-listed endangered or threatened species or critical habitat that might be affected or is in the vicinity of the activity? ☐ Yes ☐ No

(2) Is the activity located in designated critical habitat for Federally-listed endangered or threatened species? ☐ Yes ☐ No

If yes to either (1) or (2), include the name(s) of those endangered or threatened species that might be affected by the proposed activity or might utilize the designated critical habitat that might be affected by the proposed activity:

1. 2.

3. 4.

5. 6.

If no to both (1) and (2), proceed to Box 8.

Note: If yes to either (1) or (2), note per General Condition 18(c), you shall not begin work on the activity until notified by the Corps that the requirements of the ESA have been satisfied and that the activity is authorized.

b. Has information sufficient to initiate consultation with the U.S. Fish and Wildlife Service/National Marine Fisheries Service for compliance with Section 7 of the ESA been prepared? ☐ Yes ☐ No

If yes, please attach a copy of the information.

c. Additional information you wish to provide regarding compliance with the ESA, if applicable:

d. For Federal permittees, you must provide documentation demonstrating compliance with ESA as a separate attachment.

8. Historic Properties (see Instructions)

a. For non-Federal permittees (if Federal permittee, check N/A and skip to 7(d)): ☒ N/A

(1) Is there a known historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places that the NWP may have the potential to affect? ☐ Yes ☐ No

If yes to (1), state which historic property may have the potential to be affected by the proposed activity:

1. 2.

3. 4.

5. 6.

OR

☐ A vicinity map indicating the location of the historic property is enclosed

(2) If no to (1), describe the potential for the proposed work to affect a previously unidentified historic property:

Note: If yes to (1), note per General Condition 20(c), you shall not begin the activity until notified by the Corps that the activity has no potential to cause effects or that consultation under Section 106 of the National Historic Preservation Act (NHPA) has been completed.

b. Has information sufficient to initiate consultation with the State Historic Preservation Officer/Tribal Preservation Officer for compliance with Section 106 of the National Historic Preservation Act (NHPA) been prepared?

☐ Yes ☐ No

If yes, please attach a copy of the information.

c. Additional information you wish to provide regarding compliance with the NHPA, if applicable:

d. For Federal permittees, you must provide documentation demonstrating compliance with NHPA in a separate attachment.

9. National Wild and Scenic Rivers (see Instructions)

a. Will the proposed activity(s) occur in a component of the National Wild and Scenic River System or a river officially designated by Congress as a "Study River" for possible inclusion in the system while the river is in an official study status?

☐ Yes, in a component of a National Wild and Scenic River System; ☐ Yes, in a "study" river ☒ No

If yes, identify the Wild and Scenic River or the "study river"

Note: per General Condition 16(b), you shall not begin the NWP activity until notified by the Corps that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status. If you have received written notification from the Federal agency, please attach the correspondence.

10. Section 408 Permissions (see Instructions)

a. Will the NWP also require permissions from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a Corps federally authorized Civil Works project? ☐ Yes ☒ No

If yes, have you received Section 408 permission to alter, occupy, or use the Corps project? ☐ Yes ☒ No

If yes, please attach the Section 408 permission

If yes, note per General Condition 31, an activity that requires Section 408 permission is not authorized by NWP until the Corps issues the Section 408 permission to alter, occupy, or use the Corps project, and the Corps issues a written NWP verification.

11. Compliance with NWP General Conditions (see Instructions)		
Check	**General Condition**	**Rationale for Compliance with General Condition**
☒	1. Navigation	No fill in Colorado River
☒	2. Aquatic Life Movements	No change anticipated
☒	3. Spawning Areas	No work in Colorado River
☒	4. Migratory Bird Breeding Areas	Limited breeding habitat in project area and low volumes of clearing; clearing constraints would protect birds and nesting/brood rearing habitat
☐	5. Shellfish Beds	N/A
☒	6. Suitable Material	No unsuitable material will be used

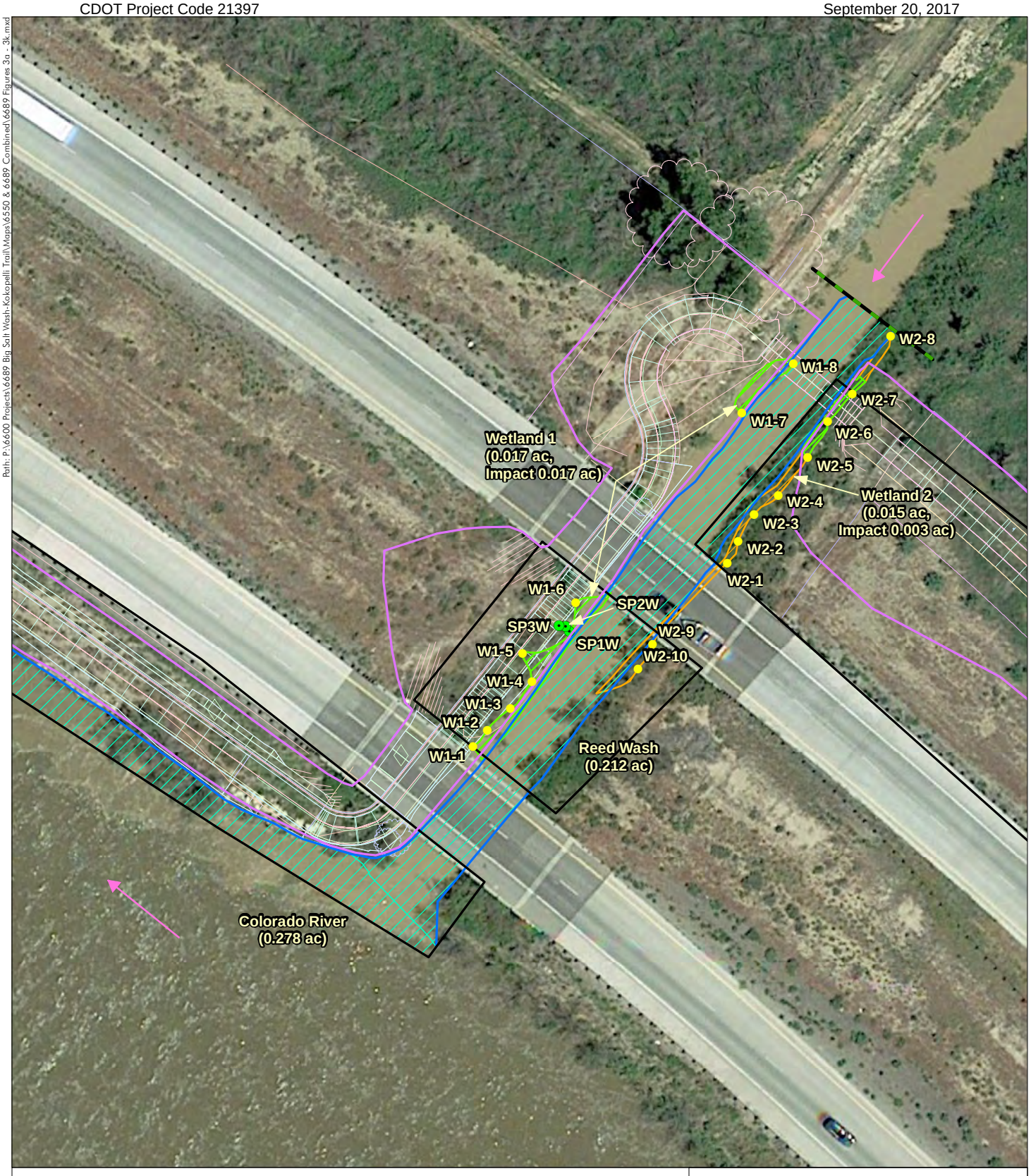
☒	7. Water Supply Intakes	No water supply intakes occur in the project area
☐	8. Adverse Effects from Impoundments	N/A
☐	9. Management of Water Flows	N/A
☒	10. Fills Within 100-Year Floodplains	Fills within the floodplain of the Colorado River is limited. The trail would be constructed "at grade" with minimal change in elevation, and most of the eastern portion would occur along existing maintenance access road. Some riprap protection would be placed at Reed Wash and Big Salt Wash.
☒	11. Equipment	No mudflats in the project area
☒	12. Soil Erosion and Sediment Controls	Erosion and sediment controls are incorporated into the design

☒	13. Removal of Temporary Fills	Temporary fills/impacts will be revegetated
☒	14. Proper Maintenance	Structure will be maintained in proper working condition
☒	15. Single and Complete Project	Project has logical termini
☐	16. Wild and Scenic Rivers	N/A
☐	17. Tribal Rights	N/A
☒	18. Endangered Species	See Box 7 above.
☒	19. Migratory Bird and Bald and Golden Eagle Permits	Existing nest will not be adversely affected by the project, design features in place to minimize disturbance (specifically, construction timing constraints). Coordination with USFWS and BLM is underway.

☒	20. Historic Properties	See Box 8 above.
☒	21. Discovery of Previously Unknown Remains and Artifacts	Project will comply with condition
☐	22. Designated Critical Resource Waters	N/A
☒	23. Mitigation	See Boxes 4(d) and 6 above.
☐	24. Safety of Impoundment Structures	N/A
☐	25. Water Quality, including status of Section 401 Water Quality Certification	N/A
☐	26. Coastal Zone Management, including status of CZM Consistency Certification from the State of California (for projects in or affecting the Coastal Zone)	N/A

☒	27. Regional and Case-by-Case Conditions	project will comply with conditions
☒	28. Use of Multiple Nationwide Permits	N/A; multiple NWPs not proposed
☒	29. Transfer of Nationwide Permit Verifications	Proponent understands transfer condition
☒	30. Compliance Certification	Proponent will return certification as required
☐	31. Activities Affecting Structures or Works Built by the United States	See Box 10 above.
☒	32. Pre-Construction Notification	To be submitted

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd



Big Salt Wash-Kokopelli Trail

- Soil Pit
- Wetland Flag
- Flow Direction
- Limit of Delineation
- Open Water (1.973 ac)
- Wetland (0.938 ac)
- Open Water Impact (0.031ac)
- Wetland Impact (0.051 ac)
- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

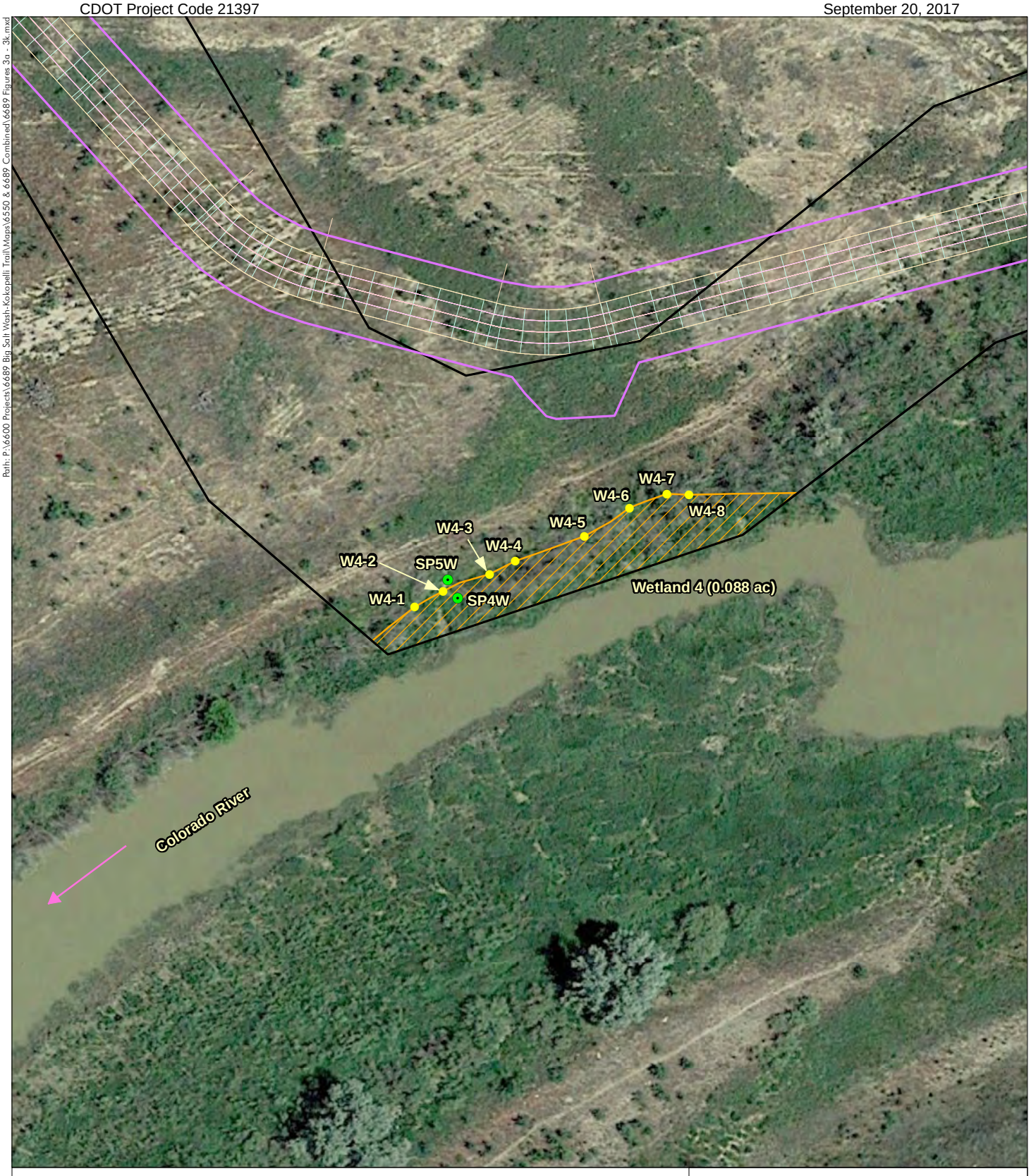
Figure 3a
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd



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- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

Figure 3b
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

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ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd

Big Salt Wash-Kokopelli Trail

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- Wetland Impact (0.051 ac)
- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

Figure 3c
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd

Big Salt Wash-Kokopelli Trail

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- Wetland Impact (0.051 ac)
- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

Figure 3d
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd

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- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

Figure 3e
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

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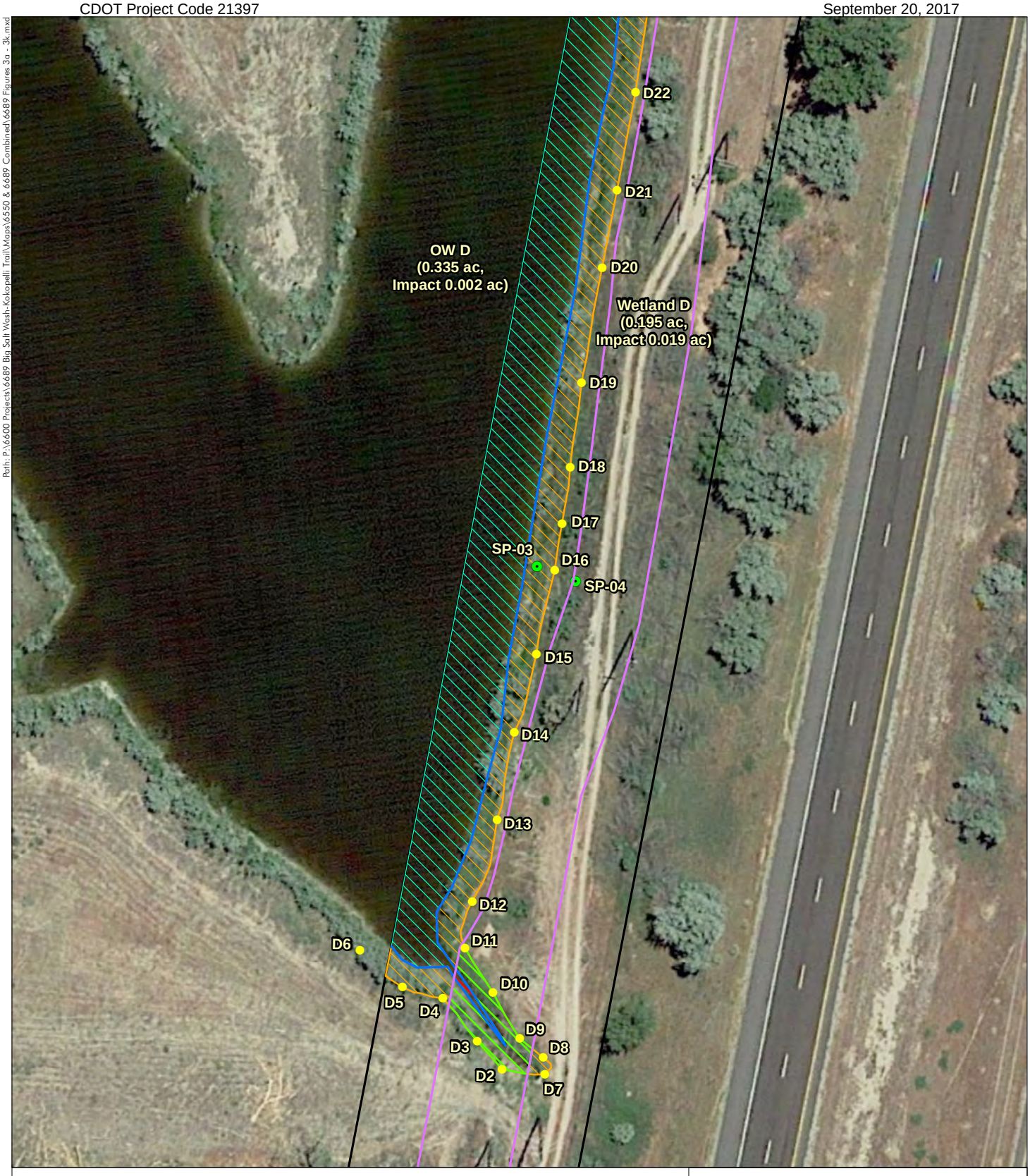
Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd



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- Project Area (64.40 ac)

0 30 60 Feet

1 inch=60 feet

N

Figure 3f
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd

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- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet

1 inch=60 feet

N

Figure 3g
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd

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- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

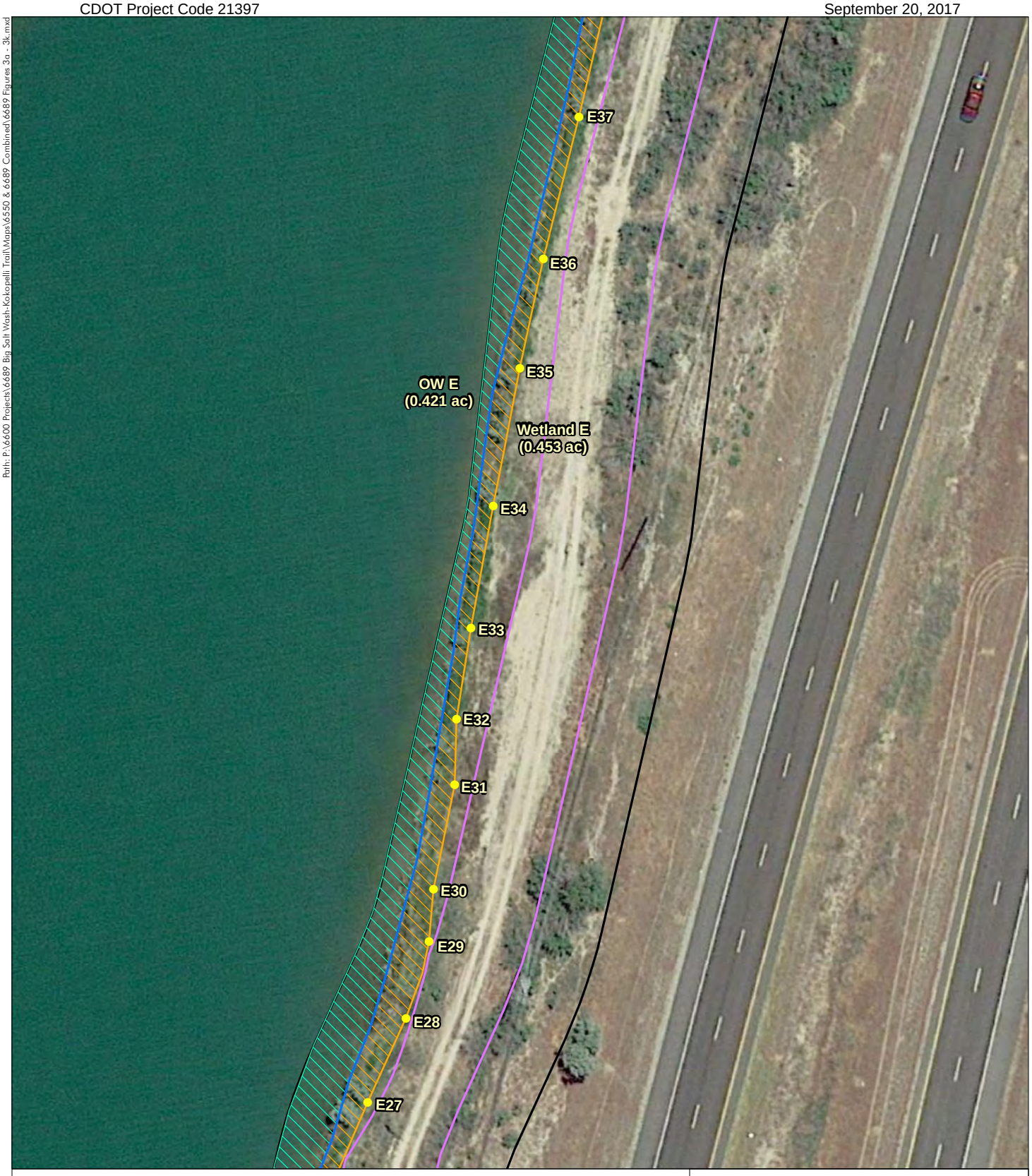
Figure 3h
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd



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- Limit of Delineation
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- Limit of Disturbance
- Project Area (64.40 ac)

0 30 60 Feet

1 inch=60 feet

N

Figure 3i
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO
ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd

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- Project Area (64.40 ac)

0 30 60 Feet

1 inch=60 feet

N

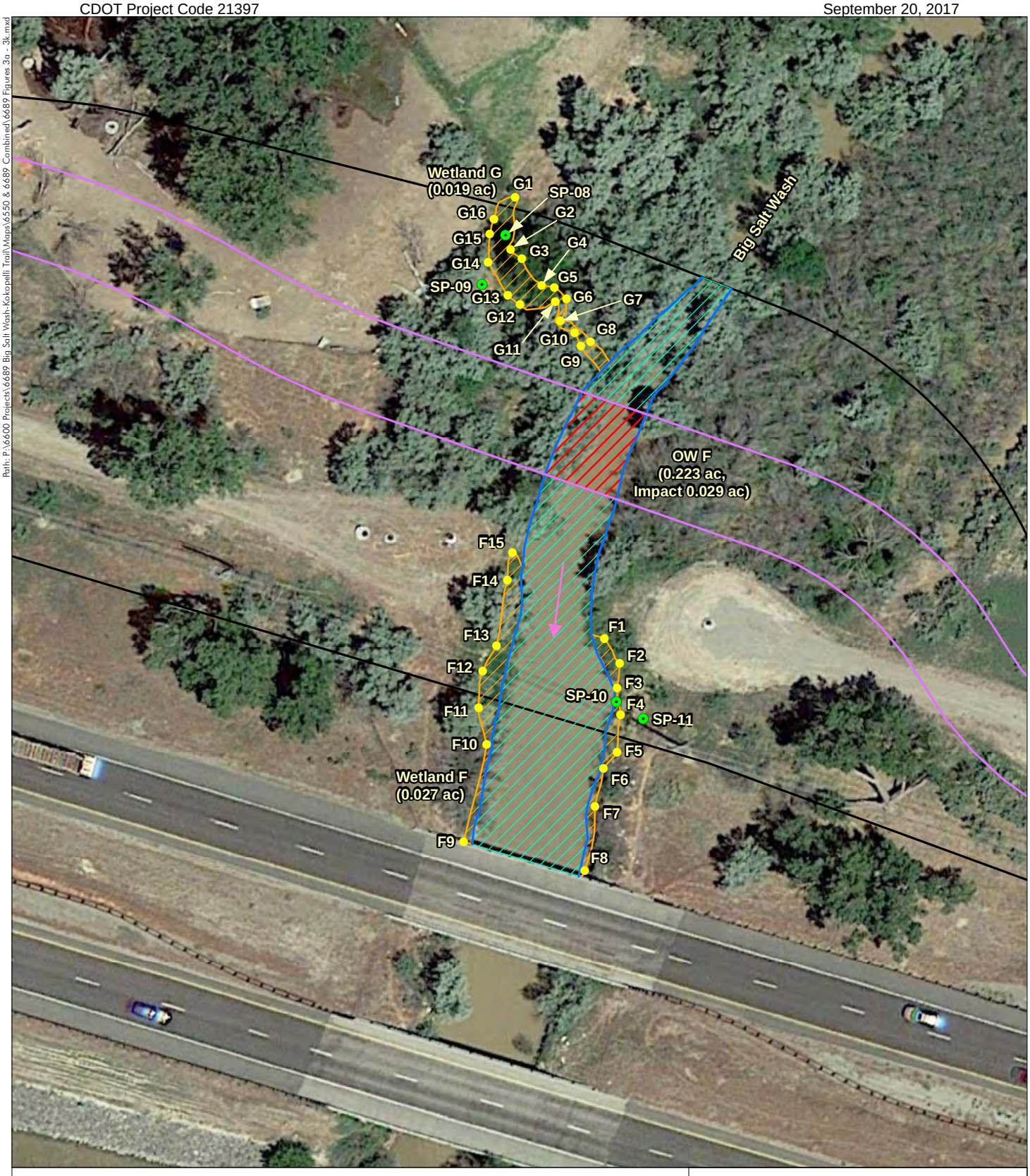
Figure 3j
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

Path: P:\6600 Projects\6689 Big Salt Wash-Kokopelli Trail\Maps\6550 & 6689 Combined\6689 Figures 3a - 3k.mxd



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- Project Area (64.40 ac)

0 30 60 Feet
1 inch=60 feet

N

Figure 3k
Proposed Impacts

Image Source: Google Earth©, June 2016

Prepared for: SGM, Inc.
File: 6689 Figures 3a - 3k.mxd (GS)
March 29, 2017

ERO Resources Corp.

September 20, 2017

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2011; AND AS SUBSEQUENTLY REVISED; THE STANDARD PLANS (M&S STANDARDS) DATED JULY 2012; AND AS SUBSEQUENTLY REVISED; AND IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDED HEREIN.

EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH M–206–1.

ALL EXPOSED CONCRETE SURFACES SHALL RECEIVE A CDOT CLASS 1 (ORDINARY SURFACE FINISH) TO 1 FOOT BELOW THE GROUND LINE.

ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".

SEVERITY OF POTENTIAL SULFATE EXPOSURE ON THIS PROJECT IS CLASS 2 WHERE CONCRETE ELEMENTS ARE IN DIRECT CONTACT WITH SOIL. ALL CAST IN PLACE CONCRETE SHALL MEET THE REQUIREMENTS SPECIFIED IN CDOT SPECIFICATIONS SECTIONS 601, 624 AND 701.

ALL STRUCTURAL STEEL FOR THE PREFABRICATED BRIDGE SHALL BE WEATHERING STEEL (ASTM A847 OR ASTM A588).

ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55 (GALVANIZED).

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS OTHERWISE NOTED.

Ⓝ DENOTES NON COATED (BLACK) REINFORCING STEEL.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS D CONCRETE	1'–10"	2'–3"	3'–4"	3'–11"	4'–5"	5'–6"	6'–10"	8'–2"

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

PERMANENT DECK FORMS ARE REQUIRED.

ABUT.	= ABUTMENT	EL.	= ELEVATION
AH.	= AHEAD	F.F.	= FAR FACE
BK.	= BACK	F.G.	= FINISHED GRADE
B.F.	= BACK FACE	H.C.L.	= HORIZONTAL CONTROL LINE
BRG.	= BEARING	N.F.	= NEAR FACE
CIP.	= CAST IN PLACE	P.G.L.	= PROFILE GRADE LINE
CONT.	= CONTINUOUS	TYP.	= TYPICAL
E.F.	= EACH FACE	U.O.N.	= UNLESS OTHERWISE NOTED

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ALL LONGITUDINAL AND TRANSVERSE DIMENSIONS ARE MEASURED HORIZONTALLY AND INCLUDE NO CORRECTION FOR GRADE.

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1–800–922–1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

811 Know what's below. Call before you dig.

CNCC 1–800–922–1987

DESIGN DATA

AASHTO LRFD GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES, 2009.

AAHSTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7th EDITION WITH 2015 & 2016 INTERIMS

DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN

LIVE LOAD: 90 PSF PEDESTRIAN LIVE LOAD
5 TON SERVICE VEHICLE (H–5 TRUCK)

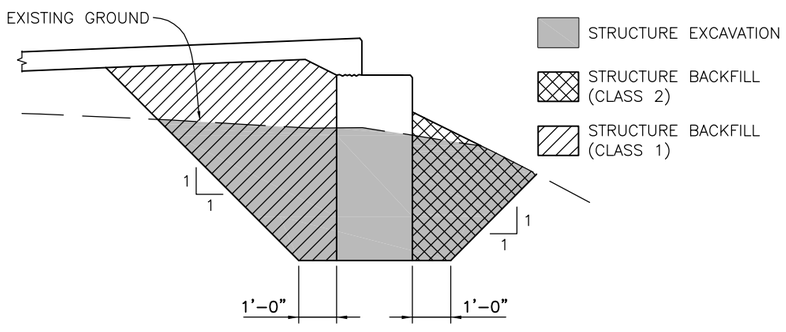
REINFORCED CONCRETE:
CLASS D CONCRETE: f'c = 4,500 psi
REINFORCING STEEL: fy = 60,000 psi

A GEOTECHNICAL REPORT BY DOWL (PROJECT NO. 7131.74482.01, 3/21/16) IS AVAILABLE FOR THIS PROJECT. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD OBSERVE ALL PILE INSTALLATION TO EVALUATE SUBSURFACE CONDITIONS.

SUMMARY OF BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
206	STRUCTURAL EXCAVATION	CY	30
206	STRUCTURE BACKFILL (CLASS 1)	CY	34
206	STRUCTURE BACKFILL (CLASS 2)	CY	14
503	MICROPILE (6 INCH)	LF	175
514	BRIDGE RAIL (STEEL) (SPECIAL)	LF	50
601	STRUCTURAL CONCRETE COATING	SY	22
601	CONCRETE CLASS D	CY	28
602	REINFORCING STEEL (EPOXY COATED)	LB	2600
628	BRIDGE GIRDER AND DECK UNIT (65 FT TO 70 FT)	EA	1

NOTES: ABOVE VALUES DO NOT INCLUDE CONCRETE CLASS D AND REINFORCING STEEL (EPOXY COATED) QUANTITIES REQUIRED BY BRIDGE DECK. CONTRACTOR SHALL COORDINATE WITH BRIDGE SUPPLIER TO DETERMINE BRIDGE DECK QUANTITIES.



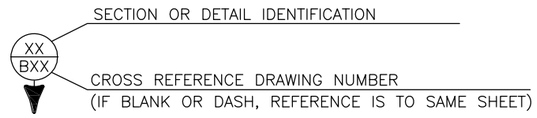
ABUTMENT EXCAVATION DETAIL

INDEX OF DRAWINGS

BRIDGE DESCRIPTION

1–SPAN 68'–0" PREFABRICATED STEEL PEDESTRIAN BRIDGE OVER BIG SALT WASH

10'–0" CLEAR WIDTH
90° SKEW



SEISMIC DESIGN CRITERIA

LATITUDE = 39.160° N
LONGITUDE = 108.753° W

AASHTO SPECTRUM FOR 7% PE IN 75 YEARS

PERIOD (sec)	Sa (g)	
0.0	0.075	PGA – SITE CLASS D
0.2	0.158	Ss – SITE CLASS D
1.0	0.039	S1 – SITE CLASS D

SPECTRAL RESPONSE ACCELERATIONS:
As = Fpga*PGA, SDs = Fa*Ss, AND SD1 = Fv*S1
Fpga = 1.60, Fa = 1.55, Fv = 2.40

PERIOD (sec)	Sa (g)	
0.0	0.120	As – SITE CLASS D
0.2	0.251	SDs – SITE CLASS D
1.0	0.093	SD1 – SITE CLASS D

SEISMIC ZONE = ZONE 1

IF THE CONTRACTOR ELECTS TO EXCAVATE MORE EXISTING MATERIAL THAN SHOWN, THE ADDITIONAL EXCAVATION AND BACKFILL WILL NOT BE MEASURED AND PAID FOR.

I:\2016\2016-160-CITYOFFRUITA\002-BIGSALTWASHPEDBRDG\H-DWGS\STRUC\PS-SHEETSET\BR-GNL.DWG Plotted: 6/14/2017 11:41 AM By: Frances Blackwelder

Computer File Information	
Print Date: 6/14/17	
Last Modification Date: 4/20/2017	
Drawing File Name:	BR-GNL
Autocad Ver. 2017 Scale: As Shown	Units: English
SGM Project No.: 2017-160.002	Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

FRUITA COLORADO
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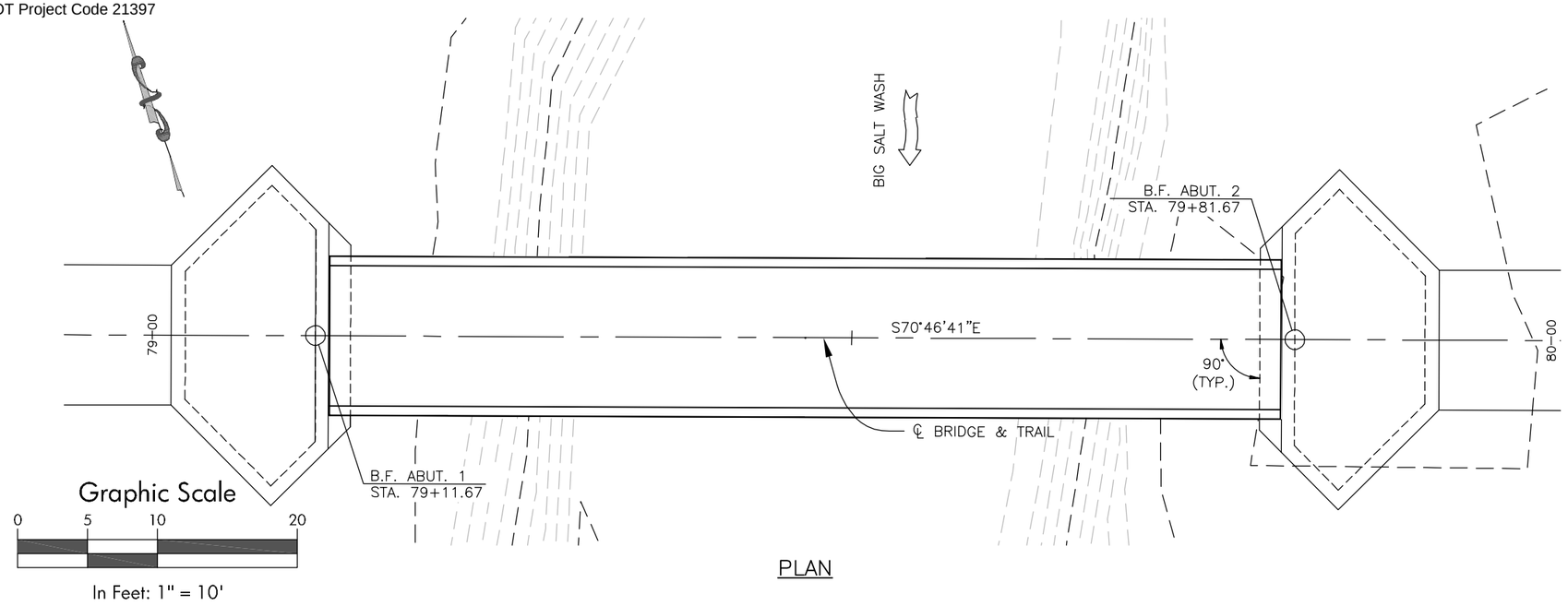
SGM
744 Horizon Court, Suite 250
Grand Junction, CO 81506
970.245.2571 www.sgm-inc.com

As Constructed	
No Revisions:	-
Revised:	-
Void:	-

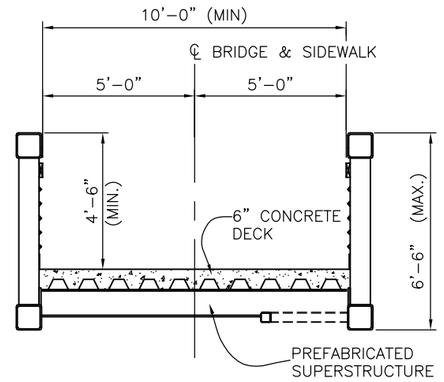
Big Salt Wash General Information			
Engineer:	JNM	Structure	--
Drawn By:	JNM	Numbers	--
Sheet Subset:	Bridge	Subset Sheets:	B1 of 8

Project No./Code	
No.:	-
Code:	-
Sheet Number:	B1

September 20, 2017



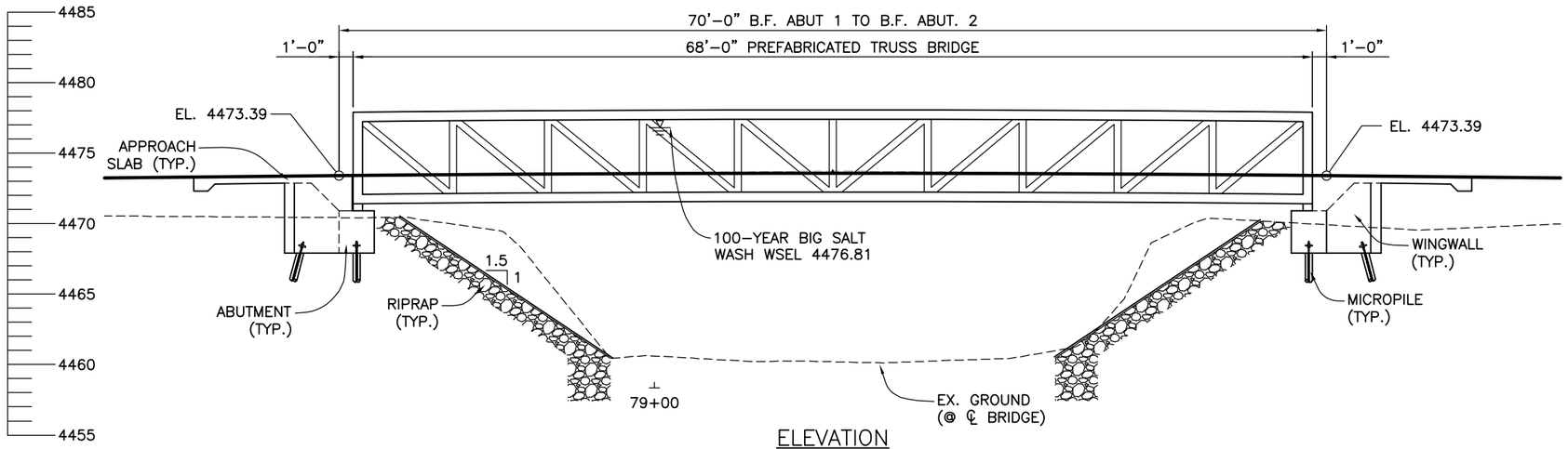
PLAN



TYPICAL SECTION

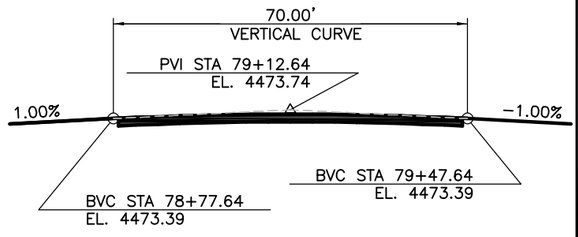
(LOOKING AHEAD STATION)

NOTE: CONTRACTOR SHALL COORDINATE WITH BRIDGE SUPPLIER TO DETERMINE BRIDGE DECK QUANTITIES.



ELEVATION

(LOOKING NORTH–EAST)
(TRAIL RAILING NOT SHOWN FOR CLARITY)



BIG SALT WASH PROFILE GRADE

N.T.S

Computer File Information	
Print Date: 6/14/17	
Last Modification Date: 4/20/2017	
Drawing File Name:	BR-GNL
Autocad Ver. 2017 Scale: As Shown	Units: English
SGM Project No.: 2017-160.002	Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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970.245.2571 www.sgm-inc.com

As Constructed	
No Revisions:	-
Revised:	-
Void:	-

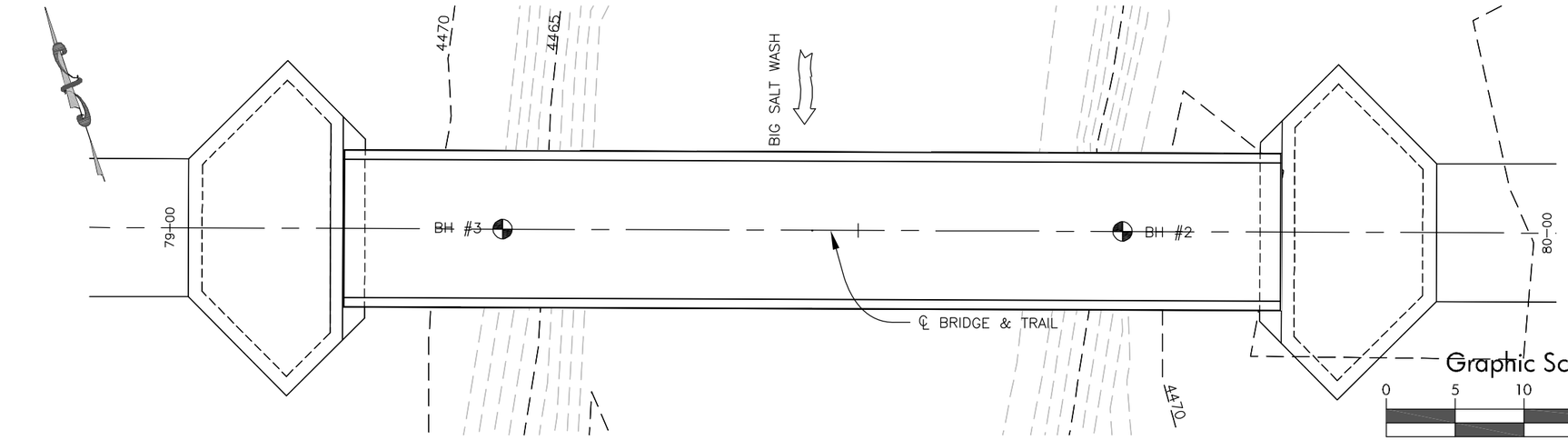
Big Salt Wash General Layout			
Engineer:	JNM	Structure	--
Drawn By:	JNM	Numbers	--
Sheet Subset:	Bridge	Subset Sheets:	B2 of 8

Project No./Code	
No.:	-
Code:	-
Sheet Number:	B2

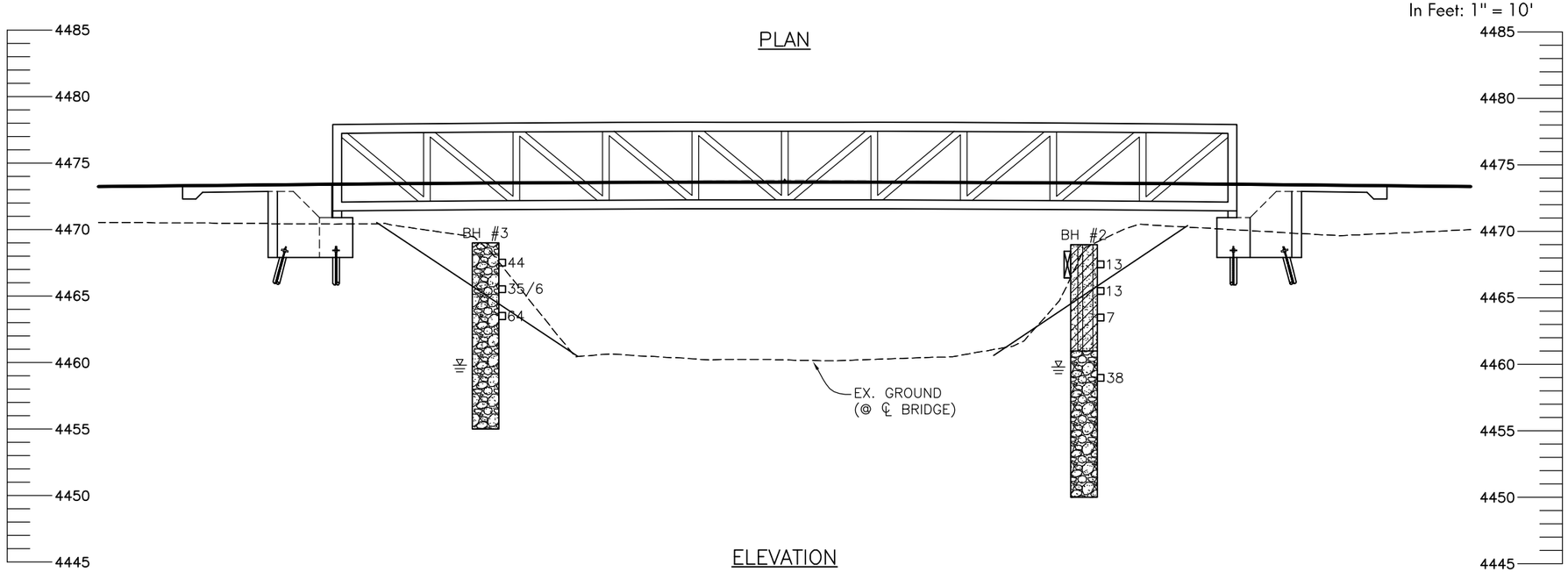
September 20, 2017

NOTES:

1. BOREHOLES WERE DRILLED ON FEBRUARY 4, 2015. BOREHOLE #2 AND #3 WERE DRILLED WITH A CONTINUOUS FLIGHT POWER AUGER AND A SOLID AUGER, RESPECTIVELY.
2. TEST HOLE DESCRIPTIONS ARE SUBJECT TO EXPLANATIONS CONTAINED IN THE REPORT, DOWL PROJECT NO. 7131.74482.01.
3. THE BORINGS WERE LOCATED IN THE FIELD RELATIVE TO EXISTING SITE FEATURES AS SHOWN IN THE SITE PLAN CONTAINED IN THE GEOTECH REPORT. THESE LOCATIONS HAVE NOT BEEN SURVEYED OR MEASURED OTHERWISE. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN IN THE PLANS.
4. THE LINES BETWEEN THE MATERIALS SHOWN IN THE TEST HOLE LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE ACTUAL TRANSITIONS MAY BE GRADUAL.
5. GROUND WATER LEVELS SHOWN ON THE LOGS WERE MEASURED AT THE TIMES AND UNDER CONDITIONS INDICATED. FLUCTUATIONS IN THE WATER LEVEL MAY OCCUR WITH TIME.



PLAN



ELEVATION

LEGEND

- LOCATION OF EXPLORATORY BORING (TEST HOLE)
- 13 STANDARD CAMPLER. THE SYMBOL 13/12 INDICATES 13 BLOWS FROM A 140lb HAMMER FALLING 30 INCHES WAS USED TO DRIVE THE SAMPLER 12 INCHES.
- BULK SAMPLE OBTAINED FROM AUGER CUTTINGS AT DEPTH INDICATED.

SUMMARY OF TEST RESULTS

SAMPLE LOCATION			CLASSIFICATION	
BORE HOLE	DEPTH (FT)	SAMPLE TYPE	SOIL OR BEDROCK TYPE (USCS CLASSIFICATION)	AASHTO
#2	0.5–2.5	DS	brown, moist, soft sandy/silty CLAY to sand/clayey SILT with some small rounded to subrounded gravels	–

TYPE OF MATERIAL

- sandy/silty CLAY to sandy/clayey SILT
- sandy GRAVELS & COBBLED

Computer File Information	
Print Date:	6/14/17
Last Modification Date:	4/20/2017
Drawing File Name:	BR-GEO
Autocad Ver. 2017	Scale: As Shown Units: English
SGM Project No.:	2017-160.002 Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Big Salt Wash
Engineering Geology

Engineer:	JNM	Structure	--
Drawn By:	JNM	Numbers	--
Sheet Subset:	Bridge	Subset Sheets:	B3 of 8

Project No./Code	
No.:	-
Code:	-
Sheet Number:	B3

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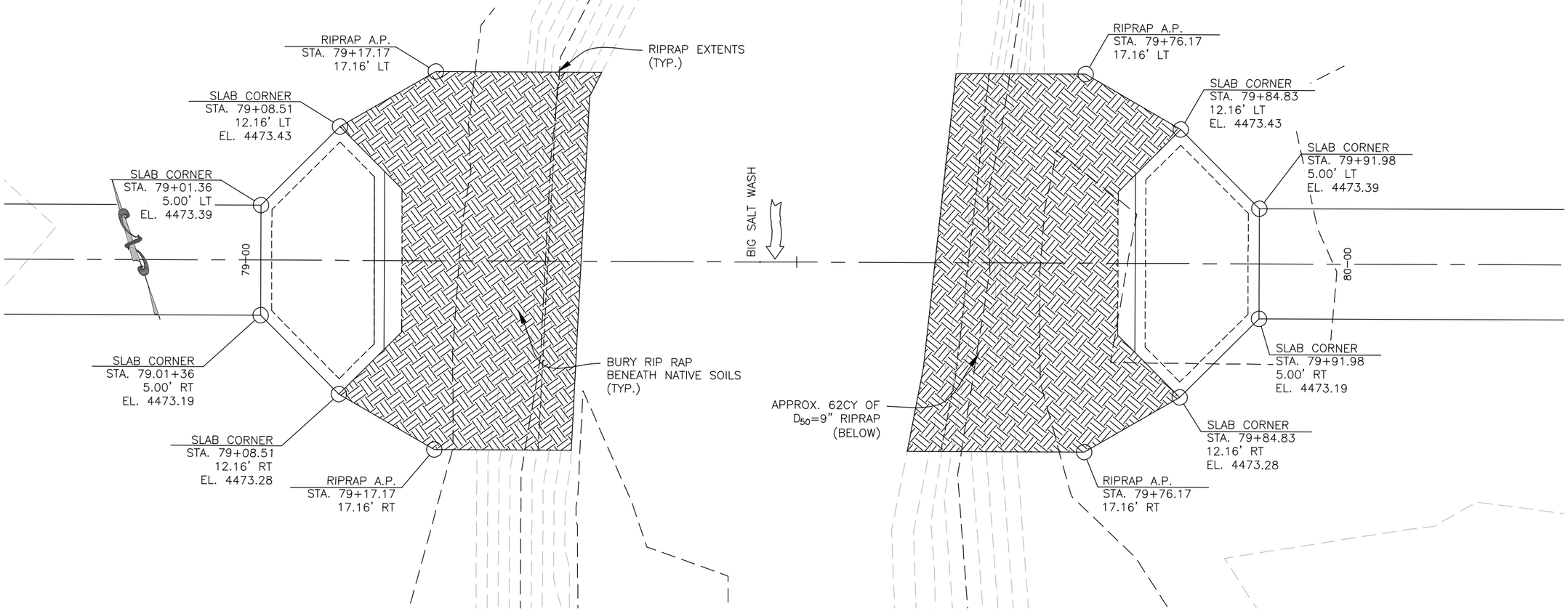
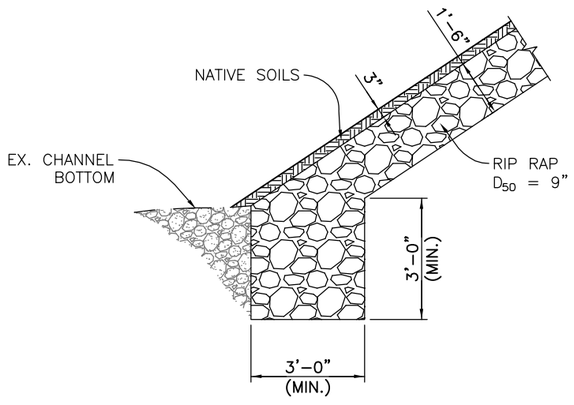


PLAN



RIP RAP DETAILS

Graphic Scale

0 5 10 20

In Feet: 1" = 10'

Computer File Information	
Print Date: 6/14/17	
Last Modification Date: 4/20/2017	
Drawing File Name:	BR-CON
Autocad Ver. 2017 Scale: As Shown	Units: English
SGM Project No.: 2017-160.002	Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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Grand Junction, CO 81506
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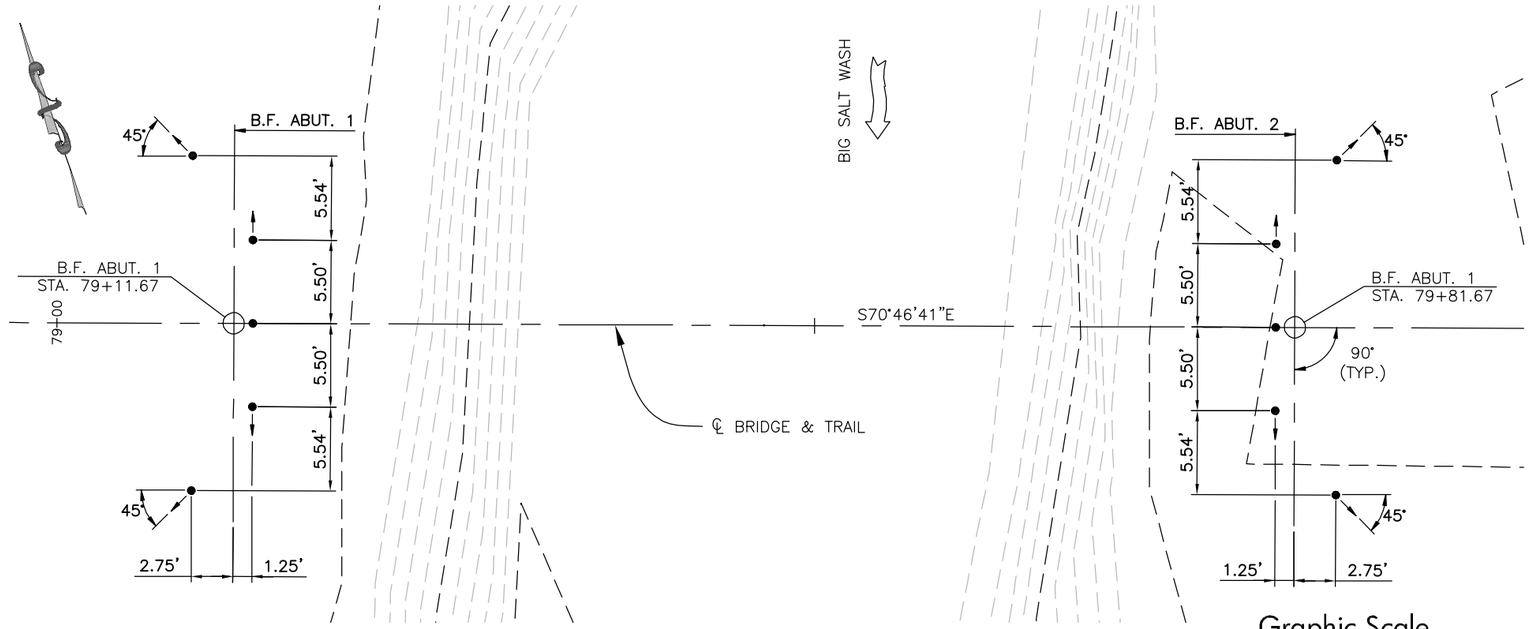
As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Big Salt Wash
Construction Layout

Engineer:	JNM	Structure	--
Drawn By:	JNM	Numbers	--
Sheet Subset:	Bridge	Subset Sheets:	B4 of 8

Project No./Code	
No.:	-
Code:	-
Sheet Number:	B4



PLAN

Graphic Scale

0 5 10 20

In Feet: 1" = 10'

FOUNDATION NOTES:

1. REFER TO SOILS REPORT PREPARED BY DOWL, PROJECT NO. 7131.74482.01, DATED MARCH 21, 2016 FOR ADDITIONAL INFORMATION REGARDING SUBSURFACE CONDITIONS.
2. MICROPILES SHALL BE DRILLED INTO THE UNDERLYING GRAVELS TO A DEPTH SUFFICIENT TO RESIST THE MAXIMUM LOAD INDICATED ON THE PLANS.
3. THE UPPER 15 FEET SHALL BE CASED.
4. ONE PRODUCTION PILE PER ABUTMENT SHALL BE PROOF TESTED TO THE LOAD INDICATED IN THE SCHEDULE.
5. NEAT CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
6. THREADED REINFORCING BAR SHALL CONFORM TO ASTM A615, GRADE 75 AND HAVE A MINIMUM YIELD STRENGTH OF 75 KSI AND A MINIMUM ULTIMATE STRENGTH OF 100 KSI.
7. ALL COUPLERS, NUTS & WASHERS FOR THE REINFORCING BAR SHALL HAVE ULTIMATE STRENGTHS EXCEEDING THE BAR.
8. A REPRESENTATIVE OF THE CONTRACTOR'S ENGINEER SHALL OBSERVE ALL PILE INSTALLATION.
9. HORIZONTAL DIMENSIONS SHOWN ARE AT THE BOTTOM OF THE ABUTMENT OR FOOTING CONCRETE.
10. REFER TO TRAIL PLANS FOR ADDITIONAL UTILITY INFORMATION.
11. CONTRACTOR IS RESPONSIBLE FOR PERFORMING A SACRIFICIAL VERIFICATION TEST OF ONE MICROPILE IN THE VICINITY OF EACH ABUTMENT, FOR A TOTAL OF TWO TESTS, PRIOR TO THE PLACEMENT OF PRODUCTION MICROPILES. THE DEPTH OF PRODUCTION MICROPILES SHALL BE DETERMINED FROM THE RESULTS OF THESE VERFICATION TESTS. PREFERRED AND ALTERNATE TESTING LOCATIONS ARE INDICATED ON PLANS, CONTRACTOR MUST TEST PILES IN EITHER BOTH PREFERRED OR BOTH ALTERNATE LOCATIONS.
12. PRODUCTION MICROPILE DEPTHS EXCEED THE EXTENTS OF GEOTECHNICAL EXPLORATIONS PROVIDED TO SGM. SGM ACCEPTS NO RESPONSIBILITY FOR THE INFORMATION CONTAINED IN GEOTECHNICAL DOCUMENTS OR INTERPRETATION THEREOF. GEOTECHNICAL QUESTIONS SHOULD BE DIRECTED TO DOWL, (970)-249-6828.

LEGEND:

- ● VERTICAL MICROPILE
- ●→ 1:6 BATTERED MICROPILE

LOCATION	FOUNDATION SIZE	MINIMUM PILE DEPTH*	MAXIMUM FACTORED LOAD	MAXIMUM SERVICE LOAD
ALL	6" ø	35.0'	20 TONS	14 TONS

* BELOW BOTTOM OF ABUTMENT OR A MINIMUM 15.0' INTO SOUND BEDROCK

811 Know what's below. Call before you dig.

CNCC 1-800-922-1987

Computer File Information	
Print Date: 6/14/17	
Last Modification Date: 4/20/2017	
Drawing File Name:	BR-FDN
Autocad Ver. 2017 Scale: As Shown	Units: English
SGM Project No.: 2017-160.002	Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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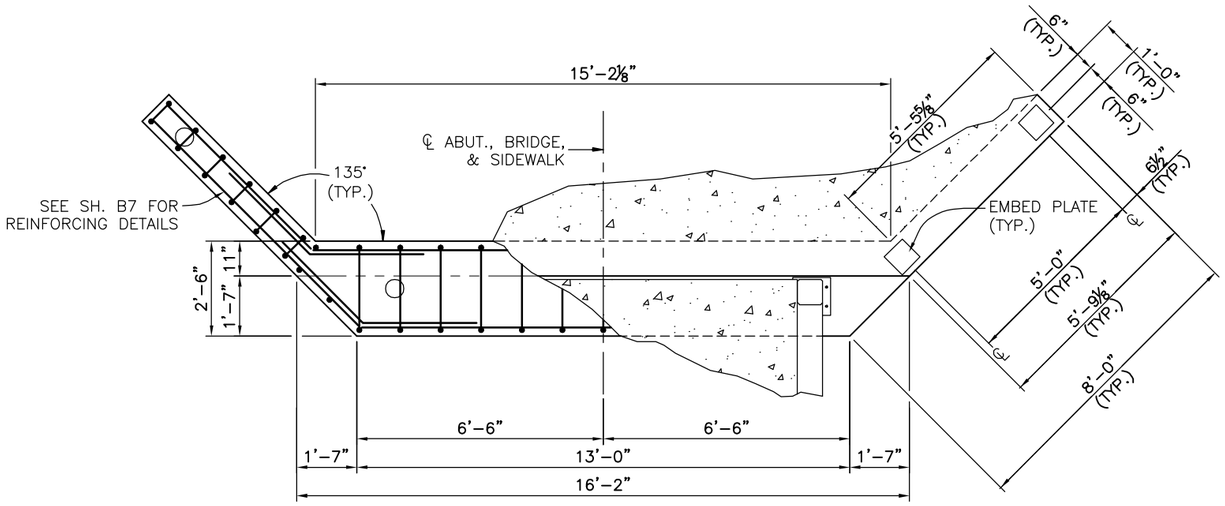
As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Big Salt Wash Foundation Layout			
Engineer:	JNM	Structure	--
Drawn By:	JNM	Numbers	--
Sheet Subset:	Bridge	Subset Sheets:	B5 of 8

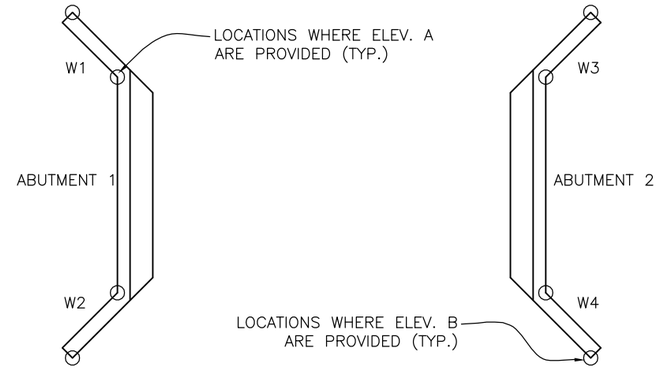
Project No./Code	
No.:	-
Code:	-
Sheet Number:	B5



ABUTMENT PLAN

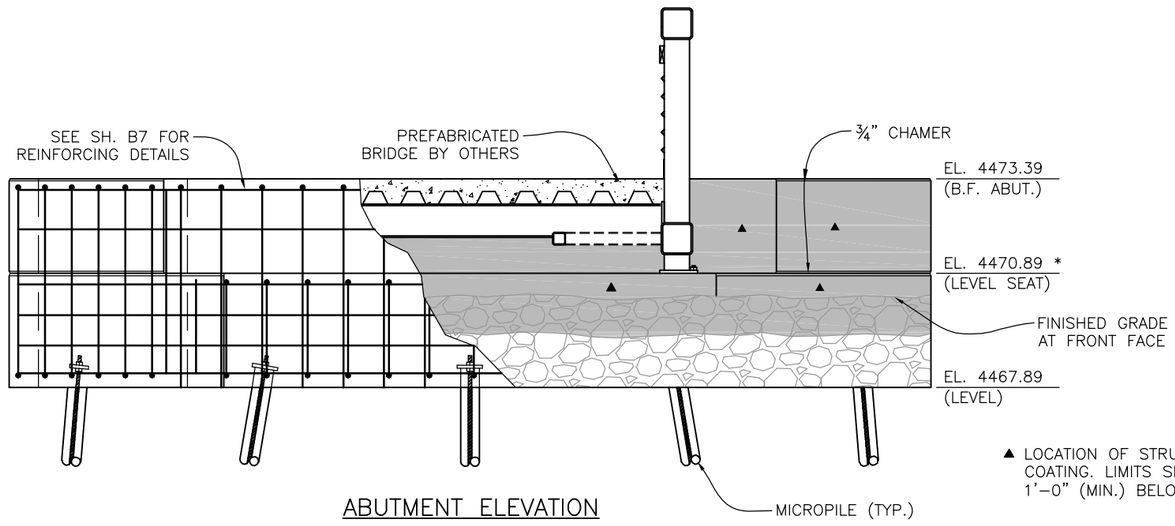
ABUTMENT NOTES:

1. ALL CONCRETE SHALL BE CLASS D.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED, UNLESS OTHERWISE NOTED.
3. THE ENGINEER WILL PROVIDE ANCHOR BOLT DETAILS AFTER REVIEW OF THE PREFABRICATED BRIDGE SHOP DRAWINGS.
4. DIMENSIONS AND ELEVATIONS NOTED WITH AN * INDICATE THAT THESE ARE TO BE VERIFIED WITH THE PREFABRICATED BRIDGE SHOP DRAWINGS AND ADJUSTED ACCORDINGLY.
5. REINFORCING MAY BE ADJUSTED TO ACCOMMODATE MICROPILES.
6. APPLY STRUCTURAL CONCRETE COATING AT EXTERIOR FACE OF ABUTMENT. LIMITS SHALL EXTEND TO 1'-0" (MIN.) BELOW FINISHED GRADE PER GRADING PLAN.
7. SEE SHEET B7 FOR ABUTMENT AND WINGWALL SECTIONS AND REINFORCING DETAILS.



WINGWALL LOCATION PLAN AND ELEVATIONS

LOCATION	ELEV. A	ELEV. B
W1	4473.39	4473.43
W2	4473.39	4473.28
W3	4473.39	4473.43
W4	4473.39	4473.28



ABUTMENT ELEVATION

▲ LOCATION OF STRUCTURAL CONCRETE COATING. LIMITS SHALL EXTEND TO 1'-0" (MIN.) BELOW FINISHED GRADE.

NOTE: RAILING NOT SHOWN FOR CLARITY

Computer File Information	
Print Date: 6/14/17	
Last Modification Date: 4/20/2017	
Drawing File Name:	BR-ABUT
Autocad Ver. 2017 Scale: As Shown	Units: English
SGM Project No.: 2017-160.002	Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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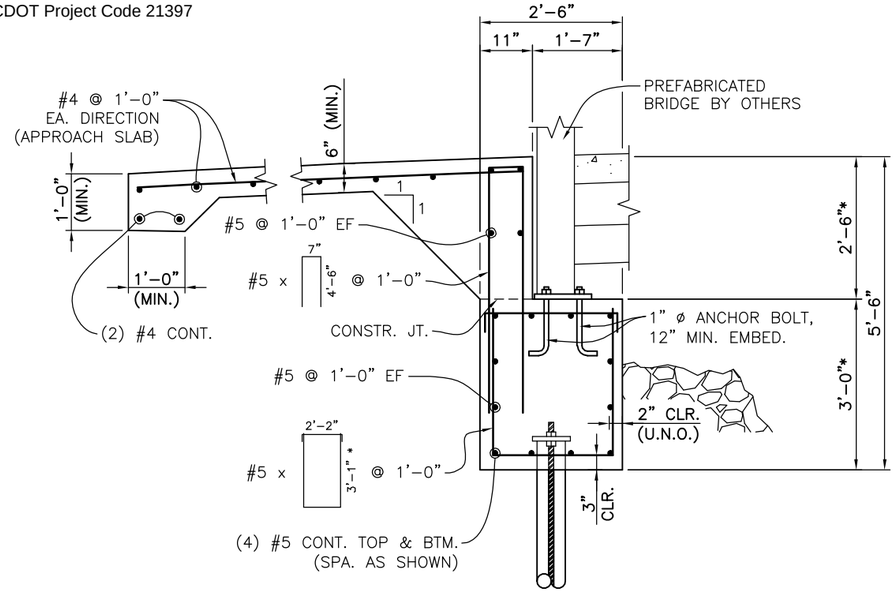
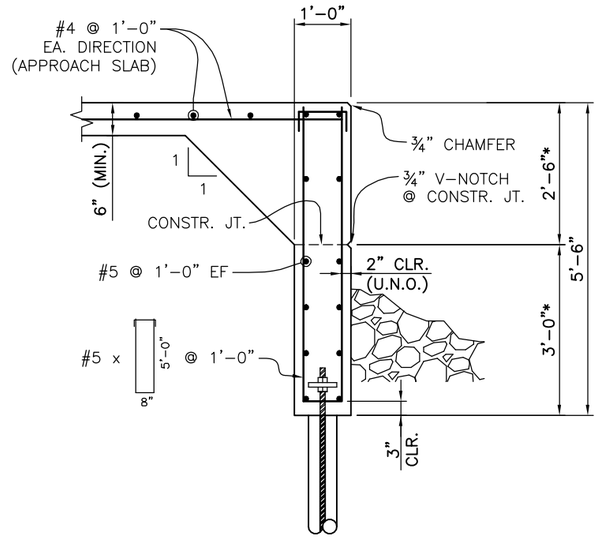
As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Big Salt Wash Abutment Layout			
Engineer:	JNM	Structure Numbers	--
Drawn By:	JNM		--
Sheet Subset:	Bridge	Subset Sheets:	B6 of 8

Project No./Code	
No.:	-
Code:	-
Sheet Number:	B6



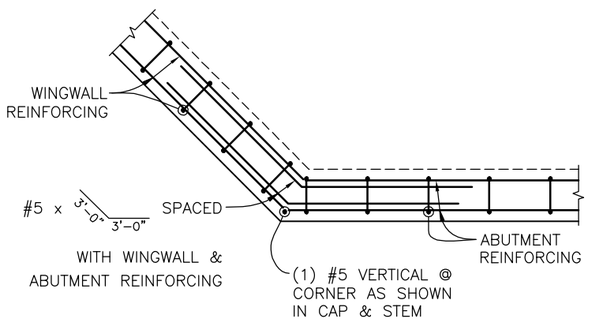
ABUTMENT SECTION

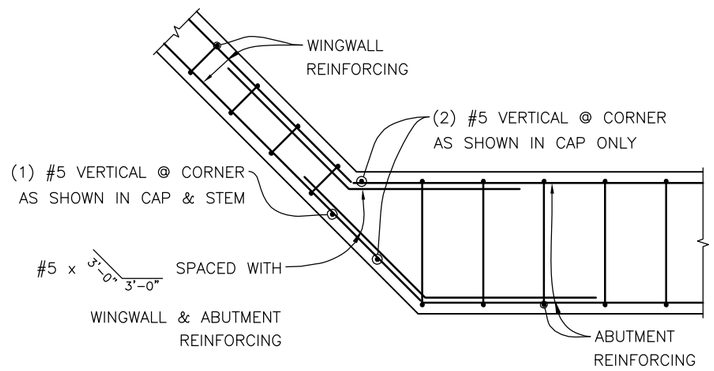


WINGWALL SECTION

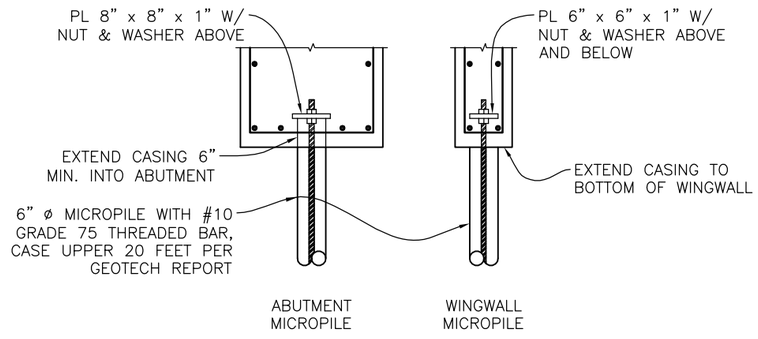
NOTES:

1. SEE SHEET B1 FOR NOTES.
2. DIMENSIONS AND ELEVATIONS NOTED WITH AN * INDICATE THAT THESE ARE TO BE VERIFIED WITH THE PREFABRICATED BRIDGE SHOP DRAWINGS AND ADJUSTED ACCORDINGLY.





CORNER DETAILS



MICROPILE CONNECTION DETAILS

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Last Modification Date: 4/20/2017		1			
Drawing File Name:	BR-ABUT				
Autocad Ver. 2017	Scale: As Shown Units: English				
SGM Project No.: 2017-160.002	Quality Control: JJB				

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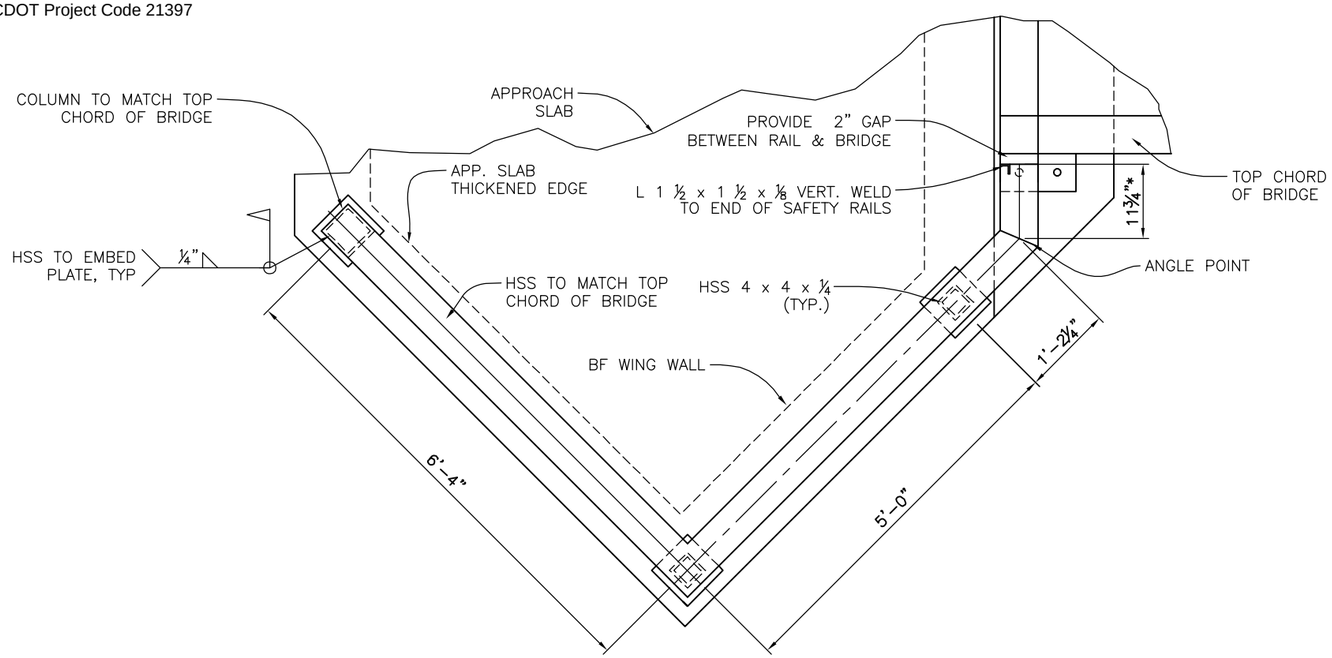
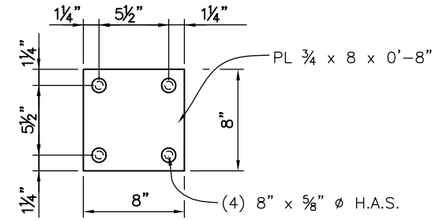
As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Big Salt Wash Abutment Details			
Engineer:	JNM	Structure Numbers	--
Drawn By:	JNM		--
Sheet Subset:	Bridge	Subset Sheets:	B7 of 8

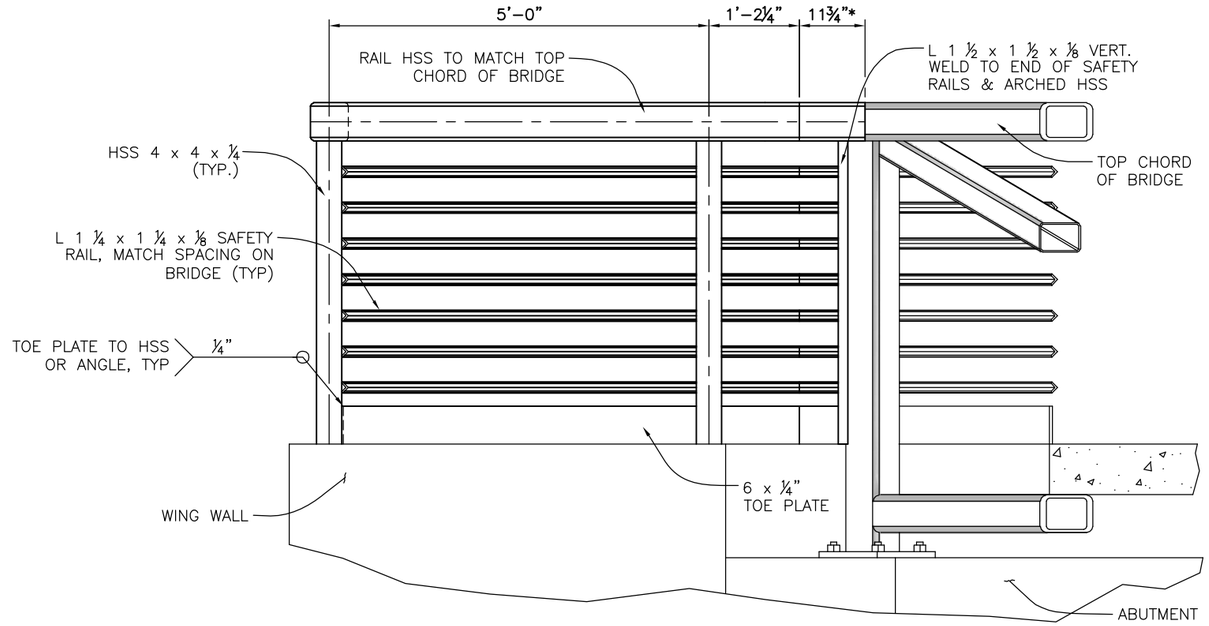
Project No./Code	
No.:	-
Code:	-
Sheet Number:	B7



ELEVATION VIEW



EMBED PLATE DETAIL



ISOMETRIC ELEVATION VIEW

NOTES:

1. ALL HSS SHALL CONFORM TO ASTM 500, ALL OTHER STEEL SHALL CONFORM TO ASTM A36.
2. ALL WELDS SHALL BE E70XX AND SHALL CONFORM TO AWS D1.1.
3. DIMENSIONS NOTED WITH AN * INDICATE THAT THESE WILL BE ADJUSTED AFTER REVIEW OF THE PREFABRICATED BRIDGE SHOP DRAWINGS.
4. ALL COMPONENTS OF RAIL SHALL BE PAID UNDER PAY ITEM 514–BRIDGE RAIL (STEEL) (SPECIAL)

Computer File Information	
Print Date: 6/14/17	
Last Modification Date: 4/20/2017	
Drawing File Name:	BR-ABUT
Autocad Ver. 2017	Scale: As Shown Units: English
SGM Project No.: 2017-160.002	Quality Control: JJB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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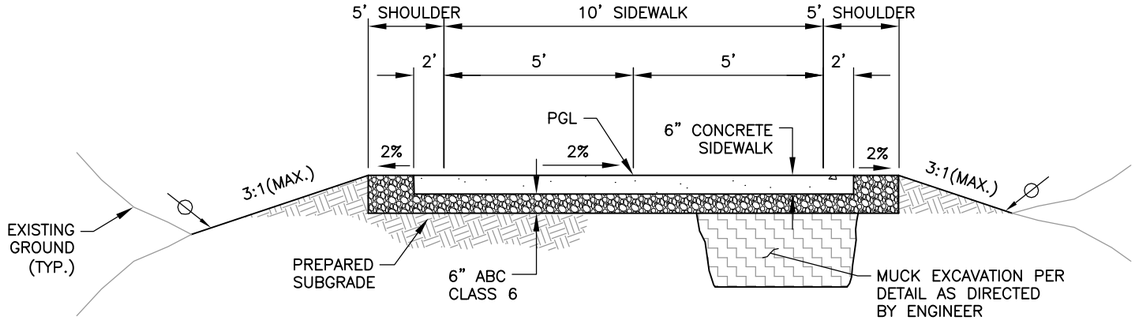
As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Big Salt Wash
Bridge Rail Details

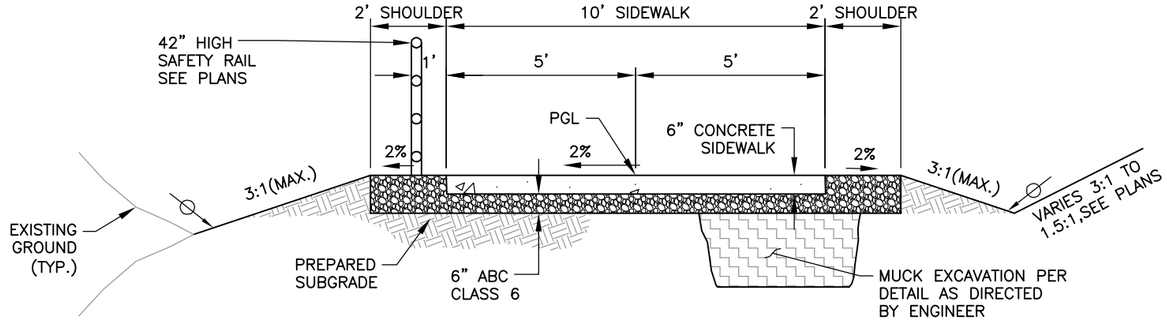
Engineer:	JNM	Structure	--
Drawn By:	JNM	Numbers	--
Sheet Subset:	Bridge	Subset Sheets:	B8 of 8

Project No./Code	
No.:	-
Code:	-
Sheet Number:	B8



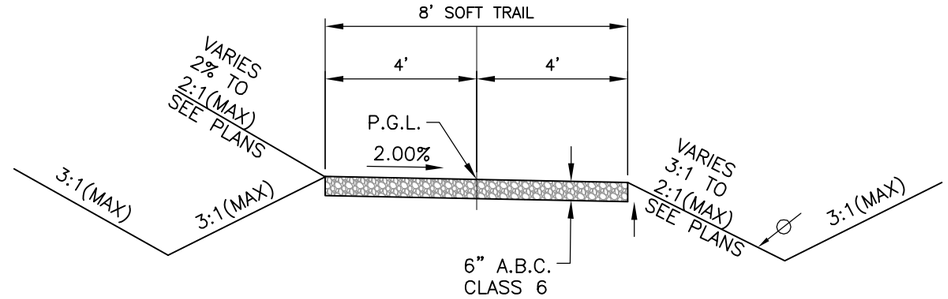
TYPICAL TRAIL SECTION

N.T.S.
STA 53+23.83 TO 132+48.66



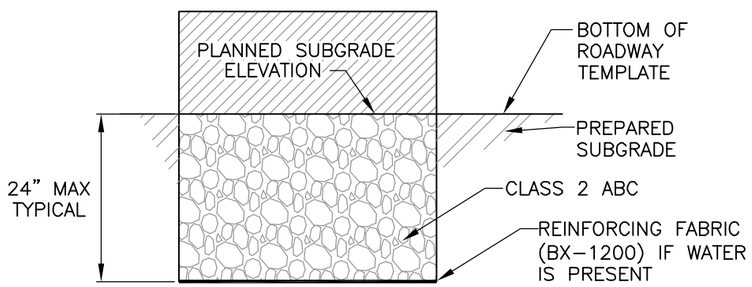
ALTERNATE TRAIL SECTION

N.T.S.
STA 14+31.64 TO 52+75.33
STA 53+25.33 TO 53+23.83



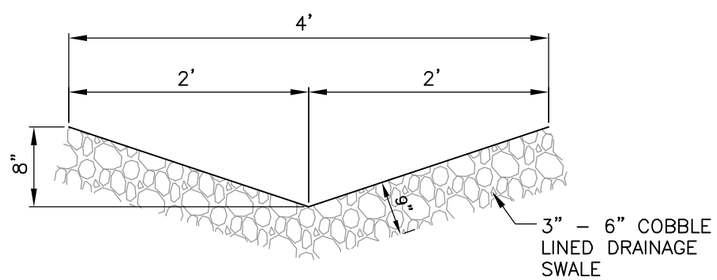
SOFT TRAIL TYPICAL SECTION

N.T.S.
STA. 1+66.38 TO 11+64.77



TYPICAL MUCK EXCAVATION TEMPLATE

N.T.S.



TYPICAL DRAINAGE SWALE SECTION

N.T.S.

Computer File Information	
Print Date: 8/1/16	
Last Modification Date: 8/01/16	
Drawing File Name:	Admin
Autocad Ver. 2016	Scale: As Shown Units: English
SGM Project No.: 2016-196.001	Quality Control: JB

Sheet Revisions			
Rev.	Date	Comments	Init.
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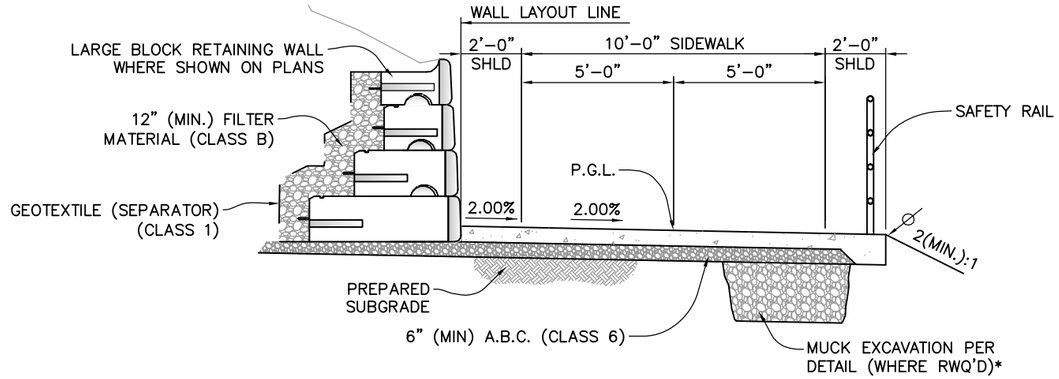
As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Kokopelli Riverfront Trail Typical Sections 1			
Engineer:	BT	Structure	–
Drawn By:	FB	Numbers	–
Sheet Subset:	Admin.	Subset Sheets:	AD5 of 14

Project No./Code	
No.:	TAP M505-007
Code:	21397
Sheet Number:	5



GRAVITY RETAINING WALL TYPICAL SECTION

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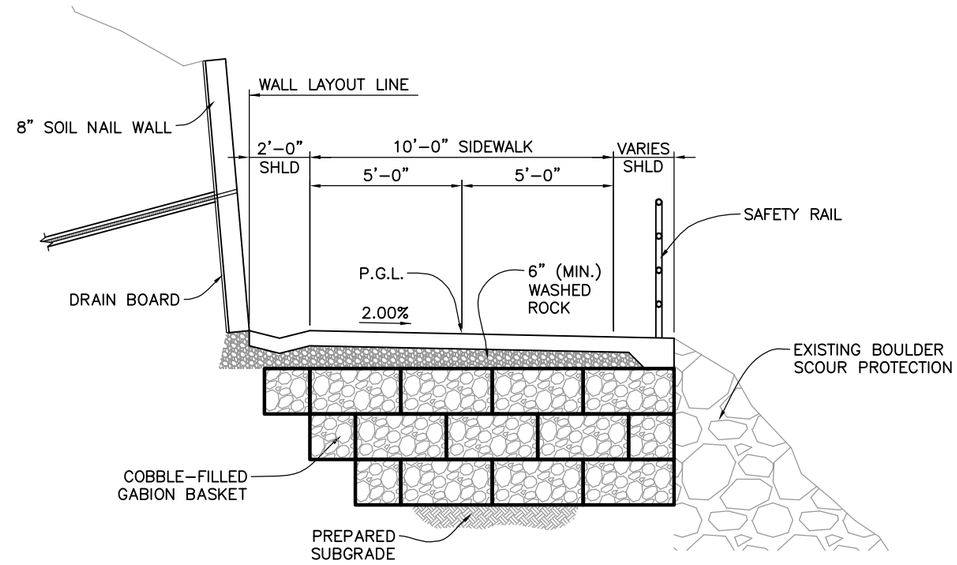
STA. 25+40.00 TO 31+80.00

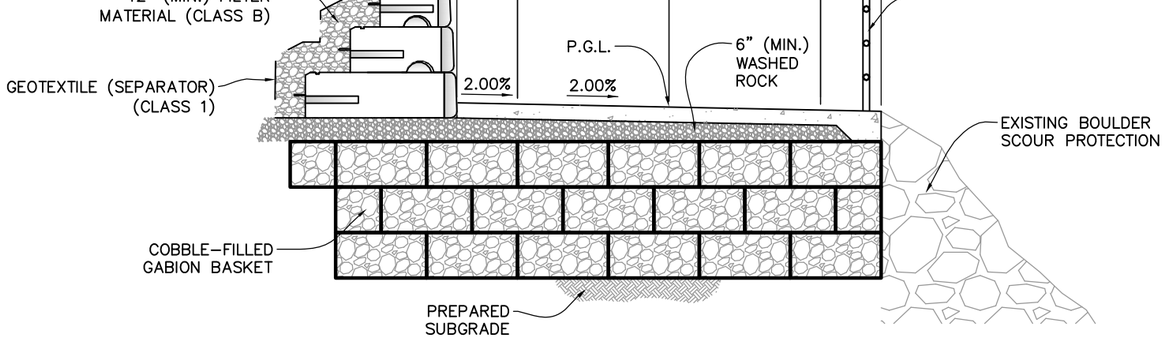


SOIL NAIL WALL TYPICAL SECTION

N.T.S.

STA. 48+20.00 TO 50+00.00

STA. 50+90.00 TO 51+50.00



GABION FOUNDED GRAVITY RETAINING WALL TYPICAL SECTION

N.T.S.

STA. 42+60.00 TO 48+20.00

Computer File Information	
Print Date: 8/1/16	
Last Modification Date: 8/01/16	
Drawing File Name:	Admin
Autocad Ver. 2016 Scale: As Shown	Units: English
SGM Project No.: 2016-196.001	Quality Control: JB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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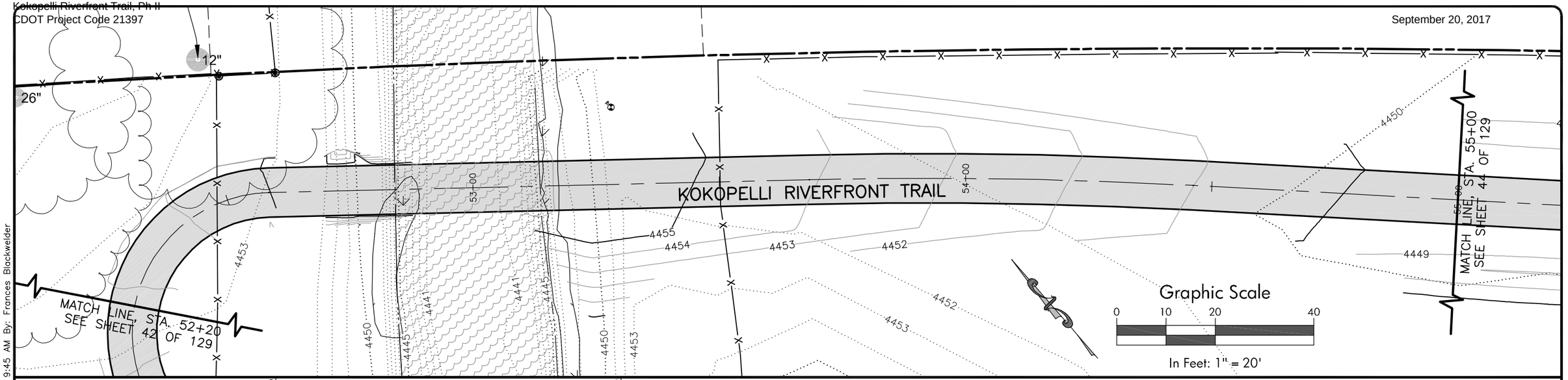
Revised:	-
Void:	-

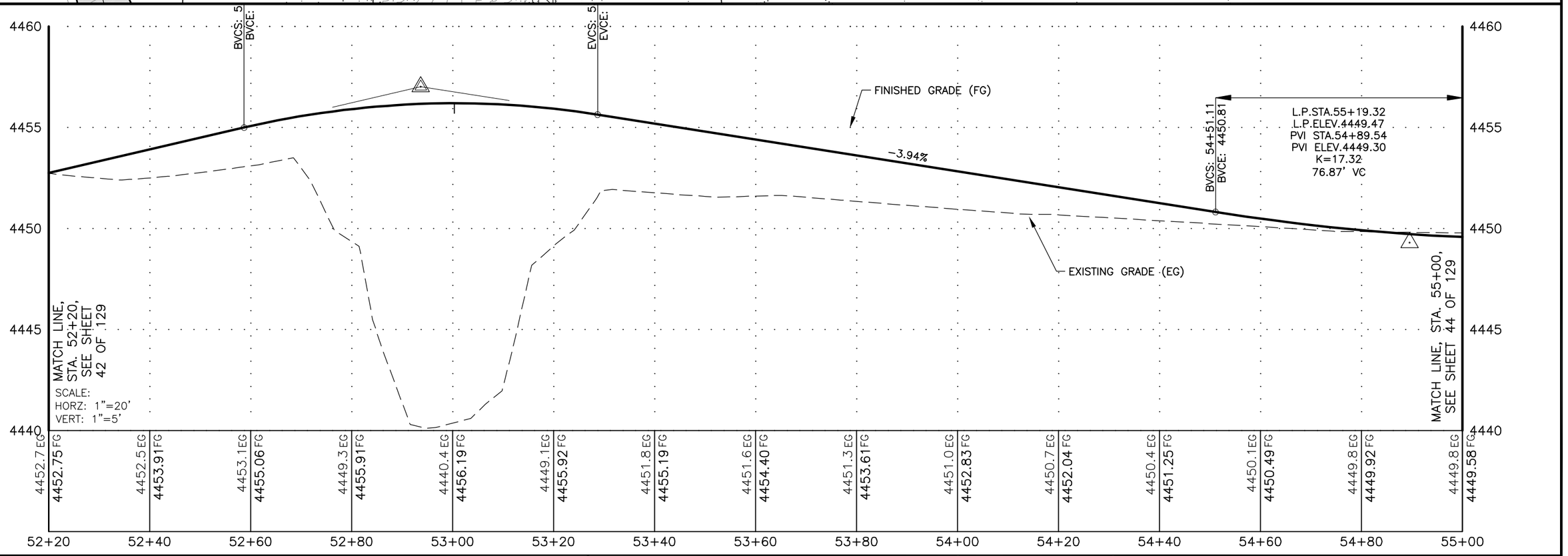
Kokopelli Riverfront Trail
Typical Sections 2

Engineer:	BT	Structure	–
Drawn By:	FB	Numbers	–
Sheet Subset:	Admin	Subset Sheets:	AD6 of 14

Project No./Code	
No.:	TAP M505-007
Code:	21397
Sheet Number:	6

September 20, 2017





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Computer File Information	
Print Date:	8/1/16
Last Modification Date:	8/01/16
Drawing File Name:	TrailPlanProfile3
Autocad Ver. 2016	Scale: As Shown Units: English
SGM Project No.: 2016-196.001	Quality Control: JB

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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As Constructed	
No Revisions:	-
Revised:	-
Void:	-

Kokopelli Riverfront Trail
Trail Plan & Profile Sta. 52+20 to 55+00

Engineer:	BT	Structure	-
Drawn By:	FB	Numbers	–
Sheet Subset:	Trail	Subset Sheets:	TR20 of 49

Project No./Code	
No.:	TAP M505-007
Code:	21397
Sheet Number:	43

September 20, 2017

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Grand Junction Field Office
2815 H Road
Grand Junction, Colorado 81506
(970) 244-3000

In Reply Refer To:
8100 (COS08000) 15916-01

SECTION 106 INFORMATIONAL LETTER
(UNDER BLM PROTOCOL)

Mr. Steve Turner
State Historic Preservation Officer
History Colorado
1200 Broadway
Denver, CO 80203

MAY 16 2017

Undertaking Name: Kokopelli Riverfront Trail Expansion

County: Mesa

BLM Cultural Resources Project Number: 15916-01

OAHP Document Number: ME.LM.R956

NEPA Number: DOI-BLM-CO-S080-2017-0026-EA

Report Type: Positive Results

Mesa County is proposing the expansion of an existing riverfront trail from Fruita, Colorado to Loma, Colorado along the Colorado River. In addition, the BLM plans to issue four rights-of-way along the trail (two to Fruita and two to Public Service Company [PSCo]). The city of Fruita would receive a right-of-way (ROW) for the trail, as well as a parking lot for the trail on the western end. Fruita would also receive a ROW to bring an existing 10-inch sanitary sewer force main pipeline into federal ROW compliance and to construct a second 12-inch force main in the future to accommodate projected population growth (construction would occur between the years 2020 and 2025). Two ROWs would be issued to PSCo to bring existing utilities into federal ROW compliance, including a 15-kV overhead electric distribution line serving the City of Grand Junction (30-foot wide ROW) as well as a 6-inch high pressure gas pipeline (50-foot wide ROW), with operating pressure of 450 to 550 PSI year-round. None of the existing ROWs are historic in nature. This project crosses two small BLM parcels, but is primarily on private property.

ERO Resource Corporation (ERO) conducted a Class III cultural resource inventory of the area of potential effect. ERO inventoried 63.4 acres for the project and encountered three historic linear resources- a previously recorded canal (5ME4860.15) and two drainage ditches (5ME20933.1 and 5ME20956.1). All three sites have previously been determined **eligible** for listing on the NRHP, and this recording recommends a determination of **non-supporting** of the overall eligibility of the

resources.

Pursuant to the 2014 Protocol Agreement between the Colorado BLM and SHPO, the BLM believes that the proposed trail and ROWs will result in **no adverse effect** to historic properties, as the linear segments located here do not support eligibility of the historic properties. Please review the enclosed documentation and send us your comments within ten working days. If you have any questions regarding this decision proposal please contact Katie Stevens, GJFO Manager at (970) 244-3010 or kasteven@blm.gov. For questions regarding the cultural resource determinations please contact Natalie Clark at (970) 244-3038 or nfclark@blm.gov.

BUREAU OF LAND MANAGEMENT, GRAND JUNCTION FIELD OFFICE

5/10/2017

BY FIELD OFFICE ARCHAEOLOGIST — DATE
Natalie F. Clark

5/15/2017

BY FIELD MANAGER — DATE
Katie A. Stevens

Enclosures:

1. *Cultural Resource Survey Kokopelli Trail Project, Mesa County, Colorado* (BLM CRIR 15916-01) and associated documentation (Kroll 2017)

Electronic enclosure:

1. FTP upload of project shapefiles and PDF documentation for ME.LM.R956 (e-mail notification of upload sent to Stephanie Boktor)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Colorado Ecological Services

IN REPLY REFER TO:
FWS/R6/ES CO

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ES/CO: BLM/GJFO
TAILS 06E24100-2017-I-0299

June 8, 2017

Memorandum

To: Field Manager, Bureau of Land Management, Grand Junction Field Office, Grand Junction, Colorado

From: Western Colorado Supervisor, U.S. Fish and Wildlife Service, Ecological Services, Grand Junction, Colorado

Subject: Riverfront Trail System, Kokopelli Trail Connection, Mesa County, Colorado

☐ No Concerns

☒ Concur Not Likely to Adversely Affect (see comments for current and future projects below)

☐ Do Not Concur (see explanation below)

On May 17, 2017, we received your request for informal Endangered Species Act (ESA), section 7 consultation for the Riverfront Trail, Kokopelli Trail Connection Phases I and II Project. The project is located primarily north of I-70 right-of-way (ROW) between the City of Fruita (City) and the I-70 Loma exit. The biological assessment (BA) determined that the project may affect, but is not likely to adversely affect threatened yellow-billed cuckoo (*Coccyzus americanus*) as well as the four federally listed endangered fish species and their critical habitat: Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), bonytail (*Gila elegans*), and humpback chub (*Gila cypha*).

The City is proposing to construct Phases I and II of the Kokopelli Connection of the Riverfront Trail System. The project area consists of an area about 4.5 miles long, with approximately 2,500 feet crossing BLM land. The proposed trail will be a 10-foot wide paved public pedestrian and bicycle access trail, primarily traversing within or near the I-70 ROW.

The trail will follow existing grade and dips in terrain to naturally convey stormflow. There are two locations (Big Salt Wash and Reed Wash) where bridge construction requires excavation and riprap placement, impacting approximately 0.051 acres of wetlands. The bridges are in the Colorado River 100-year floodplain and will require approximately 300 cubic feet of fill at the bridge abutments, above and below grade, to protect them from scour. There will also be

placement of concrete stem walls on the fill slope of the trail or between the trail and I-70 at several locations. A more detailed description of the proposed trail and features are in the BA.

Non-native species of predatory fish are present in the project area, in particular, smallmouth bass. USFWS fisheries researchers have observed smallmouth bass utilizing the spaces between rip-rap as rearing habitat during electro-fishing surveys (Elverud, 2017). Conservation measures were addressed in the BA and further clarified via email with the Services and a site visit to the bridge locations with the senior engineer and Services, June 8, 2017. The measures described below will be implemented to minimize the effects of placing rip-rap in the stream channels.

It was determined the project may affect designated critical habitat for the Colorado pikeminnow and razorback sucker because the construction of the trail is planned to occur in portions of the Colorado River 100-year floodplain. We concur with your determination that the project is not likely to adversely affect these fish and critical habitats due to the following existing conditions:

1. Most of the 100-year floodplain and project area are currently constrained and impacted by existing transportation and commercial/industrial features, thus the proposed changes to the hydrology from the project and increased human impacts will be insignificant.
2. Typical water flow (when inundated) at both Reed Wash and Big Salt Wash contributes to high sedimentation on top of rip-rap, thus filling voids which could provide smallmouth bass habitat.
3. Reed Wash has been observed to only be inundated during peak flows of the Colorado River, typically Mid-May through June.

The following conservation measures described in the BA and discussed via email with supplemental design criteria supplied to the Services will further minimize the impacts to endangered Colorado River fish:

1. Construction in which may occur in live water will be coordinated to occur outside the period of July 1 through September 30 to avoid impacts to larval endangered fish near the project area. Construction is intended to occur December through February to avoid working in live water.
2. Small gaps in rip-rap used to stabilize bridges at Big Salt Wash will be filled with gravel and small (two to three inch) stone size and covered with native soils derived from excavation on site.
3. The rip-rap used in construction of the Reed Wash crossing will be placed in gabion baskets and lined with a drainage geotextile to keep the filler material within the baskets, effectively eliminating exposure of any voids, and covered with native soils derived from excavation on site.
4. Low water crossings and culverts will be minimized as much as possible to avoid constraining hydrologic flow.
5. Temporarily disturbed areas will be replanted with native vegetation.

There is riparian vegetation in the project area which may provide foraging habitat for the yellow-billed cuckoo, although not within proposed critical habitat, and it was determined that the project may affect yellow-billed cuckoo. We concur with your determination that the project is not likely to adversely affect yellow-billed cuckoo due to the poor quality habitat for cuckoo in the project area and the following conservation measure: Riparian vegetation removal for trail

construction and maintenance will be limited primarily to small trees and shrubs and clearing will be conducted outside of the breeding season for cuckoos (June 1-August 31).

There is a known nesting bald eagle pair, observed to be quite tolerant to human activity, nesting about 600-800 feet from the I-70 corridor, several hundred feet from an active mining operation, and in close proximity to other industrial and commercial uses. We agree that the increased human disturbance from the trail is unlikely to cause additional stress to the eagles, and placement of a fence to deter people from getting closer to the nest would be beneficial. Additional measures to avoid taking of migratory birds include:

1. Tree removal will be timed after August 31 to March 15 to occur outside the nesting season.
2. The trail was designed to avoid mature trees, and tree removal will be limited to small (less than 4 inches in diameter) trees and shrubs.
3. Preconstruction surveys will be conducted during migratory bird nesting season to avoid impacts to raptor nests.

This concludes Section 7 consultation for the proposed project. As provided in 50 CFR §402.16, re-initiation of consultation is required if: 1) new information reveals effects of the agency action that may impact listed species or critical habitat in a manner or to an extent not previously considered, 2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered, or 3) a new species is listed or critical habitat designated that may be affected by the action.

Thank you, if you have any further questions please contact Allison Jehly of my staff at (970) 628-7194 or email at allison_jehly@fws.gov.

References

Elverud, D. (2017, May 31). smallmouth bass habitat in the Colorado River. (A. Jehly, Interviewer)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GRAND JUNCTION FIELD OFFICE

FINDING OF NO SIGNIFICANT IMPACT

Colorado Riverfront Trail
DOI-BLM- S080-2017-0026-EA

Based on the analysis of potential environmental impacts contained in the attached environmental assessment (EA), and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

BACKGROUND
The Bureau of Land Management (BLM) prepared an EA which analyzed the effects of approving four new Federal Land Policy and Management Act rights-of-way (ROWs). Under the proposed action, one transportation ROW grant would be issued to the City of Fruita for the proposed Kokopelli Section of the Colorado Riverfront Trail (Kokopelli trail) project, as well as a new utility ROW to resolve the existing unauthorized use and proposed addition to Fruita's sewer force main system. Two new ROW grants would be issued to PSCo to resolve the existing unauthorized use for an underground gas line and an overhead electric line. The transportation ROW grant issued to the City of Fruita would also include a short-term ROW during the construction phase for the Kokopelli trail project.

The EA considered the No Action alternative of denying the ROW application and the Proposed Action alternative of approving the proposed ROWs. Public scoping was conducted by posting this project on the Grand Junction Field Office NEPA website. No comments were received.

Intensity
I have considered the potential intensity/severity of the impacts anticipated from the Colorado Riverfront Trail Project decision relative to each of the ten areas suggested for consideration by the Council on Environmental Quality (CEQ). With regard to each:

1. Impacts that may be both beneficial and adverse.
This project may have minor short term (several months to a year) impacts to soils and vegetation, and minor long-term (several years to greater than 5 years) impacts to vegetation. These impacts are not significant. Effects to soils and vegetation would be mitigated by reclamation efforts to restore the natural vegetative environment after the project's construction phase. This project will have a long-term net benefit for public welfare, health and safety, due to protection of a reliable utility corridor across BLM-managed land, and creation of a recreational trail connection system between the Little Salt Wash trail (completed in 2016) and the existing Kokopelli trail, a popular mountain bike trail system. The project will have a short-term and long-term benefit to area recreational users and residents of Fruita.

2. The degree to which the proposed action affects public health and safety.
The proposed action is expected to benefit public welfare, health and safety. The construction project will be implemented in accordance with signage and traffic management procedures to protect health and safety during construction (short-term; approximately 4 to 6 months). The project will benefit the public welfare, health and safety by improving the recreational corridor along the Colorado River and completing an important connection, allowing biking and pedestrian access from the city center of Palisade, through Grand Junction, to Loma and beyond as part of the Colorado Riverfront Trail. Upgrading a sewer main capacity will beneficially affect public heath and safety by providing capacity in keeping with potential population growth for the City of Fruita over the next 10-20 years. There will be no change to the placement of existing gas and electric utilities that transect BLM-managed land and no direct or immediate affect to public health and safety; however, issuing grants to resolve unauthorized uses and allow these utilities to be present in conformance with federal laws, before maintenance or access is needed, will protect the public health and safety in the future.

3. Unique characteristics of the geographic area such as proximity of historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
There are no parklands, prime farmlands, wild and scenic rivers, or paleontological resources within the project area. Small areas of wetlands have been avoided to the greatest extent possible, with only small impacts proposed. The project has been modified through applicant-committed design features to minimize impacts to a federally threatened species (endangered Colorado River fishes and critical habitat). Cultural and historic resources surveys have been conducted and no impacts to historic properties will result from project implementation.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
Trail corridor and utility construction projects are common within the Fruita area and the effects of development such as for roads and trails are generally well known and accepted by the public; therefore, effects on the quality of the human environment are not likely to be controversial.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
Utility and transportation construction projects such as the proposed project are common and involve no unique or unknown risks. Coordination with agencies has resulted in implementation of applicant-committed design features to avoid and minimize impacts to sensitive areas and resolve concerns. The proposed project will make recreational improvements and utility upgrades where utilities and trails cross BLM-managed land near Fruita.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
This decision is one of many that have previously been made and will continue to be made by BLM responsible officials regarding ROW authorization across lands managed by the BLM. The decision is within the scope of the Resource Management Plan and is not expected to

establish a precedent for future actions. The decision does not represent a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

There are no significant cumulative effects on the environment, either when combined with the effects created by past and concurrent projects, or when combined with the effects from natural changes taking place in the environment or from reasonably foreseeable future projects.

The Kokopelli trail project and future force main sewer upgrade project is confined geographically to a small area and the construction will be short-term. The project area is located adjacent to both US I-70 and CO 6, in a region that contains low density residential and industrial development, increasing in intensity to the east towards the town of Fruita and the city of Grand Junction. When considered in combination with the proposed project, the potential cumulative effects are minor due to the confined and controlled nature of the project and the small scale of disturbance. Authorization of existing unauthorized utilities will have no new effects on the environment.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.

There would be no adverse impacts to the above resources. Construction would occur within the vicinity of three previously recorded segments of linear features (canal and drainage ditches), which are officially non-supporting of the eligibility of the resource for the National Register of Historic Places or recommended non-supporting. No other resources were identified during a pedestrian survey and a literature review.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Nine federal or BLM threatened, endangered, proposed, or candidate (TEPC) species are listed as occurring in Mesa County. The western end of the project area has potential habitat for one of these species, the threatened Colorado Hookless Cactus (CHC). In May 2016, habitat in the project area was surveyed for sensitive plant species including CHC and no individuals or suitable habitat were found. The 100-year floodplain of the Colorado River, critical habitat for the Colorado Pikeminnow and Razorback Sucker, covers much of the project area. However most of the project area does not provide physical and biological factors essential to the life cycle of these fish due to the disturbed nature of the project area. In coordination with the USFWS, he project has been modified through applicant-committed design features to eliminate potential brooding habitat for smallmouth bass, a predatory species with known impacts on the endangered fish species. Based on existing habitat within the project area and known habitat preferences for species, the remaining TEPC species do not have the potential to occur in the project area.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.
This decision complies with other Federal, State, or local laws and requirements imposed for the protection of the environment.

FINDING OF NO SIGNIFICANT IMPACT
On the basis of the information contained in the EA, and all other information available to me, it is my determination that: 1) the implementation of the Proposed Action or alternatives will not have significant environmental impacts beyond those already addressed in the "Record of Decision and Resource Management Plan," (August, 2015); (2) the Proposed Action is in conformance with the Resource Management Plan; and (3) the Proposed Action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

This finding is based on my consideration of the CEQ's criteria for significance (40 CFR §1508.27), both with regard to the context and to the intensity of the impacts described in the EA.

Katie A Stevens 6-29-17

Field Manager
Grand Junction Field Office

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
GRAND JUNCTION FIELD OFFICE
2815 H Road, Grand Junction, CO 81506

DECISION RECORD

Colorado Riverfront Trail
DOI-BLM- S080-2017-0026-EA

DECISION: It is my decision to authorize the Proposed Action as described in the attached Environmental Assessment (EA). This decision is to issue four new Federal Land Policy and Management Act right-of-way (ROW) grants: one to the City of Fruita for the 4.5-mile section of recreational trail construction connecting the Colorado Riverfront Trail with the Kokopelli Trail, one to the City of Fruita for the existing and proposed new sewer force main, and two to PSCo for the existing gas and electric lines. The two ROW grants issued to the City of Fruita would also include issuing a short-term ROW during the construction phase for each project.

Specifically, the project would include the following (totaling 8.46 acres of ROW footprint on BLM land):

- BLM land (Lot 3) Recreational Trail ROW, 1.98 acres; BLM land (Lot 4) Recreational Trail ROW, 2.07 acres; BLM land (Lot 4) Recreation parking lot and temporary access roads, approximately 0.70 acres, a total of 4.75 acres for recreational trail related facilities;
- BLM land (Lot 3) Utility ROW for City of Fruita's existing and future sewer force main, 1.84 acres;
- BLM land (Lot 3): Utility ROW to PSCo. for 15-kV overhead electric line, 0.69 acres; and
- BLM land (Lot 3): Utility ROW to PSCo. for 6-inch high pressure gas pipeline, 1.18 acres.

This decision is contingent on meeting the mitigation measures and monitoring requirements listed below.

The Bureau of Land Management (BLM) notified the public about the project by posting on the BLM Grand Junction Field Office (GJFO) National Environmental Policy Act (NEPA) website. No comments were received.

BLM GJFO interdisciplinary team (IDT) members reviewed the project proposal at various stages throughout the planning process. The proposed project was scoped internally in accordance with NEPA regulations (40 CFR §1500-1508). Maps of the parcel and a description of the Proposed Action were distributed to the IDT, and the project was discussed at IDT meetings. A meeting between the City of Fruita, Public Service Co. of Colorado, and the BLM

occurred on January 23, 2017, and multiple other phone calls and e-mail correspondence occurred. A field meeting with the USFWS and Corps was held December 7, 2016 and a follow-up meeting with the USFWS was held on June 7, 2017.

This office completed an EA and reached a Finding of No Significant Impact.

RATIONALE: Analysis of the Proposed Action has concluded that there will be no significant negative impacts. Approval of this action is in conformance with the Grand Junction Resource Management Plan, 2015.

Granting the proposed ROWs will authorize the City of Fruita to construct a connecting trail as part of the Colorado Riverfront Trail system, to maintain an existing sewer force main, and construct a new sewer force main within the ROW in the future. Granting the proposed ROWs will also authorize PSCo to continue to operate and maintain an existing natural gas and electric line and to perform necessary upgrades. The project will improve recreational access for the residents and visitors to the City of Fruita and surrounding area, and improve the safety of the utility crossings across BLM-managed Land.

MITIGATION MEASURES\MONITORING: Mitigation measures and monitoring requirements that will be incorporated as stipulations to the ROW grant are included in Attachment A.

PROTEST/APPEALS: This decision shall take effect immediately upon the date it is signed by the Authorized Officer, and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2801.10(b)). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a notice of appeal must be filed in the office of the Authorized Officer at Grand Junction Field Office, 2815 H Road, Grand Junction, Colorado, 81506. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Authorized Officer.

NAME OF PREPARER: Janet Doll

NAME OF ENVIRONMENTAL COORDINATOR: Christina Stark

DATE: 6/29/17

SIGNATURE OF AUTHORIZED OFFICIAL:

Katie A Stam 6/29/17

Grand Junction Field Manager

DATE SIGNED: 6/29/2017

ATTACHMENTS:

Figure 1 – Location Map
Figure 2 – BLM Lot 3
Attachment A – Stipulations and Environmental Protection Measures (Applicant Committed Measures)

ATTACHMENT A- Applicant Committed Design Features

Aesthetics/Visual	
A-1	The contractor shall exercise care to preserve the natural landscape and shall conduct construction operations so as to prevent any unnecessary damage to, or destruction of, natural features.
A-2	Perform final reclamation recontouring of all disturbed areas to the original contour or a contour that blends with the surrounding topography.
Air Quality	
AQ-1	The contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize atmospheric emissions or discharges of air contaminants.
AQ-2	Vehicles and equipment showing excessive emission of exhaust gases due to poor engine adjustments or other inefficient operating conditions shall not be operated until corrective adjustments or repairs are made.
AQ-3	Utilize dust suppression techniques on unpaved surfaces, including water and gravel. Chemical dust suppressants will not be used due to proximity to the Colorado River and its tributaries.
AQ-4	Post and enforce speed limits to reduce airborne fugitive dust from vehicular traffic on unpaved roads.
AQ-5	Reduce unnecessary vehicle idling to reduce combustion emissions, ozone formation, visibility impacts, and fuel consumption.
AQ-6	Restrict surface disturbing activities to periods when wind speeds are less than 25 miles per hour.
Biological Resources	
BR-1	Native vegetation and soils will be protected from damage from construction, and disturbance to them will be minimized. Mature trees will be avoided as much as possible; tree removal will be limited to small (less than 4inches in diameter) trees and shrubs.
BR-2	Erosion will be controlled during construction. An erosion control plan would be provided, and includes stabilizing areas that have low potential to naturally revegetate and have high wind and soil erosion potential. Treatments include the following: a) Installing water bars and other drainage diversions along the construction corridor and other cleared areas; b) Seeding and planting with native vegetation, including temporary disturbed areas, to provide vegetative cover; c) Spreading mulch to protect bare soil and discourage runoff d) Installing erosion control structures; e) Installing channel-stabilization structures; f) Monitoring emergency stabilization and rehabilitation treatments.
BR-3	All construction materials and debris shall be removed from the project area in a timely manner.

BR-4	Pre-construction surveys shall be conducted prior to construction for the force main installation, projected to be constructed in 2020-2025.
BR-5	All trail project construction is expected to occur in the fall of 2017 and winter/spring of 2018 to avoid affecting nesting raptors and endangered fish habitat. Clearing and grubbing of vegetation will occur outside of the nesting period for migratory birds (August 31 to March 15). Construction in live water will be coordinated to occur outside of the period of July 1 through September 30 to avoid impacts to larval endangered fish in the project area. Construction is intended to occur between December through February to avoid working in live water.
BR-6	A biological monitor would be on-site during project initiation to provide information to the project foreman regarding sensitive resources. A biological monitor also may provide oversight visits and do a final review of the project area when all project activities are complete, to verify that site conditions are as planned. The biological monitor would coordinate with the BLM ecologist and biologist regarding site visits (both pre- and post-visit reporting). The biological monitor is authorized to halt construction and consult with BLM if sensitive resources are threatened by construction impacts in unauthorized locations.
BR-7	At Big Salt Wash, gaps in the riprap bank stabilization would be filled with gravel and small (2- to 3-inch) stone size and covered with native soils. At Reed Wash, riprap would be placed in gabion baskets and lined with a drainage geotextile to keep the filler material within the baskets, eliminating exposure of any voids, and then covered with native soils derived from excavation on site.
BR-8	Low water crossings and culverts would be minimized as much as possible to avoid constraining hydrologic flow.
Cultural Resources	
CR-1	The National Historic Preservation Act, as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during project implementation, work in that area must stop and the BLM Authorized Officer must be notified immediately. Within five working days, the BLM Authorized Officer will inform the proponent as to: a) Whether the materials appear eligible for the National Register of Historic Places; b) The mitigation measures the proponent will likely have to undertake before the site could be used (assuming in situ preservation is not practicable) (36 CFR 800.13); and c) A timeframe for the BLM Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Office, that the BLM Authorized Officer's findings were correct and mitigation was appropriate.
Fire Prevention/Control	
FP-1	The contractor shall maintain in all construction vehicles a current list of local emergency response providers and methods of contact/communication.

General	
G-1	An intergovernmental agreement for trail maintenance with Mesa County, Palisade, Grand Junction and Fruita will be provided to the BLM upon completion.
Land Use	
LU-1	The contractor shall limit movement of crews, vehicles and equipment on the ROW and approved access roads to minimize damage to property and disruption of normal land use activity.
LU-2	The contractor shall maintain all fences and gates during the construction period. Any fence or gate damaged during construction would be repaired immediately by the contractor.
Noise	
N-1	Noise-reduction techniques and designs will be used to reduce noise from motorized equipment.
Noxious Weeds	
NW-1	Rights-of-way and other lands and realty authorizations will contain noxious and invasive plant management terms or stipulations for all ground-disturbing actions. These will include conducting a pre-disturbance noxious weed inventory, designing to avoid or minimize vegetation removal and weed introduction or spread, managing weeds during the life of the right-of-way or authorization to prevent or minimize weed introduction or spread, and monitoring revegetation success and weed prevention and control for a reasonable number of years.
NW-2	Seed and straw mulch to be used for mulch or rehabilitation (e.g., for wattles, straw bales, and dams) shall be certified weed-free.
NW-3	Most of the project area contains noxious weeds. Weeds should be treated (if the timing is appropriate) or removed (if seeds are present) to limit weed seed production and dispersal.
NW-4	Topsoil that is removed from the site where noxious weeds are present would be treated for weeds. If topsoil is to be used in reclamation activities, it would be treated for weeds when stockpiled in the project area and before being applied to reclaimed areas if necessary.
NW-5	Locate and use weed-free project staging areas. Avoid or minimize travel through weed-infested areas, or restrict travel to periods when spread of disseminules is least likely.
NW-6	Identify sites where equipment can be cleaned. Remove mud, dirt, and plant parts from project equipment before moving it into a project area. Seeds and plant parts should be collected and incinerated when possible.
NW-7	Inspect and document all ground-disturbing activities in noxious weed-infested areas for at least three growing seasons following project completion. For ongoing projects, continue to monitor until reasonably certain that no weeds are present. Plan for follow-up treatments based on inspection results.
ROW	

R-1	Before construction begins, ROW authorization holders and private land owners shall be notified about ROW activities and construction schedule.
R-2	Construction activities should be coordinated so to not inhibit ROW authorization holders' activities.
R-3	At least 90 days prior to termination of the ROW, the City of Fruita and PSCo should contact the AO to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan should include, but is not limited to, removal of facilities, drainage structures, and removal of surface material; re-contouring, top-soiling, or seeding. The AO must approve the plan in writing prior to the holder's commencement of any termination activities.
R-4	All activities associated with the construction, operation and termination of the ROWs should be conducted within the authorized limits of the ROWs (see Section 3.5.1 of the EA).
Soils	
S-1	Restrict travel to established roads to avoid compacting soil that could hinder the recovery of desired plants. All soils compacted by movement of construction vehicles and equipment, shall be reseeded (see S-2). The specific seed mix(s) and rate(s) of application would be determined by the BLM.
S-2	Seeding Procedures a) Seeding will be conducted no more than 24 hours following completion of final seedbed preparation (see Seedbed Preparation). b) Where practical, seed will be planted by drill-seeding to a depth of 0.25- to 0.5-inch along the contour of the site. Drill seeding will be followed by culti-paction to enhance seed-to-soil contact and prevent losses of both. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25- to 0.5-inch of soil cover. Hydro-seeding and hydro-mulching may be used in temporary seeding or in areas where drill-seeding or broadcast-seeding/ raking are impracticable. Hydro-seeding and hydro-mulching must be conducted in two separate applications to ensure adequate seed-to-soil contact. c) If interim revegetation is unsuccessful, reseedings will be repeated annually until satisfactory vegetative cover has been achieved. Requirements for reseeding of temporary areas will be considered on a case-by-case basis. Seeding will be considered successful as determined by the BLM. A successful seeding may occur, for example, when the site is protected from erosion and revegetated with a vigorous, self-sustaining, and diverse cover of native (or otherwise approved) plant species. If necessary, reseeding will occur during optimal periods as much as possible.
S-3	Excavated material not used shall be transported off-site [to an approved disposal location]. Disturbed areas shall then be regraded to approximate pre-construction contours and reseeded as specified in S-2.
S-4	Seeded areas would be inspected to ensure successful revegetation and soil stabilization. Any bare or thin areas would be re-graded and re-seeded, mulched, or otherwise addressed.

S-5	When saturated soil conditions exist on access roads or location, or when road rutting becomes deeper than 3 inches, construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils, roads, and locations.
S-6	Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.
S-7	Topsoil stripping will include all growth medium present at a site (e.g., following initial clearing of large trees), as indicated by color or texture. Stripping and storage depth may be specified during the onsite inspection. All stripped topsoil/growth medium will be salvaged, segregated, and stored in a manner that extends biological viability and protects it from loss. Topsoil and all growth medium will be replaced prior to seedbed preparation. No topsoil will be stripped or segregated when soils are saturated or frozen below the stripping depth.
S-8	Cleared vegetation smaller than 4 inches in diameter will be stockpiled, shredded, and salvaged with topsoil. Cleared vegetation larger than 4 inches in diameter will be scattered over disturbed areas to accomplish reclamation objectives. Excessive vegetation larger than 4 inches in diameter may be removed from BLM-administered land or shredded in place to be salvaged with topsoil. A wood-cutting permit may be purchased from BLM for material removed from the site.
Traffic	
T-1	The contractor shall make all necessary provisions for conformance with federal, state and local traffic safety standards and shall conduct construction operations so as to offer the least possible obstruction and inconvenience to public traffic.
T-2	The City of Fruita would install signage where trail crosses the Loma Boat launch road.
Waste Management	
WM-1	The City of Fruita would comply with all applicable federal, state, and local laws and regulations regarding the use, storage and disposal of any toxic or hazardous material or solid waste.
WM-2	Construction trash and debris would be contained and confined continuously during construction so as to avoid release to public lands. All materials would be removed to the waste management facility or landfill, as appropriate, following the completion of the project.
WM-3	All refueling operations and hazardous material transfers will occur over secondary containment to contain drips and spills.
Water Resources	
WR-1	The holder shall adhere to all requirements under the Federal Water Pollution Control Act, as amended through Public Law 107-303, November 27, 2002.

WR-2	For surface-disturbing activities exceeding 1 acre, develop and implement Stormwater Pollution Prevention Plans (SWPP) and Spill Prevention, Control and Countermeasures Plan (SPCC) to include site-specific design, systematic site monitoring, installation of run-on/off controls such as ditches or berms, and installation of adaptive BMPs to reduce potential erosion and sediment production and transport, and to prevent spills. Stormwater will be dispersed to stabilized areas to slow velocity, prevent erosion, and support infiltration into soils. Stormwater BMPs identified in the State-approved SWPP shall be in place prior to any earth-disturbing activity. Additional BMPs will be installed if determined necessary by the BLM. All measures shall be maintained in good, functional condition. All temporary BMPs shall be removed once site stabilization and reclamation efforts have been deemed successful by the BLM.
WR-3	Design and construct stream crossings at right angles, in straight sections of stable reaches to handle (at a minimum) the 100-year flood, and consider culvert and bridge designs that facilitate aquatic life passage.

July 3, 2017

REVISION OF SECTION 106
SUPPLIER LIST

Section 106 of the Standard Specifications is hereby revised for this project as follows:

In subsection 106.01 delete the fourth and 5th paragraphs and replace with the following:

All companies that will provide $10,000 or more in supplies or materials on any CDOT project must be registered in the B2GNow software system and shall update the registration on an annual basis.

Prior to beginning any work on the project, the Contractor shall submit to the Engineer a completed Form 1425, Supplier List documenting all companies providing $10,000 or more of supplies or materials directly to the Contractor for the project. This list shall not include companies also responsible for the installation of the supplies or materials. During the performance of the project, the Contractor shall submit an updated Form 1425 if one or more of these companies change.

The Contractor shall require each subcontractor to submit a Form 1425 listing all companies providing $10,000 or more of supplies or materials to the subcontractor. The Contractor shall submit the subcontractor's Form 1425 with Form 205.

Failure to comply with the requirements of this subsection shall be grounds for withholding of progress payments.

July 20, 2017

REVISION OF SECTION 108
LIQUIDATED DAMAGES

Section 108 of the Standard Specifications is hereby revised for this project as follows:

In subsection 108.09 delete the schedule of liquidated damages and replace with the following:

Original Contract Amount ($)		Liquidated Damages per Calendar Day ($)
From More Than	To And Including	
0	500,000	900
500,000	1,000,000	1,500
1,000,000	2,000,000	2,200
2,000,000	5,000,000	4,100
5,000,000	15,000,000	5,500
15,000,000	-----	9,900

July 3, 2017

REVISION OF SECTION 108
SUBLETTING OF CONTRACT

Section 108 of the Standard Specifications is hereby revised for this project as follows:

Subsection 108.01 shall include the following:

All firms to which the Contractor will be subletting a portion of the Contract must be registered in the B2GNow Software System and shall update the registration on an annual basis. If the firm is not registered, approval of the Form 205 may be withheld.

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REVISION OF SECTION 109
PROMPT PAYMENT
(LOCAL AGENCY)

Section 109 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 109.06(e) and replace with the following:

(e) *Prompt Payment*. The Contractor shall pay subcontractors and suppliers for all work which has been satisfactorily completed within seven calendar days after receiving payment for that work from the Local Public Agency (LPA). For the purpose of this section only, work shall be considered satisfactorily complete when the LPA has made payment for the work. The Contractor shall include in all subcontracts a provision that this requirement for prompt payment to subcontractors and suppliers must be included in all subcontracts at every tier. The Contractor shall ensure that all subcontractors and suppliers at every tier are promptly paid. If the Contractor or its subcontractors fail to comply with this provision, the Engineer will not authorize further progress payment for work performed directly by the Contractor or the noncompliant subcontractor until the required payments have been made. The Engineer will continue to authorize progress payments for work performed by compliant subcontractors.

Delete subsection 109.06(f)5 and replace with the following:

5. In determining whether satisfactory completion has been achieved, the Contractor may require the subcontractor to provide documentation such as certifications and releases, showing that all laborers, lower-tiered subcontractors, suppliers of material and equipment, and others involved in the subcontractor's work have been paid in full. The Contractor may also require any documentation from the subcontractor that is required by the subcontract or by the Contract between the Contractor and the LPA or by law such as affidavits of wages paid, material acceptance certifications and releases from applicable governmental agencies to the extent that they relate to the subcontractor's work.

Delete subsection 109.06(f)8 and replace with the following:

8. If additional quantities of a particular item of work are required at a later date after final measurement has been made, the Contractor shall perform this work in accordance with Contract requirements and at unit bid prices.

   For this subsection only, satisfactory completion of all work described on CDOT Form No. 205 is when all tasks called for in the subcontract as amended by changes directed by the Engineer have been accomplished and documented as required by the LPA.

   The requirements stated above do not apply to retainage withheld by the LPA from monies earned by the Contractor. The LPA will continue to process the release of that retainage based upon the completion date of the project as defined in the Commencement and Completion of Work special provision.

Delete subsection 109.06(f)9 and replace with the following:

9. If during the prosecution of the project a portion of the work is partially accepted in accordance with subsection 105.21(a), the Contractor shall release all subcontractors' retainage on the portion of the partially accepted work performed by subcontractors. Prior to the LPA releasing the Contractor's retainage on work that has been partially accepted in accordance with subsection 105.21(a), the Contractor shall submit to the Engineer a certified statement for each subcontractor that has participated in the partially accepted work. The statement shall certify that the subcontractor has been paid in full for its portion of the partially accepted work including release of the subcontractor's retainage. The statement shall include the signature of a legally responsible official for the Contractor, and the signature of a legally responsible official for the subcontractor.

Delete subsection 109.06(g) and replace with the following:

REVISION OF SECTION 109
PROMPT PAYMENT
(LOCAL AGENCY)

(g) *Good Cause Exception.* If the Contractor has "good cause" to delay or withhold a subcontractor's progress payment, the Contractor shall notify the LPA and the subcontractor in writing within seven calendar days after receiving payment from the LPA. The notification shall specify the amount being withheld and provide adequate justification for withholding the payment. The notice shall also clearly state what conditions the subcontractor must meet to receive payment. "Good cause" shall include but not be limited to the failure of the subcontractor to make timely submission of required paperwork.

Delete subsection 109.06(h) and replace with the following:

(h) *Monthly Reporting.* On a monthly basis, the Contractor shall submit the Form 1418, Monthly Payment Report, to the Engineer along with the project schedule updates, in accordance with subsections 108.03(g). Failure to submit a complete and accurate Form 1418 shall be grounds for CDOT to withhold subsequent payments or retainage from the Contractor.

July 3, 2017

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REVISION OF SECTION 208
EROSION CONTROL

Section 208 of the Standard Specifications is hereby revised for this project as follows:

In subsection 208.03(c) delete the first paragraph and replace it with the following

Erosion Control Management (ECM). Erosion Control Management for this project shall consist of Erosion Control Inspection and the SWMP Administration. All ECM staff shall have working knowledge and experience in construction, and shall have successfully completed the Transportation Erosion Control Supervisory Certificate Training (TECS) as provided by the Department. The Superintendent will not be permitted to serve in an ECM role. The Erosion Control Inspector (ECI) and the SWMP Administrator may be the same person in projects involving less than 40 acres of disturbed area.

In subsection 208.03(c)1 delete the first paragraph and replace it with the following:

SWMP Administration. The SWMP shall be maintained by a SWMP Administrator. In the case of a project requiring only one TECS, the SWMP Administrator may also be the ECI for the project. The name of the SWMP Administrator shall be recorded on the SWMP Section 3. B. The SWMP Administrator shall have full responsibility to maintain and update the SWMP and identify to the Superintendent critical action items needed to conform to the CDPS-SCP as follows:

In subsection 208.03(c)2 delete the first paragraph and replace It with the following:

One ECI is required for every 40 acres of total disturbed area which is currently receiving temporary and interim stabilization measures as defined in subsection 208.04 (e). An ECI shall not be responsible for more than 40 acres in the project. Accepted permanent stabilization methods as defined in subsection 208.04 (e) will not be included in the 40 acres.

In subsection 208.03(d)1 delete item (1) and replace it with the following:

(1) SWMP Site Maps and Plan Title Sheet - Construction site boundaries, ground surface disturbance, limits of cut and fill, flow arrows, structural BMPs, non-structural BMPs, Springs, Streams, Wetlands and surface water. Also included on the sheets is the protection of trees, shrubs and cultural resources.

In subsection 208.05(n), in the list of requirements for pre-fabricated concrete washout structures, delete item (2) and replace it with the following:

(2) Structure shall be located 50 horizontal feet away from State waters, and shall be confined so that no potential pollutants will enter State waters and other sensitive areas are as defined in the Contract. Locations shall be as approved by the Engineer. The site shall signed as “Concrete Washout”.

In subsection 208.11 delete the first paragraph and replace it with the following:

Erosion Control Management will be measured as the actual number of days of ECM work performed, regardless of the number of personnel required for SWMP Administration and Erosion Control Inspection, including erosion control inspections, documentation, meeting participation, SWMP Administration, and the preparation of the SWMP notebook. If the combined hours of SWMP Administration and Erosion Control Inspection is four hours or less in a day, the work will be measured as ½ day. If the combined hours of SWMP Administration and Erosion Control Inspection is more than four hours in a day, the work will be measured as one day. Total combined hours of ECM work exceeding eight hours in a day will still be paid as one day.

AFFIRMATIVE ACTION REQUIREMENTS
EQUAL EMPLOYMENT OPPORTUNITY

A. AFFIRMATIVE ACTION REQUIREMENTS

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area are as follows:

Goals and Timetable for Minority Utilization

Timetable - Until Further Notice			
Economic Area	**Standard Metropolitan Statistical Area (SMSA)**	**Counties Involved**	**Goal**
157 (Denver)	2080 Denver-Boulder	Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, Jefferson.....	13.8%
	2670 Fort Collins	Larimer.....	6.9%
	3060 Greeley	Weld.....	13.1%
	Non SMSA Counties	Cheyenne, Clear Creek, Elbert, Grand, Kit Carson, Logan, Morgan, Park, Phillips, Sedgwick, Summit, Washington & Yuma.....	12.8%
158 (Colo. Spgs. - Pueblo)	1720 Colorado Springs	El Paso, Teller.....	10.9%
	6560 Pueblo	Pueblo.....	27.5%
	Non SMSA Counties	Alamosa, Baca, Bent, Chaffee, Conejos, Costilla, Crowley, Custer, Fremont, Huerfano, Kiowa, Lake, Las Animas, Lincoln, Mineral, Otero, Prowers, Rio Grande, Saguache.....	19.0%
159 (Grand Junction)	Non SMSA	Archuleta, Delta, Dolores, Eagle, Garfield, Gunnison, Hinsdale, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel	10.2%
156 (Cheyenne - Casper WY)	Non SMSA	Jackson County, Colorado.....	7.5%
GOALS AND TIMETABLES FOR FEMALE UTILIZATION Until Further Notice.....6.9% -- Statewide			

AFFIRMATIVE ACTION REQUIREMENTS
EQUAL EMPLOYMENT OPPORTUNITY

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts meet the goals established for the geographical area where the contract resulting form this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Par 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this specification, and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the Invitation for Bids and on the plans. In cases where the work is in two or more counties covered by differing percentage goals, the highest percentage will govern.

B. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these Specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   d. "Minority" includes;

      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractor toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any office of Federal Contract Compliance Programs Office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following;

   a. Ensure and maintain a working environment free of harassment, intimidation , and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and maintain a record of the organization's responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source of community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

   d. Provide immediate written notification to the Director when the union with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when he Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

   f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least once a year, and by posting the Contractor's EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the Contractor's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc. such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and Contractor's activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligation.

AFFIRMATIVE ACTION REQUIREMENTS
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8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goal and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even thought the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13 The Contractor in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form, however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

C. SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES.

1. *General.*

   a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract. Provisions (Form FHWA 1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract provisions.

   b. The Contractor will work with the State highway agencies and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

   c. The Contractor and all his/her subcontractors holding subcontracts not including material suppliers, of $10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The Contractor will include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. *Equal Employment Opportunity Policy*. The Contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program;

   It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include; employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

3. *Equal Employment Opportunity Officer*. The Contractor will designate and make known to the State highway agency contracting officers and equal employment opportunity officer (herein after referred to as the EEO Officer) who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. *Dissemination of Policy*.

   a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum;

      (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official, covering all major aspects of the Contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the Contractor.

(3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the Contractor's procedures for locating and hiring minority group employees.

b. In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor will take the following actions:

(1) Notices and posters setting forth the Contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

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(2) The Contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. *Recruitment*.

a. When advertising for employees, the Contractor will include in all advertisements for employees the notation; "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The Contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the Contractor will, through his EEO Officer, identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The Contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

`6. *Personnel Actions*. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be followed;

a. The Contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The Contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The Contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The Contract will promptly investigate all complaints of alleged discrimination made to the Contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor will inform every complainant of all of his avenues of appeal.

7. *Training and Promotion*.

a. The Contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

c. The Contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The Contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. *Unions*. If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women with the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor either directly or thorough a contractor's association acting as agent will include the procedures set forth below:

a. The Contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The Contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.

c. The Contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to the State highway department and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and women referrals within he time limit set forth in the collective bargaining agreement, the Contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion , sex or national origin; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the State highway agency.

9. *Subcontracting*.

a. The Contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State highway agency personnel.

b. The Contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. *Records and Reports.*

a. The Contractor will keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Contractor will be designed to indicate:

(1) The number of minority and nonminority group members and women employed in each work classification on the project.

(2) The Progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration.

c. The Contractors will submit an annual report to the State highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR 1391.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS (LOCAL AGENCY)

1. Overview

The Disadvantaged Business Enterprise (DBE) Program is a federally-mandated program that seeks to ensure non-discrimination in the award of U.S. Department of Transportation (DOT)-assisted contracts and to create a level playing field on which DBEs can compete fairly for DOT-assisted contracts. Local Public Agencies (LPAs) that receive federal funds, must comply with CDOT's DBE program. To such end, CDOT sets a contract goal for DBE participation for each DOT-assisted LPA Contract.

In order to be awarded the Contract, the bidder shall show that it has committed to DBE participation sufficient to meet the goal or has otherwise made good faith efforts to do so. CDOT will amend the goal prior to award if the lowest apparent bidder demonstrates that good faith efforts were made but sufficient commitments to meet the goal could not be obtained.

CDOT and the LPA will monitor the progress of the Contractor throughout the project to ensure that the Contractor's DBE commitments are being fulfilled. Modifications to the commitments must be approved by the CDOT Regional Civil Rights Office (RCRO). CDOT may withhold payment or seek other contractual remedies if the Contractor is not complying with the requirements of this special provision. Upon completion of the Contract, CDOT may require the LPA to reduce the final payment to the Contractor if the Contractor has failed to fulfill the commitments or made good faith efforts to meet the contract goal.

For general assistance regarding the DBE program and compliance, contact CDOT's Civil Rights and Business Resource Center (CRBRC) at (303)757-9234. For project specific issues, contact the LPA Engineer or RCRO.

All forms referenced herein can be found on the CDOT website in the forms library.

2. Contract Assurance

By submitting a proposal for this Contract, the bidder agrees to the following assurance and shall include it verbatim in all (including non-DBE) subcontracts:

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to: (1) Withholding monthly progress payments; (2) Assessing sanctions; (3) Liquidated damages; and/or (4) Disqualifying the contractor from future bidding as non-responsible.

3. Definitions

Terms not defined herein shall have the meaning provided in the CDOT Standard Specifications for Road and Bridge Construction.

A. *Commitment.* A commitment is a portion of the Contract, identified by dollar amount and work area, designated by the bidder or Contractor for participation by a particular DBE. Commitments are submitted to CDOT via Form 1414, Anticipated DBE Participation Plan, or via Form 1420, DBE Plan Modification Request. Once approved, commitments are enforceable obligations of the Contract.

B. *Commercially Useful Function (CUF).* Responsibility for the execution of the work and carrying out such responsibilities by actually performing, managing and supervising the work as further described in Section 8 below.

C. *Contract Goal.* The percentage of the contract designated by CDOT for DBE participation. The contract goal for this contract is provided in the Project Special Provision Disadvantaged Business Enterprise Contract Goal.

(1) The bidder/Contractor shall make good faith efforts to fulfill the contract goal with eligible DBE participation. For determining whether the contract goal was met prior to award, the contract goal shall be based upon the proposal amount excluding force account items. For determining whether the contract goal was met during and upon completion of the project, the contract goal shall be based upon the total earnings amount.

(2) If the lowest apparent bidder demonstrates that it was unable to meet the contract goal but made good faith efforts to do so, the contract goal will be amended and the revised contract goal will be provided on Form 1417, Approved DBE Participation Plan.

D. *Disadvantaged Business Enterprise (DBE).* A Colorado-certified Disadvantaged Business Enterprise listed on the Colorado Unified Certification Program (UCP) DBE Directory at www.coloradodbe.org.

E. *DBE Program Manual.* The manual maintained by the CRBRC which details CDOT's policies and procedures for administering the DBE program. A copy of the DBE Program Manual is available on the CRBRC webpage.

F. *Eligible Participation.* Work by a DBE that counts toward fulfillment of the contract goal as described in Section 4 below.

G. *Good Faith Efforts.* All necessary and reasonable steps to achieve the contract goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if not fully successful. Good faith efforts are evaluated prior to award and throughout performance of the Contract. For guidance on good faith efforts, see 49 CFR Part 26, Appendix A.

H. *Joint Check.* A check issued by the Contractor or one of its subcontractors to a DBE firm and a material supplier or other third party for materials or services to be incorporated into the work.

I. *Reduction.* A reduction occurs when the Contractor reduces a commitment to a DBE. A reduction constitutes a partial termination.

J. *Subcontractor.* An individual, firm, corporation or other legal entity to whom the Contractor sublets part of the Contract. For purposes of this special provision, the term subcontractor includes suppliers.

K. *Substitution.* Substitution occurs when a Contractor seeks to find another DBE to perform work on the contract as a result of a reduction or termination.

L. *Termination.* A termination occurs when a Contractor no longer intends to use a DBE for fulfillment of a commitment.

M. *Total Earnings Amount:* Amount of the Contract earned by the Contractor, including approved changes and approved force account work performed, but not including any deductions for liquidated damages, price reduced material, work time violations, overweight loads or liens. The amount of the Contract earned does not include plan force account items (i.e. OJT, pavement incentives, etc).

N. *Work Code.* A code to identify the work that a DBE is certified to perform. A work code includes a six digit North American Industry Classifications System code plus a descriptor. Work codes are listed on a firm's profile on the UCP DBE Directory. The Contractor may contact the CRBRC to receive guidance on whether a work code covers the work to be performed.

4. Eligible Participation

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

The following rules will be used to determine whether work performed by a DBE qualifies as eligible participation on the Contract:

A. *Work Must be Identified in Commitment.* The work performed by the DBE must be reasonably construed to be included in the work area and work code identified by the Contractor in the approved commitment.

(1) If the Contractor intends to use a DBE for work that was not listed in the commitment, the Contractor shall submit Form 1420, DBE Participation Plan Modification for approval of the modification. Unapproved work will not count toward the contract goal.

(2) A DBE commitment cannot be modified to include work for which the DBE was not certified at the time of the approval of the original commitment.

B. *DBE Must be Certified to Perform the Work.* The DBE must be certified to perform the work upon submission of the commitment and upon execution of the DBE's subcontract.

(1) When a commitment has been made, but upon review of Form 205, Sublet Permit, CDOT determines that the DBE is no longer certified in the work code which covers the work to be performed, the Contractor may not use the DBE's participation toward the contract goal. The Contractor shall terminate the DBE commitment and seek substitute DBE participation in accordance with Section 9 below.

(2) A DBE's work will continue to count as eligible participation if the DBE was certified upon approval of Form 205, Sublet Permit and the certification status changes during the performance of the work.

(3) Suppliers must be certified upon execution of the purchase order.

C. *DBE Performs the Work*. Eligible participation will only include work actually performed by the DBE with its own forces.

(1) Work performed by the DBE includes the cost of supplies and materials obtained by the DBE for its work on the Contract, including any equipment leased by the DBE, provided that such supplies or equipment are not purchased or leased from the Contractor or a subcontractor that is subletting to the DBE.

(2) The term "work actually performed by the DBE with its own forces" includes work by temporary employees, provided such employees are under the control of the DBE.

(3) If CDOT or the LPA determines that a DBE has not performed a CUF on the project, no participation by such DBE shall count toward the contract goal.

D. *DBE Subcontracts to Another Firm.* When a DBE subcontracts part of the work, the value of the subcontracted work may only be counted toward the goal if the subcontractor is a DBE. Performance by non-DBE subcontractors, including non-DBE trucking firms and owner-operators, shall be deducted from the DBE's participation.

E. *DBE Received Payment for the Work.* Eligible participation only includes work for which the DBE has received payment, including the release of its retainage.

F. *Special Calculations for Suppliers.* When a DBE supplies goods on a project, the DBE may be classified as a manufacturer, dealer or broker. The DBE's status as a manufacturer, dealer or broker is determined on a contract-by-contract basis and is based upon the actual work performed.

(1) When a DBE is deemed to be acting as a manufacturer, one hundred percent of the

commitment will count as eligible participation.

(2) When a DBE is deemed to be acting as a regular dealer (i.e. non-manufacturer supplier), only sixty percent of the commitment will count as eligible participation.

(3) When a DBE is deemed to be acting as a broker, only the reasonable brokerage fee will count as eligible participation.

G. *Reasonable Fee for Contract-Specific Services.* Services shall count toward the contract goal only if they are specifically required for the performance of the Contract. Non-contract specific expenses may not be counted toward the contract goal. Fees for services must be reasonable. Services include but are not limited to professional services, public involvement, etc. In the case of temporary employment placement agencies, only the placement fee for an individual to be specifically and exclusively used for work on the contract shall count as eligible participation.

H. *Pre-Approval for Joint Venture Participation.* When a DBE is a participant in a joint venture, the DBE must apply to CDOT to determine how much of the work performed by the joint venture will count toward the contract goal. The DBE shall complete Form 893, Information for Determining DBE Participation when a Joint Venture Includes a DBE. Form 893 shall be submitted to CDOT CRBRC no less than ten days before the submission of the Proposal or to the RCRO no less than ten days before submission of the Form 205 to ensure sufficient time for review.

5. Proposal Requirements

In order to be eligible for award, the following shall be submitted with the proposal to the LPA:

A. *Form 1413, Bidders List.* The bidder shall list each subcontractor (including both DBE and non-DBE subcontractors) that submitted a quote for participation on the project. Failure to submit a signed Form 1413 will result in rejection of the proposal.

B. *Form 1414, Anticipated DBE Participation Plan*. If the Contract Goal is greater than zero, the bidder shall submit Form 1414 to document anticipated DBE participation.

(1) If the Bidder has not obtained any DBE commitments, it shall still submit Form 1414 documenting zero anticipated participation. If the Contract Goal is greater than zero, failure to submit a signed Form 1414 shall result in rejection of the proposal.

(2) The bidder shall list the DBE, work area(s), commitment amount and estimated eligible participation for each commitment. Once Form 1414 is submitted, a commitment may only be terminated or reduced in accordance with Section 9 below. The bidder is responsible for ensuring that commitments, and the estimated eligible participation resulting therefrom, have been properly calculated prior to submitting its proposal.

(3) If the bidder is a DBE, the bidder must include itself in Form 1414 and list the work area(s) and amount that it intends to self-perform and count as eligible participation on the contract.

(4) Commitments may be made to second tier or lower DBE subcontractors; however, the Contractor is ultimately responsible for the fulfillment of the commitment and shall sign the Form 1415, Commitment Confirmation.

6. Additional Forms Due Prior to Award.

If the contract goal is greater than zero, or if the bidder has voluntarily made commitments, the Bidder shall submit the following forms to the LPA within five calendar days of selection as the lowest apparent bidder. These forms must be submitted to the CDOT CRBRC concurrent with the request for concurrence to award.

A. *Form 1415, Commitment Confirmation*. A Form 1415, Commitment Confirmation shall be obtained from each DBE listed on Form 1414. The bidder shall complete Section 1 and the DBE shall complete Section 2 of Form 1415. Form 1415s shall be consistent with the commitments listed on Form 1414. The bidder shall not modify commitments listed on Form 1414 without good cause and approval from CDOT. The bidder shall contact CDOT if any issues arise which may require the bidder to alter or terminate a commitment.

B. *Form 1416, Good Faith Effort Report.* If the total eligible participation listed on Form 1414 does not meet the contract goal, the lowest apparent bidder shall also submit Form 1416, Good Faith Effort Report and any supporting documentation that the bidder would like considered by CDOT as evidence of good faith efforts.

7. Commitment and Good Faith Effort Review

A. *Commitment Review*. CDOT will evaluate the Form 1414 and each Form 1415 to ensure that it the commitment is valid and has been properly calculated. CDOT may investigate or request additional information in order to confirm the accuracy of a commitment. If CDOT determines that the total estimated eligible participation of the commitments does not meet the contract goal, within two business days of notice from CDOT, the bidder shall submit Form 1416 to CDOT.

B. *Good Faith Effort Review.* If the total eligible participation of Form 1414 and all supporting Form 1415s does not meet the contract goal, CDOT will review Form 1416 and all supporting documentation submitted by the bidder in order to determine whether the bidder has demonstrated good faith efforts to obtain DBE participation. CDOT will use 49 CFR Part 26, Appendix A as a guide for determining whether the bidder made good faith efforts to meet the contract goal. A bidder will be deemed to not have made good faith efforts if the bidder lists a DBE for a work area for which the DBE is not certified and the bidder cannot establish a reasonable basis for its determination. CDOT may consider and approve commitments made after submission of the bid if the Bidder demonstrates that (1) good faith efforts were made prior to submission of the bid and (2) there is a reasonable justification for not obtaining the commitments prior to submission of the bid.

C. *Administrative Reconsideration.* If CDOT determines that the bidder did not demonstrate good faith efforts to meet the contract goal, it will provide the bidder and LPA with written notice of its determination. The bidder will be provided an opportunity to request administrative reconsideration of the decision. The process for reconsideration is set forth in the *Good Faith Effort Appeal Process,* which is an Appendix I to the DBE Program Manual. A copy of the *Good Faith Effort Appeal Process* will be included in the written notice from CDOT.

D. *Form 1417, Approved DBE Participation Plan.* If CDOT determines that the bidder has met the contract goal or made good faith efforts to do so, CDOT will issue to the bidder, with a copy to the LPA, Form 1417, Approved DBE Participation Plan, documenting the approved commitments. If CDOT determines that the bidder did not meet the contract goal but made good faith efforts to do so, via the Form 1417 CDOT will amend the contract goal in accordance with the commitments that were obtained and attach an explanation of its determination.

8. Ongoing Oversight of DBE Participation

A. *Consistency Review.* CDOT will review Form 205, Sublet Permit Application to determine whether the work being sublet is consistent with the DBE commitments. CDOT may withhold approval of the sublet or direct the LPA to stop performance of the work if the Contractor has reduced, terminated, or otherwise modified the type or amount of work to be performed by a DBE without seeking prior approval.

B. *Form 1419, DBE Participation Report.* The Contractor shall submit Form 1419, DBE Participation Report to the LPA Engineer on a quarterly basis (January 15, April 15, July 15, and October 15) and upon completion of the Contract. The LPA may withhold progress payments if the quarterly Form 1419 is not received on time. The LPA will not provide final payment on the Contract until the final Form 1419 has been reviewed and approved by the CDOT RCRO.

C. *Joint Checks*. All joint checks must be approved by the CDOT RCRO before they are used in payment to a DBE. Joint checks used in payments to DBEs will be monitored closely to ensure (1) the DBE is performing a CUF and (2) the joint checks are not being used in a discriminatory manner. The Contractor shall request approval for the use of a joint check in a written letter signed by the DBE and the Contractor, stating the reason for the joint checks and the approximate number of checks that will be needed.

D. *Commercially Useful Function*. CDOT will monitor performance during the Contract to ensure each DBE is performing a CUF. If CDOT or the LPA determines that a DBE is not performing a CUF, no work performed by such DBE shall count as eligible participation. The DBE, Contractor, and any other involved third parties may also be subject to additional enforcement actions.

(1) When determining whether a DBE is performing a CUF, CDOT and the LPA will consider the amount of work subcontracted, industry practices, the amount the firm is to be paid compared to the work performed and eligible participation claimed, and any other relevant factors.

(2) With respect to material and supplies used on the Contract, in order to perform a CUF the DBE must be responsible for negotiating price, determining quality and quantity, ordering the material, installing the material, if applicable, and paying for the material itself.

(3) With respect to trucking, in order to perform a CUF, the DBE trucking firm must own and operate at least one fully licensed, insured and operational truck used on the Contract. Additionally, the DBE trucking firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on the Contract.

(4) A DBE does not perform a CUF when its role is limited to that of an extra participant in a transaction, contract or project through which funds are passed in order to obtain the appearance of DBE participation. CDOT will evaluate similar transactions involving non-DBEs in order to determine whether a DBE is an extra participant.

(5) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work than would be expected on the basis of normal industry practice for the type of work involved, CDOT and the LPA will presume that the DBE is not performing a CUF. The DBE may present evidence to rebut this presumption.

9. DBE Participation Plan Modifications

A. *Contractor must Use DBEs Listed in Approved Plan.* The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which it is listed unless the Contractor obtains the CDOT RCRO's written consent to terminate, reduce or modify the commitment. Unless CDOT grants such consent, the Contractor will not be entitled to payment for the work or materials. Failure to carry out the requirements of this section is a material breach of the Contract and may result in the termination of the Contract or other remedies established by CDOT or the LPA.

B. *Form 1420, DBE Participation Plan Modification Request***.** During the performance of the Contract, the Contractor shall use Form 1420, DBE Participation Plan Modification Request to communicate all requests for termination, reduction, substitution, and waivers to the CDOT RCRO. One Form 1420 may include multiple requests and must be submitted at the time of the occurrence or, if that is not possible, within a reasonable time of the occurrence requiring termination, reduction, substitution or waiver.

C. *Commitment Terminations and Reductions.* No commitment shall be terminated or reduced without CDOT's approval. Terminations and reductions include, but are not limited to, instances in which a Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces, those of an affiliate, a non-DBE firm or with another DBE firm. In order to receive approval, the Contractor shall:

(1) Have good cause for termination or reduction. Good cause may include:

(i) the DBE fails or refuses to execute a written contract;

(ii) the DBE fails or refuses to perform the work of its subcontract consistent with normal industry standards, provided that such failure is not the result of bad faith or discriminatory actions of the Contractor or one of its subcontractors;

(iii) the DBE fails to meet reasonable, nondiscriminatory bond requirements;

(iv) the DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;

(v) the DBE is ineligible to work because of suspension or debarment proceedings or other state law;

(vi) the DBE is not a responsible contractor;

(vii) the DBE voluntarily withdraws from the project and provides written notice to CDOT,

(viii) the DBE is ineligible to receive DBE credit for the work required;

(ix) the DBE owner dies or becomes disabled and is unable to complete the work;

(x) the DBE ceases business operations or otherwise dissolves;

(xi) or other documented good cause that compels termination. Good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

(2) Provide the DBE notice of the Contractor's intent to terminate or reduce the commitment and the reason for such termination or reduction, with a copy to the CDOT RCRO and LPA;

(3) In the notice of intent, provide the DBE at least five calendar days to respond to the notice and inform CDOT and the Contractor of the reasons, if any, why it objects to the proposed termination or reduction and any reasons that it shall not be approved. The Contractor is not required to provide the five calendar days written notice in cases where the DBE in question has provided written notice that it is withdrawing from the subcontract or purchase order. The notice period may be reduced by the CDOT RCRO if required by public necessity.

(4) Following the notice period, if the Contractor decides to proceed, submit Form 1420 requesting approval of the termination or reduction.

(5) When a commitment is terminated or reduced (including when a DBE withdraws), make good faith efforts to find another DBE to substitute. These good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the participation that was terminated or reduced up to the contract goal.

D. *Contract Changes.* In the event of a contract change:

(1) If the LPA eliminates or reduces work committed to a DBE, such change shall be considered good cause for termination or reduction in accordance with Section 9.B above. The Contractor shall follow the processes outlined in Section 9.B.

(2) If the LPA issues a change which increases or adds new work items, the Contractor shall ensure that it has obtained sufficient DBE participation to meet the Contract Goal, or has made good faith efforts to do so.

E. *Process for Substitution or Increase in Participation to Meet the Contract Goal.* When the Contractor must obtain additional DBE participation to meet the Contract Goal, whether resulting from an approved termination or reduction or a change to the Contract, the Contractor shall:

(1) Increase the participation of a DBE for any work items previously identified in an approved commitment without seeking CDOT approval; provided, however, that at its discretion, the CDOT RCRO may request a Form 1420 documenting such additional participation; or

(2) If the Contractor needs to add new work to a commitment or obtain additional participation from a DBE that is not already participating on the contract pursuant to an approved commitment, submit a Form 1420 and Form 1415 to the RCRO requesting approval of the additional participation; or

(3) If the Contractor determines that additional DBE participation cannot be obtained, submit a Form 1420 to the RCRO requesting waiver of the participation. The Contractor shall include its justification for not obtaining additional participation and, at its discretion, CDOT may require additional information regarding the efforts of the Contractor. If the Contractor has not obtained substitute participation, the RCRO may require the Contractor to submit evidence of good faith efforts to substitute. The contractor shall have seven days to submit such information. This period may be extended at the discretion of the RCRO.

10. Payment Reduction

The Contractor's retainage will not be released until the CDOT RCRO has determined whether the Contractor will be subject to a payment reduction. Payment reductions will be calculated as follows:

A. *Failure to Fulfill Commitments.* If the Contractor terminated or reduced a commitment, the Contractor will be subject to a payment reduction for any termination or reduction which was not approved via a Form 1420.

B. *Failure to Meet Contract Goal.* If the Contractor failed to meet the contract goal, the Contractor will be subject to a payment reduction for the portion of the contract goal that was not met and was not waived via an approved Form 1420.

C. *Duplication.* The contractor will not be subject to duplicate reduction for the same offense.

D. *Adjustments.* CDOT may adjust the payment reduction wherein the Contractor demonstrates that its failure to obtain DBE participation was due to circumstances outside of its control.

11. Other Enforcement

A. *Investigations.* As it determines necessary, CDOT or the LPA may conduct reviews or investigations of participants. All participants, including, but not limited to, DBE firms and applicants for DBE certification, complainants, and contractors using DBE firms to meet contract goals, are required to cooperate fully and promptly with compliance reviews, certification reviews, investigations, and other requests for information.

B. *Intimidation and retaliation.* Participants shall not intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by the DBE program or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under the DBE program.

C. *Consequences of Non-Compliance.* Failure to comply with subsections 11 A. or 11 B. shall be a ground for appropriate action against the party involved (e.g., with respect to recipients, a finding of noncompliance; with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a contractor which uses DBE firms to meet goals, findings of non-responsibility for future contracts and/or suspension and debarment).

D. *Fraud and Misrepresentation*. If CDOT or the LPA determines that a Contractor or subcontractor was a knowing and willing participant in any intended or actual subcontracting arrangement contrived to artificially inflate DBE participation or any other business arrangement determined by CDOT or the LPA to be unallowable, or if the Contractor engages in repeated violations, falsification or misrepresentation, CDOT may:

(1) refuse to count any fraudulent or misrepresented DBE participation;

(2) withhold progress payments to the Contractor commensurate with the violation;

(3) suspend or reduce the Contractor's prequalification status;

(4) refer the matter to the Office of Inspector General of the US Department of Transportation for investigation; or

(5) seek any other available contractual remedy.

U.S. DEPT. OF LABOR DAVIS BACON MINIMUM WAGES, COLORADO DATE 06-09-17
HIGHWAY CONSTRUCTION, GENERAL DECISION NUMBER - CO170024

Decision Nos. CO170024 dated January 06, 2017 supersedes **Decision Nos. CO160024** dated January 08, 2016.	**Modifications**			**ID**
	MOD Number	**Date**	**Page Number(s)**	
When work within a project is located in two or more counties and the minimum wages and fringe benefits are different for one or more job classifications, the higher minimum wages and fringe benefits shall apply throughout the project.	**1**	**06-09-17**	**1**	**1**
General Decision No. CO170024 applies to the following counties: Larimer, Mesa, and Weld counties.				

General Decision No. CO170024

The wage and fringe benefits listed below reflect collectively bargained rates.

Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR:			
	Drill Rig Caisson			
1714	Smaller than Watson 2500 and similar	27.60	10.10	**1**
1715	Watson 2500 similar or larger	27.92	10.10	**1**
	Oiler			
1716	Weld	26.84	10.10	**1**

General Decision No. CO170024

The wage and fringe benefits listed below do not reflect collectively bargained rates.

	CARPENTER:			
1717	Excludes Form Work	20.72	5.34	
	Form Work Only			
1718	Larimer, Mesa	18.79	3.67	
1719	Weld	16.54	3.90	
	CEMENT MASON/CONCRETE FINISHER:			
1720	Larimer	16.05	3.00	
1721	Mesa	17.53	3.00	
1722	Weld	17.48	3.00	
	ELECTRICIAN:			
	Excludes Traffic Signalization			
1723	Weld	33.45	7.58	
	Traffic Signalization			
1724	Weld	25.84	6.66	

General Decision No. CO170024

The wage and fringe benefits listed below do not reflect collectively bargained rates.

Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	FENCE ERECTOR:			
1725	Weld	17.46	3.47	
	GUARDRAIL INSTALLER:			
1726	Larimer, Weld	12.89	3.39	
	HIGHWAY/PARKING LOT STRIPING:			
	Painter			
1727	Larimer	14.79	3.98	
1728	Mesa	14.75	3.21	
1729	Weld	14.66	3.21	
	IRONWORKER:			
	Reinforcing (Excludes Guardrail Installation)			
1730	Larimer, Weld	16.69	5.45	
	Structural (Excludes Guardrail Installation)			
1731	Larimer, Weld	18.22	6.01	
	LABORER:			
	Asphalt Raker			
1732	Larimer	18.66	4.66	
1733	Weld	16.72	4.25	
1734	Asphalt Shoveler	21.21	4.25	
1735	Asphalt Spreader	18.58	4.65	
1736	Common or General	16.29	4.25	
1737	Concrete Saw (Hand Held)	16.29	6.14	
1738	Landscape and Irrigation	12.26	3.16	
1739	Mason Tender - Cement/Concrete	16.29	4.25	
	Pipelayer			
1740	Larimer	17.27	3.83	
1741	Mesa, Weld	16.23	3.36	
1742	Traffic Control (Flagger)	9.55	3.05	

General Decision No. CO170024

The wage and fringe benefits listed below do not reflect collectively bargained rates.

Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	LABORER (con't):			
	Traffic Control (Sets Up/Moves Barrels, Cones, Installs signs, Arrow Boards and Place Stationary Flags), (Excludes Flaggers)			
1743	Larimer, Weld	12.43	3.22	
1744	**PAINTER (Spray Only)**	16.99	2.87	
	POWER EQUIPMENT OPERATOR:			
	Asphalt Laydown			
1745	Larimer	26.75	5.39	
1746	Mesa, Weld	23.93	7.72	
1747	Asphalt Paver	21.50	3.50	
	Asphalt Roller			
1748	Larimer	23.57	3.50	
1749	Mesa	24.25	3.50	
1750	Weld	27.23	3.50	
	Asphalt Spreader			
1751	Larimer	25.88	6.80	
1752	Mesa, Weld	23.66	7.36	
	Backhoe/Trackhoe			
1753	Larimer	21.46	4.85	
1754	Mesa	19.81	6.34	
1755	Weld	20.98	6.33	
	Bobcat/Skid Loader			
1756	Larimer	17.13	4.46	
1757	Mesa, Weld	15.37	4.28	
1758	Boom	22.67	8.72	
	Broom/Sweeper			
1759	Larimer	23.55	6.20	
1760	Mesa	23.38	6.58	
1761	Weld	23.23	6.89	

General Decision No. CO170024

The wage and fringe benefits listed below do not reflect collectively bargained rates.

Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't):			
	Bulldozer			
1762	Larimer, Weld	22.05	6.23	
1763	Mesa	22.67	8.72	
1764	Crane	26.75	6.16	
	Drill			
1765	Larimer, Weld	31.39	0.00	
1766	Mesa	35.06	0.00	
1767	Forklift	15.91	4.68	
	Grader/Blade			
1768	Larimer	24.82	5.75	
1769	Mesa	23.42	9.22	
1770	Weld	24.53	6.15	
1771	Guardrail/Post Driver	16.07	4.41	
1772	**Loader** (Front End)			
1773	Larimer	20.45	3.50	
1774	Mesa	22.44	9.22	
1775	Weld	23.92	6.67	
	Mechanic			
1776	Larimer	27.68	4.57	
1777	Mesa	25.50	5.38	
1778	Weld	24.67	5.68	
	Oiler			
1779	Larimer	24.16	8.35	
1780	Mesa	23.93	9.22	
	Roller/Compactor (Dirt and Grade Compaction)			
1781	Larimer	23.67	8.22	
1782	Mesa, Weld	21.33	6.99	

General Decision No. CO170024

The wage and fringe benefits listed below do not reflect collectively bargained rates.

Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't.):			
	Rotomill			
1783	Larimer	18.59	4.41	
1784	Weld	16.22	4.41	
	Scraper			
1785	Larimer	21.33	3.50	
1786	Mesa	24.06	4.13	
1787	Weld	30.14	1.40	
	Screed			
1788	Larimer	27.20	5.52	
1789	Mesa	27.24	5.04	
1790	Weld	27.95	3.50	
1791	Tractor	13.13	2.95	
	TRAFFIC SIGNALIZATION:			
	Groundsman			
1792	Larimer	11.44	2.84	
1793	Mesa	16.00	5.85	
1794	Weld	16.93	3.58	
	TRUCK DRIVER:			
	Distributor			
1795	Larimer	19.28	4.89	
1796	Mesa	19.17	4.84	
1797	Weld	20.61	5.27	
	Dump Truck			
1798	Larimer	18.86	3.50	
1799	Mesa	15.27	4.28	
1800	Weld	15.27	5.27	

U.S. DEPT. OF LABOR DAVIS BACON MINIMUM WAGES, COLORADO DATE 06-09-17
HIGHWAY CONSTRUCTION, GENERAL DECISION NUMBER - CO170024

General Decision No. CO170024

The wage and fringe benefits listed below do not reflect collectively bargained rates.

Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	TRUCK DRIVER (con't.):			
	Lowboy Truck			
1801	Larimer	18.96	5.30	
1802	Mesa, Weld	18.84	5.17	
1803	Mechanic	26.48	3.50	
	Multi-Purpose Specialty & Hoisting Truck			
1804	Larimer, Mesa	16.65	5.46	
1805	Weld	16.87	5.56	
1806	Pickup and Pilot Car	13.93	3.68	
1807	Semi/Trailer Truck	18.39	4.13	
1808	Truck Mounted Attenuator	12.43	3.22	
	Water Truck			
1809	Larimer	19.14	4.99	
1810	Mesa	15.96	5.27	
1811	Weld	19.28	5.04	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

U.S. DEPT. OF LABOR DAVIS BACON MINIMUM WAGES, COLORADO DATE 06-09-17
HIGHWAY CONSTRUCTION, GENERAL DECISION NUMBER - CO170024

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program.
If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).
Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION NO. CO170024

ON THE JOB TRAINING

This training special provision is an implementation of 23 U.S.C. 140 (a). The Contractor shall meet the requirements of the FHWA 1273 for all apprentices and trainees.

As part of the Contractor's Equal Employment Opportunity Affirmative Action Program, training shall be provided on projects as follows:

1. The Contractor shall provide on the job training aimed at developing full journey workers in the skilled craft identified in the approved training plan. The Contractor shall provide at a minimum, required training hours listed in the Project Special Provisions for each project.

2. The primary objective of this specification is to train and upgrade women and minority candidates to full journey worker status. The Contractor shall make every reasonable effort to enroll and train minority and women workers. This training commitment shall not be used to discriminate against any applicant for training whether or not the applicant is a woman or minority.

3. The Contractor may employ temporary workers from CDOT supportive services providers to meet OJT requirements. Information pertaining to supportive services providers may be obtained by calling the CDOT OJT Coordinator at the number shown on the link http://www.coloradodot.info/business/equal-opportunity/training.html

4. An employee shall not be employed or utilized as a trainee in a skilled craft in which the employee has achieved journey status.

5. The minimum length and type of training for each skilled craft shall be as established in the training program selected by the Contractor and approved by the Department and the Colorado Division of the Federal Highway Administration (FHWA), or the U. S Department of Labor (DOL), Office of Apprenticeship or recognized state apprenticeship agency. To obtain assistance or program approval contact:

   CDOT Center for Equal Opportunity
   4201 East Arkansas Avenue
   Denver, CO 80222
   eo@dot.state.co.us
   1-800-925-3427

6. The Contractor shall pay the training program wage rates and the correct fringe benefits to each approved trainee employed on the project and enrolled in an approved program. The minimum trainee wage shall be no less than the wage for the Guardrail Laborer classification as indicated in the wage decision for the project.

7. The CDOT Regional Civil Rights Manager must approve all proposed apprentices and trainees for the participation to be counted toward the project goal and reimbursement. Approval must occur before training begins. Approval for the apprentice or trainee to begin work on a CDOT project will be based on:

   A. Evidence of the registration of the trainee or apprentice into the approved training program.
   B. The completed Form 838 for each trainee or apprentice as submitted to the Engineer.

8. Before training begins, the Contractor shall provide each trainee with a copy of the approved training program, pay scale, pension and retirement benefits, health and disability benefits, promotional opportunities, and company policies and complaint procedures.

9. Before training begins, the Contractor shall submit a copy of the approved training program and CDOT Form 1337 to the Engineer. Progress payments may be withheld until this is submitted and approved and may be withheld if the approved program is not followed.

ON THE JOB TRAINING

10. On a monthly basis, the Contractor shall provide to the Engineer a completed On the Job Training Progress Report (Form 832) for each approved trainee or apprentice on the project. The Form 832 will be reviewed and approved by the Engineer before reimbursement will be made. The Contractor will be reimbursed for no more than the OJT Force Account budget. At the discretion of the Engineer and if funds are available, the Engineer may increase the force account budget and the number of reimbursable training hours through a Change Order. The request to increase the force account must be approved by the Engineer prior to the training.

11. Upon completion of training, transfer to another project, termination of the trainee or notification of final acceptance of the project, the Contractor shall submit to the Engineer a "final" completed Form 832 for each approved apprentice or trainee.

12. All forms are available from the CDOT Center for Equal Opportunity, through the CDOT Regional Civil Rights Manager, or on CDOT's website at http://www.coloradodot.info/business/bidding/Bidding%20Forms/Bid%20Winner%20Forms

13. Forms 838 and 832 shall be completed in full by the Contractor. Reimbursement for training is based on the number of hours of on the job training documented on the Form 832 and approved by the Engineer. The Contractor shall explain discrepancies between the hours documented on Form 832 and the corresponding certified payrolls.

14. The OJT goal (# of training hours required) for the project will be included in the Project Special Provisions and will be determined by the Regional Civil Rights Manager after considering:

    A. Availability of minorities, women, and disadvantaged for training;
    B. The potential for effective training;
    C. Duration of the Contract;
    D. Dollar value of the Contract;
    E. Total normal work force that the average bidder could be expected to use;
    F. Geographic location;
    G. Type of work; and
    H. The need for additional journey workers in the area
    I. The general guidelines for minimum total training hours are as follows:

Contract dollar value	Minimum total training hours to be provided on the project
Up to 1 million	0
>1 - 2 million	320
>2 - 4 million	640
>4 - 6 million	1280
>6 - 8 million	1600
>8 - 12 million	1920
>12 - 16 million	2240
>16 - 20 million	2560
For each increment of $5 million, over $20 million	1280

ON THE JOB TRAINING

15. The number of training hours for the trainees to be employed on the project shall be as shown in the Contract. The trainees or apprentices employed under the Contract shall be registered with the Department using Form 838, and must be approved by the Regional Civil Rights Manager before training begins for the participation to be counted toward the OJT project goal. The goal will be met by an approved trainee or apprentice working on that project; or, if a Contractor's apprentice is enrolled in a DOL approved apprenticeship program and registered with CDOT using Form 838 and working for the Contractor on a non-CDOT project. The hours worked on the non-CDOT project may be counted toward the project goal with approved documentation on Form 832. Training hours will be counted toward one project goal.

16. Subcontractor trainees who are enrolled in an approved Program may be used by the Contractor to satisfy the requirements of this specification.

17. The Contractor will be reimbursed $2.00per hour worked for each apprentice or trainee working on a CDOT project and whose participation toward the OJT project goal has been approved

18. The Contractor shall have fulfilled its responsibilities under this specification if the CDOT Regional Civil Rights Manager has determined that it has provided acceptable number of training hours.

19. Failure to provide the required training will result in the following disincentives: A sum representing the number of training hours specified in the Contract, minus the number of training hours worked as certified on Form 832, multiplied by the journey worker hourly wages plus fringe benefits [(A hours – B hours worked) x (C dollar per hour + D fringe benefits)] = Disincentives Assessed. Wage rate will be determined by averaging the wages for the crafts listed on Form 1337. The Engineer will provide the Contractor with a written notice at Final Acceptance of the project informing the Contractor of the noncompliance with this specification which will include a calculation of the disincentives to be assessed.

July 3, 2017

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

Attached is Form FHWA 1273 titled *Required Contract Provisions Federal-Aid Construction Contracts*. As described in Section I. General, the provisions of Form FHWA 1273 apply to all work performed under the Contract and are to be included in all subcontracts with the following modification:

For TAP (Transportation Alternatives Program) funded Recreational Trails projects, Section I (4) regarding convict labor and all of Section IV of the FHWA 1273 do not apply.

Except for Local Agency projects, the Contractor and all subcontractors who are subject to Davis-Bacon Related Acts (DBRA) requirements, shall submit all payrolls and Contractor Fringe Benefit Statements electronically via LCPtracker, utilizing the following web link:

https://prod.lcptracker.net/WebForms/login.aspx

The Contractor and subcontractors shall submit a Contractor Fringe Benefit Statement, either for each individual, or for groups of people, for all employees who perform work on the project and whose wages are covered by the Davis-Bacon Related Acts. Other approved deductions shall be noted within the LCPtracker system, and supporting documentation shall be attached. If for any reason the fringe benefits are altered during the life of the project, the Contractor, subcontractor, or both shall submit a revised Contractor Fringe Benefit Statement to accurately reflect the changes.

Each construction subcontractor shall submit their payrolls directly into LCP Tracker for approval by the Contractor.

The Contractor shall submit and approve their own payrolls in LCPtracker.

The Engineer will approve or reject weekly payrolls for the Contractor.

July 3, 2017

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REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the

provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm

or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable

predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As

used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA

approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of

Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SPECIAL CONSTRUCTION REQUIREMENTS
FIRE PROTECTION PLAN

(a) *Fire Protection Plan*. Prior to start of work, the Contractor shall submit a Fire Control Plan in writing to the Engineer for approval. The plan shall include the following:

(1) The name and contact information of a Fire Control Coordinator who shall be assigned to the project.

(2) A list of numbers to call in case of a fire, including 911 (or the equivalent in the area).

(3) A complete list, including storage locations, of all tools and equipment the Contractor will use in the event of a fire within project limits.

(4) Methods that will be employed if a fire is encountered or started during construction activities within the project limits.

(5) Specific fire prevention precautions, and the required firefighting equipment, for every activity which has the potential for starting a fire. At a minimum the plan shall address prevention planning related to use of heavy equipment, vehicles, hand tools, storage and parking areas.

(6) Specific precautions for fueling operations.

(7) Provisions for field safety meetings. The Contractor shall conduct field safety meetings (also known as toolbox or tailgate meetings) at least once per week. The Contractor shall encourage participation by all persons working at the project site. Participants shall discuss specific fire prevention precautions for construction activities.

(b) *Equipment and Procedures*.

(1) Fire Boxes. Fire boxes shall contain tools and equipment that shall be used exclusively for controlling or suppressing fires which occur due to construction activities on project sites. Each fire box shall contain, as a minimum, the following:

(1) five round-pointed shovels,
(2) two double-bitted axes,
(3) three pulaskis or mattocks, and
(4) two backpack pumps

(2) Welding. If welding at field locations is required, the welding shall be done at a location where all flammable material has been cleared away for a distance of 16 feet around the area.

(3) Spark Arrestors. All diesel and gasoline powered engines, both mobile and stationary, shall be equipped with serviceable spark arrestors.

(4) Power Saws. Each gasoline power saw shall be provided with a spark screen and a muffler in good condition. Spill-proof metal safety cans shall be used for refueling.

(5) Storage and Parking Areas. Batch plant areas, equipment service areas, parking areas, gas and oil drum storage areas, and explosive storage areas shall be cleared of all flammable materials for a distance of 50 feet. Small stationary engine sites shall be cleared of all flammable material for distance of 17 feet. Other mitigation methods may be used as approved by the Engineer

(c) *Fire Control Coordinator Responsibilities.* The Fire Control Coordinator shall:

(1) Implement the Fire Control Plan.

(2) Monitor, manage, and adjust the Fire Control Plan as needed as construction work progresses.

(3) Document in a letter to the Engineer changes to the Fire Control Plan.

(4) Immediately contact firefighting authorities when a fire is started due to construction activities within project limits.

(5) Coordinate fire control and suppression activities until authorities arrive, including the evacuation of staff.

(6) When the Fire Control Coordinator cannot be on the project site, he shall designate a person who is on site to serve as the Fire Control Coordinator. The Fire Control Coordinator, or his designee, shall be on site at all times that work is being performed.

(d) *Costs.* All costs associated with the preparation and implementation of the Plan and compliance with all fire protection provisions and requirements will not be measured and paid for separately, but shall be included in the work.