

**EL PASO COUNTY PUBLIC SERVICES DEPARTMENT
SPECIAL PROVISIONS
Marksheffel Road / Mesa Ridge Parkway Traffic Signal**

The 2021 *Standard Specifications for Road and Bridge Construction*, Department of Transportation, State of Colorado, controls construction of this project. The following Project Special Provisions supplement or modify the “CDOT Standard Specifications” and/or the “Pikes Peak Asphalt Paving Specifications” and take precedence over the Standard Specifications and construction drawings. A copy of the “Pikes Peak Asphalt Paving Specifications” can be obtained from the Contracts & Procurement Division or downloaded from: <https://assets-publicworks.elpasoco.com/wp-content/uploads/Documents/Pikes-Peak-Region-Asphalt-Paving-Specs-Version-5-3-20-2019.pdf>

PROJECT SPECIAL PROVISIONS

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Project No. 17-067-78A

Marksheffel Road/Mesa Ridge Parkway Traffic Signal

August 26, 2022

STANDARD SPECIAL PROVISIONS

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Revision of Section 105 – Control of Work (Table 105-1)	(June 21, 2022)	3
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Revision of Section 106 – Buy America Requirements – Non-Federal Aid	(October 1, 2021)	1
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Revision of Section 107 – Water Quality Control	(October 1, 2021)	6
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NOTICE TO BIDDERS

The proposal guaranty shall be a certified check, cashier's check, or bid bond in the amount of 5 percent of the Contractor's total bid.

Pursuant to subsections 102.04 and 102.05, it is recommended that bidders on this project review the work site and plan details with an authorized County representative. Prospective bidders shall contact one of the following listed authorized County representatives at least 12 hours in advance of the time they wish to go over the project.

County Engineer -	Jennifer Irvine Phone: (719) 332-6310
Engineering Manager -	Randy Hergenrether Phone: (719) 244-6936
Project Manager -	Howard Schwartz Phone: (719) 339-5615

The above referenced individuals are the only representatives of the County with authority to provide any information, clarification, or interpretation regarding the plans, specifications, and any other contract documents or requirements.

Questions received from bidders along with El Paso County responses will be posted on the BidNet web site listed below as they become available.

<https://www.bidnetdirect.com/colorado/el-paso-county/solicitations/open-bids>

If the bidder has a question or requests clarification that involves the bidder's innovative or proprietary means and methods, phasing, scheduling, or other aspects of construction of the project, the Procurement Specialist may direct the bidder to contact the Project Manager directly to address the question or clarification. The Procurement Specialist will keep the bidder's innovation confidential and will not share this information with other bidders.

The Project Manager will determine whether questions are innovative or proprietary in nature. If the Project Manager determines that a question does not warrant confidentiality, the bidder may withdraw the question. If the bidder withdraws the question, the Project Manager will not answer the question and the question will not be documented in an addendum. If the bidder does not withdraw the question, the question will be answered, and both the question and El Paso County answer will be posted on the web site. If the Project Manager agrees that a question warrants confidentiality, the Project Manager will answer the question and keep both question and answer confidential. El Paso County will keep a record of both question and answer in their confidential file.

All questions shall be directed to the El Paso County contacts listed above no later than 7:00 A.M. Monday of the week of bid opening. Final questions and answers will be posted no later than Tuesday morning of bid opening week.

Questions and answers shall be used for reference only and shall not be considered part of the Contract.

Project No. 17-067-78A

Marksheffel Road/Mesa Ridge Parkway Traffic Signal

August 26, 2022

**COMMENCEMENT AND COMPLETION OF WORK
(CALENDAR DAY)**

The Contractor shall commence work under the Contract on or before the 15th day following Contract execution or the 30th day following the date of award, whichever comes later, unless such time for beginning the work is changed in the "Notice to Proceed." The Contractor shall complete all work in 90 calendar days in accordance with the "Notice to Proceed."

**REVISION OF SECTION 102
PROJECT PLANS AND OTHER DATA**

Section 102 of the Standard Specifications is hereby revised for this project as follows:

Subsection 102.05 shall include the following:

The following information will be available through the El Paso County Contracts & Procurement Division office, 15 E. Vermijo Ave, Colorado Springs, CO 80903, 719-520-6390 until the date set for opening bids:

- Bid Set Drawings (11 pages)
- Project Special Provisions (included with these specifications).
- CDOT Standard Special Provisions (available online).

After the proposals have been opened, the low responsible bidder may obtain an electronic set of plans and special provisions from the El Paso County Project Manager. Also, if they are available for the project, the low responsible bidder may also obtain cross sections, major structure plan sheets, and computer output data.

REVISION OF SECTION 107
PERFORMANCE OF SAFETY CRITICAL WORK

Section 107 of the Standard Specifications is hereby revised for this project as follows:

Subsection 107.061 is hereby added to this project as follows:

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

- (1) Traffic signal mast arm construction
- (2) Work requiring the use of cranes or other heavy lifting equipment to set mast arms or to make overhead repairs. Also, when construction materials are being lifted that may fall onto active traffic lanes.

The Contractor shall submit, for review, an initial, detailed construction plan that addresses safe construction methods for each of the safety critical elements applicable to this project. The Engineer's review will be for general conformance with the plans, specifications, best management practices regarding safety of the operation and industry standards. 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 construction plan shall be stamped "Approved for Construction" and signed by the Contractor. The construction plan will be reviewed for acceptance 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 work required: falsework, bracing, shoring, etc.
- (5) Underground, above grade, and overhead utilities identification and protective steps taken.
- (6) Communication plan as necessary with stakeholders, media, and the public.
- (7) Additional actions that will be taken to ensure that the work will be performed safely.

**REVISION OF SECTION 107
PERFORMANCE OF SAFETY CRITICAL WORK**

- (8) 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

- (9) 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

- (10) The construction plan shall address how the Contractor will handle contingencies such as:
 - A. Unplanned events (storms, traffic accidents, work accidents, etc.)
 - B. Structural elements that don't fit or line up
 - C. Work that cannot be completed in time for the roadway to be reopened to traffic
 - D. Replacement of workers who don't perform the work safely
 - E. Unexpected absence of critical management team
 - F. Equipment failure
 - G. Other potential difficulties inherent in the type of work being performed

- (11) 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.

- (12) Erection plan or bridge removal plan when submitted as required elsewhere by the specifications. Plan requirements that overlap with above requirements may be submitted only once.

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. Communications staff (Contractor or County) shall also attend in order to address any public/media needs.

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 related to construction plans for the safety critical elements, Traffic signal mast arm construction and Temporary Works. The final construction plan shall be stamped "Approved for Construction" and signed by the Contractor.

**REVISION OF SECTION 107
PERFORMANCE OF SAFETY CRITICAL WORK**

The Contractor shall perform safety critical work only when the Engineer, or an authorized representative, is on the project site. The Contractor's Engineer shall be onsite to inspect and provide written approval of safety critical work for which he provided signed and sealed construction details. Unless otherwise directed or approved, the Contractor's Engineer need not be onsite 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 which 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 108.06.

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.

The Contractor shall not be relieved from ultimate liability for unsafe or negligent acts or receive a waiver of the Colorado Governmental Immunity Act on behalf of the County.

**REVISION OF SECTION 208
EROSION CONTROL**

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

Subsection 208.11 shall be deleted and replaced with the following:

Erosion control measures – including, but not limited to, erosion logs, aggregate bags, concrete washout structures, vehicle tracking pads, removal and disposal of sediment, and erosion control management – will not be measured and paid for separately but shall be included in the Lump Sum bid price for Erosion Control.

Subsection 208.12 shall be deleted and replaced with the following:

Payment will be made under:

Pay Item

Erosion Control

Pay Unit

Lump Sum

All payment for this item will be made inclusive of the above specification, contract documents, and approved SWMP plans submitted in accordance with other contract documents.

**REVISION OF SECTION 613 AND 715
ELECTRICAL CONDUIT AND PULL BOXES**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.01 shall include the following:

This work includes furnishing and installing High Density Polyurethane (HDPE), PVC electrical conduit, or metallic electrical conduit.

Subsection 613.02 shall include the following:

All materials furnished assembled, fabricated, or installed under this item shall be new, corrosion resistant and in accordance with this contract.

All Conduits shall be schedule 80 or equivalent and shall be fully compatible with signal wiring and fiber optic cable. Pipe connections shall be made with manufacturer approved fittings and/or butt fusing.

HDPE conduit shall be certified by the manufacturer as meeting ASTM D3350.

PVC conduit shall be certified by the manufacturer as meeting ANSI/UL 6 and 651. The manufacturer shall be ISO 9000 compliant.

Transitions between polyurethane to metallic to PVC, if applicable, shall be made with manufacturer's approved couplers.

Delete the twenty-first paragraph of Subsection 613.07 and replace with the following:

Electrical Conduit shall be metallic when installed at building, VMS, or structure penetrations.

Electrical Conduit (Bored) shall be HDPE and installed using a trenchless technology of either jacked conduit or directional boring. Partial or unsuccessful bores shall be filled with a preapproved cement grout. Surface damage due to boring processes or procedures between bore pits or splice pits shall be repaired to original condition.

Electrical Conduit (Plastic) shall be PVC or HDPE and installed by direct burial methods such as plowing, open trenching, or other excavation methods. Surface damage due to direct burial methods between pull boxes shall be repaired to original condition.

Each individual conduit shall be equipped with a pull rope or tape of 1250 pounds tensile strength and be of a design to prevent cutting or burning of conduit walls during cable installation.

Each conduit shall have a copper tracer wire of at least 12-gauge in a single conduit.

The installation of conduit shall be performed in such a manner as to avoid unnecessary damage to streets, sidewalks, utilities, landscaping, and sprinkler systems. Excavations and conduit installation shall be performed in a continuous operation. All trenches shall be backfilled by the end of the work day. The material from trenching operations shall be placed in a location that will not cause damage or obstruction to vehicular or pedestrian traffic or interfere with surface drainage.

**REVISION OF SECTION 613 and 715
ELECTRICAL CONDUIT AND PULL BOXES**

Conduit installed under existing concrete or asphalt surfaces, particularly roadways, shall be bored or jacked. Conduit installed under or near wetlands shall be bored. No open cutting in these locations will be allowed unless otherwise approved by the Engineer.

The Contractor shall take all necessary precautions to avoid heaving any existing asphalt/concrete mat or over-excavating a trench, whether caused by equipment directly or by dislodging rocks and boulders. Any such heaving or over-excavation shall be repaired or replaced at the Contractor's expense. The Contractor shall bear the cost of backfilling all over-excavated areas with the appropriate backfill material as approved by the project engineer.

The Contractor shall restore all surface materials to their preconstruction condition, including but not limited to pavement, sidewalks, sprinkler systems, landscaping, shrubs, sod, or native vegetation that is disturbed by the conduit installation operation. All repairs shall be included in the cost of the conduit.

If the Contractor is unable to bore the conduit at the lengths shown on the plans from access point to access point, all splice couplings and associated work to splice conduit shall be included in the cost of this item. The coupling technology shall allow the conduit to be connected, form a watertight, airtight seal, and meet NEC standards. Breaking force between segments shall exceed 250 pounds of force. No metal fittings shall be allowed. No elevation differences between the conduit run and the splice location will be allowed. Conduit splices shall be kept to a minimum and all locations shall be approved by the project engineer. Additional pull boxes shall not be substituted for splices.

Conduit plugs shall be supplied and installed in all conduit ends as soon as the conduit is installed. Conduit shall be plugged at all termination points such as pull boxes, manholes, controller cabinets, and node buildings. Conduits containing cable shall be plugged with durable and reusable split type plugs, fabricated without metallic parts, and allow easy removal and reinstallation around in-place cables. Split type plugs shall provide a water and air-tight seal of at least 50 psi and shall be installable by hand without using special tools and without damaging the cable. All plugs shall be correctly sized to fit the conduit being plugged. Empty conduits shall be sealed with removable type duct plugs that provide a watertight barrier, foams are not acceptable.

All conduits shall use sweeps to elevate the buried conduits to within 4 inches of the bottom of the pull box or manhole, as shown in project details. The sweeps shall be terminated within the pull boxes and manholes to allow for easy installation and removal of the conduit plugs. The sweeps shall be set above the ground surface within the pull box at a height that does not interfere with the coiling of the cable.

All conduit runs containing fiber optic cable shall have a limited number of bends. The sum of the individual conduit bends on a single conduit run between two pull boxes shall not exceed 360°. The preferred limit is 270°. No individual bend shall be greater than 90°. All conduit bends shall have a minimum acceptable radius. The minimum radius for 90°-bends is 48 inches, and the minimum radius for all other bends is 24 inches.

The Contractor shall place pull or splice boxes at conduit ends, at all wiring splices, at all conduit angle points, and at all other locations shown on the plans.

Excavations for placement of pull boxes or conduit splices shall be back filled with class 6 aggregate base course. Compaction for class 6 material shall be in accordance with AASHTO T-99. All excess and demolition materials shall become the property of the contractor and shall be disposed of in compliance with all applicable laws.

**REVISION OF SECTION 613 and 715
ELECTRICAL CONDUIT AND PULL BOXES**

Pull boxes installed in non-surfaced areas shall have a concrete apron 12-inch-wide by 6 inch deep. Pull boxes shall not be installed above the grade of the apron. Concrete apron shall have a 1% slope away from the top of pull box. All concrete aprons shall be Class B or D and shall be in accordance with Section 601.

Pull boxes installed adjacent to traveled ways shall have a special concrete footing extending 6 inches around the outside and 3 inches around inside of the pull box bottom. Depth of footing shall be at least 3½ inches. Pull boxes shall be grounded with an 8-foot x 5/8-inch copper ground rod.

A minimum of 18 inches of 3/8-inch gravel shall be installed as a base for the pull box to aide in drainage. The gravel shall be free of dirt and debris and spread evenly to facilitate a level base for the pull box. The Contractor shall ensure that sufficient compacting is made prior to the installation of gravel to help alleviate future settling.

Wire mesh shall be installed in a manor to completely surround pull boxes. The wire mesh shall be installed prior to the installation of the pull box above the bed of gravel and extending one foot past the outer edges of the concrete apron. The wire mesh shall be gently cut to allow only the entrance of the conduit at the bottom of the box. Any openings cut in the wire mesh larger than the diameter of the conduit shall be remedied by the installation of additional wire mesh to obtain a completely sealed pull box enclosure.

If new conduits are installed in existing pull boxes, manholes or cabinet bases the Contractor shall carefully excavate around the pull box or manhole and install the new conduit as shown in the plans. The Contractor shall not damage the existing pull box, manhole or their contents. If the existing pull box, lid, or the concrete collars are cracked or damaged during conduit installation, the Contractor shall restore the damaged section to preconstruction condition at no additional cost.

Section 613.13 shall include the following:

Pull boxes will be measured as each complete in place.

Section 613.14 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
2 Inch Electrical Conduit (Bored)	Linear Foot
3 Inch Electrical Conduit (Bored)	Linear Foot
Type Three Pull Box	Each
Type Four Pull Box	Each

The following items will not be measured and paid for separately, but shall be included in the work:

- (1) Partial or unsuccessful bores and any work necessary for abandonment
- (2) Restoring the ground to original grade and condition, including topsoil, seeding, mulching, mulch tackifier, soil retention blanket, sod, or turf reinforcement mat.
- (3) The disposal of excess and demolition materials
- (4) Material required for pull box installations including gravel bedding, grounding rod, or concrete apron.

**REVISION OF SECTION 613 and 715
ELECTRICAL CONDUIT AND PULL BOXES**

Section 715 of the Standard Specifications is hereby revised for this project as follows:

Subsection 715.07 shall include the following:

Pull Boxes and Covers shall be made of fiberglass reinforced polymer concrete.

The Contractor shall submit test results documenting the minimum lateral pressure capacity of 1200 pounds per square foot distributed can be accommodated over the sidewall of the box. The Contractor shall submit test results documenting the minimum vertical load capacity of 18000 lbs over 10 inches x 10 inches square over both the side wall and cover.

Pull boxes shall have a detachable cover with a skid-resistant surface and have the words "TRAFFIC" cast into the surface for traffic signal boxes or "CDOT COMM" cast into the surface for communication boxes. Painting of the words shall not be accepted. The cover shall be attached to the pull box body by means of two 3/8-inch lag head stainless steel hex bolts and shall have two (2) lift slots to aid in the removal of the lid.

Wire mesh shall be installed in a manor to completely surround the box. The wire mesh shall meet the material standard ANSI/ASTM A555-79 and made of T-304 stainless steel, 0.025-inch wire diameter minimum and shall have a spacing of 12 mesh per inch.

Pull Boxes shall be verified by a 3rd Party Nationally Recognized Independent Testing Laboratory as meeting all test provisions of the latest ANSI/SCTE 77 2007 Specifications for Underground Enclosure Integrity, Tier 22 rating. Pull boxes shall be UL listed. Certification documents shall be submitted with material submittals.

**REVISION OF SECTION 613
WIRING**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.01 shall include the following:

Contractor shall be responsible for all electrical layout design, permitting, installation and inspection scheduling for all work on customer side of electric meter. All work shall be installed in accordance with current NEC standards and performed by a Colorado licensed electrician or Colorado licensed electrical apprentices under the supervision of a Colorado licensed electrician. This is to include but not be limited to conduit installations.

Subsection 613.03 shall include the following:

Contractor shall supply the Engineer with a proposed layout of the system for approval before any installation begins.

Subsection 613.08 shall include the following:

A continuous 25-conductor shall be run from the controller cabinet to the hand hole of each signal pole, no splices shall be allowed. A 7-conductor shall be run for each signal head from each head to the hand hole of the pole base. A 10-conductor shall be run from the farthest signal head on the mast arm to the hand hole of the pole base. A 3-conductor shall be run for all pedestrian heads from the head to the hand hole of the pole base. All pedestrian push buttons shall be wired continuously from the button to the controller cabinet with a 2-conductor wire. A 3-conductor 10 gauge wire shall be run from the controller cabinet to interconnected advance flashing beacons. Contractor shall wire according to a CDOT Region 2 approved color code. All 120V circuit conductors shall be ANSI 19-1.

Electric service for the controller cabinet and Luminaire service shall be a ground mounted self-contained meter pedestal, shall be approved by the electrical service provider, and shall be 240 volt (minimum 100 amps) service panel. There shall be a dedicated circuit wired directly to the luminaires and a dedicated 120V/50A service wired to the signal cabinet. Contractor shall coordinate with the electric company to provide the signal electric service. Contractor shall furnish and install the wire and conduit from the controller to the appropriate power point, with meter and weather head or any necessary appurtenances, and shall coordinate with the utility company for transformer connection. The controller cabinet shall be supplied with a dedicated 120V/50A circuit. Luminaires shall be wired with a dedicated circuit from the pedestal.

Subsection 613.09 shall include the following:

The flasher unit for interconnected flashing beacons shall be housed in a suitable enclosure on the beacon.

Subsection 613.12 shall include the following:

Contractor shall supply the Engineer upon completion, an as-built set of drawings showing the locations of all conduit, controllers, lights, outlets, and any other pertinent information

**REVISION OF SECTION 613
WIRING**

Subsection 613.13 shall include the following:

The work shall include the dismantling and removal of existing wires for components of existing signal poles and cabinet and components connected to the signal poles and cabinet. The work shall include the dismantling and removal or modification of the existing electric service, phone service, wire, conduit, weather head, and meter.

The work shall include all necessary equipment, materials, or personnel to assemble the proposed signal components and cabinet components to achieve a fully functional traffic control system.

All signal cable shall be continuous from connections made in the hand hole compartment of the signal pole base to the terminal compartment in the controller cabinet. For interconnected flashing beacons, cable shall be continuous from the cabinet to the flasher enclosure. Splicing shall not be permitted unless specifically approved by the Engineer.

Subsection 613.14 shall include the following:

All labor, materials, equipment, and permits necessary for the wiring of proposed or removal of electric and phone service(s), signal heads, signal poles, pedestrian heads, pedestrian push buttons, pedestrian poles, controller cabinets, video cameras, telemetry, and luminaires are part of the wiring item and will not be measured and paid for separately.

REVISION OF SECTION 613
ELECTRICAL CONDUCTOR IDENTIFICATION

Section 613 of the Standard Specifications is hereby revised for this project as follows:

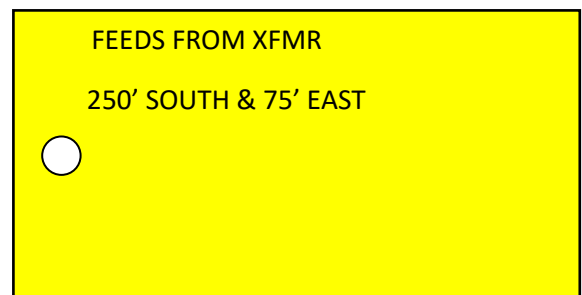
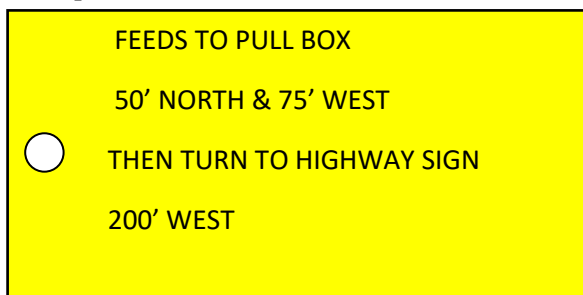
Subsection 613.08 shall include the following:

All electrical conductors shall be tagged as follows:

Electrical conductor cable tags shall be located below the termination in the base of the street light, in the pull box, in the pedestal, and at the point of termination to existing facilities of the Local Utility Company supplying electrical service. The tags shall be attached with a cable tie. The information written on the tag shall include the direction and approximate length of cable, feeds running from where and to, etc. Tags shall be made of durable, non-conductive material, including legible and indestructible markings.

Each incoming conductor shall be individually color coded with 1 tape mark, while outgoing conductors shall have 2 tape marks.

Example:



Uniform tags are available in a Tag Kit. The Tag Kit consists of: 100 tags, 3 part yellow with 1 hole, 100 black nylon ties and 1 black Sharpie pen.

Size	2.5 in x 5.0 in
Standard Package	Kit *
Weight, Kit, Approx.	1.5 lb.
Color	Yellow
Stock Unit of Measure	Kit

* Kit contains 100 tags, 100 nylon ties and 1 Sharpie pen.

Subsection 613.14 shall include the following:

Electrical conductor tagging will not be paid for separately, but shall be included in the cost of wiring.

REVISION OF SECTION 614
TRAFFIC CONTROL DEVICES

Section 614 of the Standard Specifications is hereby revised for this project as follows:

Subsection 614.01 shall include the following:

By submitting this bid, the Contractor represents that he will retain qualified personnel capable of installing, programming, and maintaining the traffic signal and microwave radar detection systems until the project is accepted. The personnel must be competent in the construction and wiring techniques required for traffic signal and microwave radar detection installation, have an excellent knowledge of traffic signal controllers, and have experience in the operation of traffic signal controllers and microwave radar detection equipment. An IMSA Level II Traffic Signals Electrician or Technician is required for any work external to the traffic signal cabinet and required to be on-job site at all times to supervise construction. The Contractor shall provide the County a copy of the individual's certification prior to the start of work.

The traffic signal controller shall be installed in accordance with the manufacturer's recommendations and approved by El Paso County traffic staff.

The Contractor shall submit materials data sheets to the Engineer for approval prior to ordering equipment.

Prior to installing the approved controller, the Contractor shall verify that existing or proposed communications are operational. El Paso County traffic staff shall be notified at least 48 hours in advance of when the Contractor plans to install the controller in order to conduct inspections on the controller, cabinet, and associated hardware prior to completing the installation.

The Contractor shall connect the controller to the proposed or existing power supply and cabinet and be responsible for the controller start up in accordance with EPC traffic staff procedures, which shall be verified with the Engineer prior to construction.

Traffic signal construction shall include the preparation, in-field implementation, monitoring, and final adjusting of all traffic signal timings and detection equipment operational parameters by a qualified contracted professional engineering consultant and will include, but not be limited to:

- a. Creating all traffic signal timing operational parameters for achieving isolated, full-actuated intersection operation and, when documented to be necessary, coordinated signal system timing plan operation during multiple times of the day.
- b. Programming and in-field implementation of all signal timing parameters into the traffic signal controller and operational equipment.
- c. Fine-tuning and adjusting traffic signal timing parameters during the initial in-field implementation period and subsequently during an in-field, follow-up review period prior to final project acceptance.
- d. Creating, programming, in-field implementation, fine-tuning, and adjusting all vehicle detection zone dimensions, zone locations, and operational parameters during the initial in-field implementation period and subsequently during an in-field, follow-up review period prior to final project acceptance.

The contracted professional engineering consultant traffic signal timing and operational services shall be consistent with national publications, including, but not limited to: Manual on Uniform Traffic Control Devices (MUTCD); FHWA-DTFH61-01-C-00183 "Signal Timing Process Final Report" (2003); FHWA-HOP-06-006 "Traffic Control Systems Handbook" (2005); FHWA-HOP-08-024 "Traffic Signal Timing Manual" (2008); NCHRP Report 731 "Guidelines for timing yellow and all-red intervals at signalized intersections" (2012); FHWA-SA-13-027 "Signalized Intersections Informational Guide, Second Edition" (2013); NCHRP Report 812 "Signal Timing Manual, Second Edition" (2015); NCHRP Web-Only Document 284: "Decision-Making Guide for Traffic Signal Phasing" (2020).

**REVISION OF SECTION 614
TRAFFIC CONTROL DEVICES**

For further direction on the County's expectations regarding qualifications and workmanship of the Contractor's personnel, the Contractor's attention is drawn to the following section:

614.08 Traffic Signal Materials (a) General: The second paragraph which stipulates that "...all materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rules for Overhead Electrical Line Construction of the Colorado Public Utilities Commission; standards of ASTM, ANSI, and all local ordinances which may apply".

Subsection 614.04 shall include the following:

All signs mounted on signal poles, mast arms, and pedestals shall be mounted using banding, aluminum channels, and backing zeos per CDOT Typical Pole Mount Sign Installations Standard Plan S-614-20, or similar rigid sign bracing mounting assembly, as directed by the engineer.

Overhead street name sign design and layout information shall be per the sign detail contained in the project plans.

Subsection 614.08 (b) shall include the following:

The traffic signal controller shall be a McCain Flex ATC or approved equivalent, constructed in accordance with FHWA-P-78-16 specification and installed with County approval.

All signal pole and controller locations shown on the plans are approximate. Mast arms shall be of sufficient length and design to allow proper placement of signal heads and overhead signing per the plans. Actual locations shall be staked in the field and approved by the Engineer prior to drilling or excavation. The location of each signal pole foundation shall be potholed prior to drilling to confirm whether any utility conflicts exist.

Subsection 614.08 Traffic Signal Materials (c) shall be revised as follows:

The controller cabinet shall be a Safetran Traffic Signal Cabinet 332D, ATCC-S, HV, 16/24, SILG/WHT, or approved equivalent that includes two full size doors and shall contain anti-graffiti silver finish coating. The cabinet shall be mounted on a prefabricated fiberglass base meeting the specifications of CDOT Typical Traffic Signal Installation Details Standard Plan S-614-42, or approved equivalent, and the cabinet shall be positioned such that, with the front doors open, both the controller display and the signal installation will be visible from the same viewpoint, and installed per the manufacturer's recommendations. The cabinet assembly shall include all shelves, racks, and assemblies to house additional equipment such as, but not limited to, detection systems, uninterrupted power supply, and communication equipment.

The cabinet shall include the following or Engineer approved equivalent(s):

Quantity	Item
1	Dymec KY-3170EMx ITS Ethernet Switch
1	MSITEC MHS117405 Bullet LTE-NA Cellular Gateway
1	Econolite ZincBlue2 UPS 1000W, 120 VAC IN/OUT, (2) Battery Modules & PIM
1	CITEL RJ45 Surge Protector MJ8-POE-A

The contractor shall furnish and install all wiring required to complete the installation and establish the functionality of all traffic signal equipment.

**REVISION OF SECTION 614
TRAFFIC CONTROL DEVICES**

Subsection 614.08 (h) shall include the following:

All traffic signal poles, mast arms, pedestals, and luminaire arms shall have a gloss black powder coat finish over hot dip galvanized base coat, installed in accordance with the paint manufacturer's instructions.

Subsection 614.08 (i) shall include the following:

All vehicle signal heads shall have approved LED indications and shall be aluminum with powder-coated gloss black finish and shall contain 12-inch aluminum tunnel visors with the outside powder coated gloss black. All overhead vehicle signal heads shall have aluminum louvered back plates with powder-coated gloss black finish. Mast arm signal heads shall use astro-type mounting assemblies and shall be installed approximately level with one another at a 17-to-19-foot vertical clearance above the high point of the pavement grade.

Subsection 614.10 (b) shall include the following:

All conductors and cabinet wiring shall be color coded and permanently tagged per engineer direction and in accordance with the signal phase numbering and radar detection zone phase numbering information contained in the project plans.

The contractor will be responsible for coordination with the local power companies, Mountain View Electric Association, to provide electrical service power to the traffic signal and lighting system that will be metered at this location. The service pedestal, electrical service disconnect, and grounding shall be included in the work for the secondary service pedestal following approval by the Engineer. The power feed from the electrical service drop to the secondary service pedestal shall be underground and included in the cost of the secondary service pedestal.

Electrical service disconnect boxes shall be lockable and weatherproof with NEMA type circuit breaker enclosures and shall be provided at the connection point of each power source or point of service as directed by the Engineer.

All signal cable shall be continuous from connections made in the hand hole compartment of the signal pole base to the terminal compartment in the controller cabinet and shall contain no splices. Each signal head shall contain separate and continuous signal cable from the signal head to the above ground hand hole at the base of the signal pole and shall contain no splices.

All signal cable used for network communications in relation to any intersection detection systems shall use enhanced shielded Cat 5E Cable for all connections with the traffic signal system.

A separate and continuous 21-conductor cable shall run from the controller cabinet to the hand hole at each signal pole and shall contain no splices.

Subsection 614.10 (j) shall include the following:

All installed vehicle and pedestrian signal heads that have not been placed in service shall be covered with a prefabricated weather resistant nylon form-fitted signal face cover material. The signal head shall remain completely covered until the signal head is placed in service and is fully functional and operational.

The signal shall not be turned on or started until directed by the engineer. Prior to signal activation, the engineer shall confirm that the appropriate pavement markings and signing are in place and that all work necessary for proper signal operation has been completed.

**REVISION OF SECTION 614
TRAFFIC CONTROL DEVICES**

Subsection 614.13 shall include the following:

All work included in providing electrical service power to the traffic signal and lighting system, including Utility coordination and all elements discussed in 614.10 (b), shall not be paid for separately, but shall be included in the work under the "Traffic Signal Controller" item.

The intersection detection system (microwave radar) shall be a Econolite EVO Radar with Econolite EVO Radar HUB and J-Box or approved equal. This item shall include device installation (i.e., detector unit, mount, hardware, wiring, processor module, etc.), and verification of successful in-field detection zone operation based on several vehicle actuations in all detection zones. The device installed for the future eastern leg of the intersection will not need detection zone set up.

Subsection 614.14 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Traffic Signal Controller	Each
Conflict Monitor	Each
Microwave Vehicle Radar Detector	Each
Ethernet Switch	Each
Cellular Gateway	Each
Uninterrupted Power Supply	Each
Secondary Service Pedestal	Each

Any incidental items such as shielded cabling and ethernet extenders necessary for the installation of the intersection detection system shall not be paid for separately but shall be included in the work.

All incidental items not shown in the summary of approximate quantities or tabulation of signal equipment shall be considered to be included as part of the traffic signal installation and will not be measured and paid for separately. All quantities are approximate. The contractor shall be responsible for all work necessary to complete the construction shown on the plans.

**REVISION OF SECTION 614
TRAFFIC SIGNAL CONTROLLER CABINET**

Section 614 of the Standard Specifications is hereby revised for this project to include the following:

Subsection 614.13 shall include the following:

Traffic signal controller cabinet shall be measured as each assembly and shall include all equipment, cable, connections, software, mounting hardware, and all other material or work necessary to complete the item. The Contractor shall install each unit and test it for compliance with the bidding documents.

The Cabinet shall be grounded using an 8-foot x 5/8-inch copper ground rod and lug.

Subsection 614.14 shall include the following:

Traffic Signal Controller Cabinet will be paid for at the unit contract price for each assembly installed. Work shall include foundation, conduit, equipment, materials, and personnel necessary for a complete assembly.

<u>Pay Item</u>	<u>Pay Unit</u>
Traffic Signal Controller Cabinet	Each

Traffic Signal Controller Cabinet shall include both the base section and pad as per the CDOT Standard Plan No. S-614-42, "Cabinet Foundation Detail".

Items designated to be included in the cabinet as part of the revision to Subsection 614.08 (c) that are not included as pay items under the revision to Subsection 614.14 shall be considered as part of the Traffic Signal Controller Cabinet and will not be measured and paid for separately.

**REVISION OF SECTION 626
PUBLIC INFORMATION SERVICES**

Section 626 of the Standard Specifications is hereby revised for this project to include the following:

No specific meetings or coordination with the public are included in this project, however; the Contractor should expect to receive inquiries from adjacent property owners and the public. The Contractor shall respond to all public inquiries in a prompt, professional manner and shall send responses to the County for review prior to sending to the public and shall include the County in all correspondence. These responses may consist of a forward or redirect of the inquiry to the County. The work and materials needed to interact with the public will not be paid separately and shall be included in the cost of the work.

**REVISION OF SECTION 627 AND 713
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

Section 627 of the Standard Specification is hereby revised for this project as follows:

Subsection 627.09 shall include the following:

- (a) *Inlaid Preformed Thermoplastic Pavement Marking.* Inlaying shall be done for all thermoplastic pavement markings. The grooved width for inlaid preformed thermoplastic pavement marking is called for in the Contract, grooved width shall be the pavement marking width plus 1 inch with a tolerance of $\pm \frac{1}{4}$ inch. The dimensions of the Crosswalk marking shall be 1.5 ft x 10 ft typical. The dimension of the stop bar shall be 2 ft x length required. The depth of the grooves shall be 130 mils \pm 5 mils. Groove position shall be a minimum of 2 inches from the edge of the pavement marking to the longitudinal pavement joint. Grinding of existing preformed thermoplastic pavement marking and the inlaying of proposed preformed thermoplastic pavement marking shall not be measured and paid for separately, but shall be included in the work. Arrow markings shall be of the narrow elongated type, as shown in MUTCD 2009 Edition, Figure 3B-24.

Grooving shall not be performed on bridge decks.

The preformed thermoplastic pavement marking shall be inlaid on new and existing pavements as shown in the Contract. The material shall be capable of use for patching worn areas of the same type according to the manufacturer's recommendations.

Removal and application of temporary preformed thermoplastic pavement marking associated with wet-cutting of pavement shall be at the Contractor's expense.

An epoxy resin primer shall be applied to all existing surfaces (concrete, asphalt, existing markings, etc.) prior to the application of any new preformed thermoplastic, plastic pavement marking. The epoxy resin primer shall conform to CDOT Standard Specifications subsection 708.07. Primer shall be required for all markings used including markings that manufacture does not require a primer. Primer and application will not be measured and paid for separately, but shall be included in the work.

Surface shall be dry and free of dirt, dust, chemicals, and/or significant oily substances. Application procedures for Portland concrete pavement shall be as described above except a compatible primer sealer shall be applied before application of marking to assure proper adhesion.

The following shall be included in the second and third paragraphs of subsection 627.13:

Payment will be made under:

Pay Item	Pay Unit
Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line)	Square Foot

**REVISION OF SECTION 627 AND 713
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

Subsection 713.12 shall include the following:

(a) General.

Material such as lines, legends, or symbols shall be capable of being affixed to HMA or PCC pavements. Marking shall be capable of conforming to pavement contours, breaks, and faults, etc. by the use of the normal heat of a propane torch. Marking shall be capable of withstanding the actions of traffic at normal pavement temperatures. Marking shall have resealing characteristics such that it is capable of fusing with itself and previously applied thermoplastic pavement markings when heated with the torch.

(b) Physical Requirements.

1. Marking shall have a factory applied coated surface of beads in addition to the intermixed beads at the rate of 1 lb. ($\pm 10\%$) per 11 sq. ft. The factory applied coated surface beads shall have the following specifications:

- a) Minimum 80% round
- b) Minimum refractive index of 1.50.
- c) Minimum SiO_2 content of 70%
- d) Maximum iron content of 0.1%
- e) The additional beads shall follow the specifications below in reference to the **Colorado Blend** bead specification

<u>Size Gradation</u>	<u>% Retained</u>
14	0-3%
16	2-10%
18	10-30%
20	30-60%
30	50-80%
35	60-85%
45	95-100%
60	98-100%

(c) Performance.

Marking, when applied in accordance with manufactures recommendations shall demonstrate a uniform level of sufficient night time retro-reflection when tested in accordance to ASTM E1710-97. The applied material must have an initial minimum intensity reading of $500 \text{ mcd} \cdot \text{m}^{-2} \cdot 1\text{x}^{-1}$ for white and $300 \text{ mcd} \cdot \text{m}^{-2} \cdot 1\text{x}^{-1}$ for yellow as measured with a retro-reflectometer.

The top surface of the stencils (the same side as the factory applied surface beads) shall have an indicator system for the contractor to properly gauge the correct amount of heat to apply during installation. The indicator system shall have a positive visual indication, such as beads changing color or indents closing together, when the material has reached the correct installation temperature. The indicator system must also provide a positive, visual indication if the material has not reached the correct installation temperature.

**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 includes furnishing, operating, and maintaining a portable message sign panel.

Add subsection 630.031 immediately following subsection 630.03 as follows:

630.031 Portable Message Sign Panel. Portable message sign panel shall be furnished as a device fully self-contained on a portable trailer, capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The panel shall display a minimum of three – eight-character lines. The panel shall be a dot-matrix type with an LED legend on a flat black background. LED signs shall have a pre-default message that activates before a power failure. The sign shall be solar powered with independent back-up battery power. The sign shall be capable of 360 degrees rotation and shall be able to be elevated to a height of at least five feet above the ground measured at the bottom of the sign. The sign shall be visible from one-half mile under both day and night conditions. The message shall be legible from a minimum of 750 feet. The sign shall automatically adjust its light source to meet the legibility requirements during the hours of darkness. The sign enclosure shall be weather tight and provide a clear polycarbonate front cover.

Solar powered message signs shall be capable of operating continuously for 10 days without any sun. All instrumentation and controls shall be contained in a lockable enclosure. The sign shall be capable of changing and displaying sign messages and other sign features such as flash rates, moving arrows, etc.

Each sign shall also conform to the following:

- (1) In addition to the onboard solar power operation with battery back-up, each sign shall be capable of operating on a hard wire, 100-110 VAC, external power source.
- (2) All electrical wiring, including connectors and switch controls necessary to enable all required sign functions, shall be provided with each sign.
- (3) Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble-shooting guide.
- (4) The portable message sign shall be capable of maintaining all required operations under Colorado mountain-winter weather conditions.
- (5) Each sign shall be furnished with an attached license plate and mounting bracket.
- (6) Each sign shall be wired with a 7-prong male electric plug for the brake light wiring system.

Subsection 630.13 shall include the following:

The portable message sign panel shall be on the project site at least 2 weeks prior to the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of portable message sign panels shall be the responsibility of the Contractor.

**REVISION OF SECTION 630
CONSTRUCTION ZONE TRAFFIC CONTROL**

Subsection 630.18 shall be deleted and replaced with the following:

Traffic control devices – including, but not limited to, signs, channelizing devices, flashing beacons, advance warning arrow panels, temporary pavement marking paint, and temporary barriers/barricades – will not be measured and paid for separately but shall be included in the Lump Sum bid price for Traffic Control (Special).

The quantity to be measured for Traffic Control Management will be the number of authorized 24-hour days of active TCM performed by the TCS or another representative certified as a work site traffic supervisor. Payment will be made for one day of Traffic Control Management regardless of the number of TCSs required to adequately control the work. An authorized 24- hour day of active TCM will be every calendar day on which active traffic control occurs in accordance with an approved MHT. This includes activities such as flagging operations and setting up or removal of construction zones, shoulder closures, lane closures or detours. Traffic control devices that are left in place during non-working hours, including configurations such as lane closures, temporary channelization or detours, are not considered active traffic control.

The quantity to be measured for Traffic Control Inspection will be the number of authorized 24-hour days of traffic control inspection (TCI) performed by the TCS or another representative certified as a work site traffic supervisor. An authorized 24- hour day of TCI shall be every calendar day that traffic control devices as shown in the MHT are in use, masked, or turned away from traffic on the project, and the only traffic control activity is the inspection of traffic control devices.

Resetting, repairing, or replacing traffic control devices is considered maintenance of the devices. Cleaning and maintaining of traffic control devices are not considered traffic control activities subsidiary to the Traffic Control Management, Traffic Control Inspection or flagging pay items.

Payment will be made for either Traffic Control Management or Traffic Control Inspection for every calendar day that traffic control devices as shown in the MHT are in use, masked, or turned away from traffic on the project. Payment will not be made for both items for the same calendar day. Work on a night shift that begins before midnight and ends after midnight will be considered as occurring on the calendar day on which the shift ends.

The quantity to be measured for flagging will be the total number of actual flagging hours that are used as authorized in accordance with an approved MHT. Payment will not be made for time spent by flaggers to set up and take down construction traffic control devices. Hours of flagging in excess of those authorized shall be at the Contractor's expense.

Temporary VMS signing will be measured and paid for in accordance with Section 630.

Subsection 630.19 shall be revised as follows:

Delete paragraph four and replace with the following:

Payment will be made under:

Pay Item	Pay Unit
Flagging	Hour
Traffic Control Inspection	Day
Traffic Control Management	Day
Traffic Control (Special)	Lump Sum
Portable Message Sign Panel	Each

All payment for these items will be made inclusive of the above specification, contract documents, and approved traffic control plans submitted in accordance with other contract documents.

**REVISION OF SECTION 713
TRAFFIC CONTROL MATERIALS**

Section 713 of the Standard Specifications is hereby revised for this project as follows:

Subsection 713.14 (a) shall be revised to include the following:

Material shall meet the requirements of the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. The thermoplastic material shall conform to AASHTO designation M249-79 (98).

Subsection 713.14 (b) 1. shall be revised to include the following:

The markings shall be a resilient white or yellow thermoplastic material with uniformly distributed glass beads throughout the entire cross sectional area.

Subsection 713.14 (b) 6, Conformability, shall be added:

6. Conformability. Marking shall be capable of conforming to pavement contours, breaks, and faults etc. Marking shall be capable of withstanding the actions of traffic at normal pavement temperatures. Marking shall have resealing characteristics such that it is capable of fusing with itself and previously applied thermoplastic pavement markings when heated with the torch.

Subsection 713.14 (b) 7, Adhesion, shall be added:

7. Adhesion. Material such as lines, legends, or symbols shall be capable of being affixed to bituminous and/or Portland cement concrete pavements by the use of the normal heat of a propane torch.

The top surface of the stencils (the same side as the factory applied surface beads) shall have an indicator system for the contractor to properly gauge the correct amount of heat to apply during installation. The indicator system shall have a positive visual indication, such as beads changing color or indents closing together, when the material has reached the correct installation temperature. The indicator system must also provide a positive, visual indication if the material has not reached the correct installation temperature.

Subsection 713.14 (b) 8, Retro-reflectance, shall be added:

8. Retro-reflectance. Marking, when applied in accordance with manufactures recommendations, shall demonstrate a uniform level of sufficient night time retro-reflection when tested in accordance to ASTM E1710-97. The applied material must have an initial minimum intensity reading of 500 mcd·m²·lx⁻¹ for white and 300 mcd·m²·lx⁻¹ for yellow as measured with a retro- reflectometer.

FORCE ACCOUNT ITEMS**DESCRIPTION**

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

BASIS OF PAYMENT

Payment will be made in accordance with subsection 109.04. Payment will constitute full compensation for all work necessary to complete the item.

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

<u>Force Account Item</u>	<u>Quantity</u>	<u>Estimated Amount</u>
F/A 01 Minor Contract Revisions	F.A.	\$30,000*
F/A Furnish and Install Electrical Service	F.A.	\$10,000*
F/A 02 Erosion Control	F.A.	\$5,000*
F/A 03 Uniformed Traffic Control	F.A.	\$5,000*

F/A 01 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 the contract.

F/A 02 Furnish and Install Electrical Service: Will cover the cost for Mountain View Electric Association to install electrical cable to service the meter as necessary for the proposed traffic signal.

F/A 03 Erosion Control: This work consists of minor Erosion Control work authorized and approved by the Engineer which is not included in the contract drawings or specifications and which is necessary to control erosion.

F/A 04 Uniformed Traffic Control: This force account covers the cost of obtaining services for the use of law enforcement personnel for traffic control.

TRAFFIC CONTROL PLAN - GENERAL

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

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

- (1) Subsection 104.04 and Section 630 of the specifications.
- (2) Standard Plan S-630-1, Traffic Controls for Highway Construction
Standard Plan S-630-2, Barricades, Drums, Concrete Barriers (Temp), & Vertical Panels
- (3) MUTCD Part 6 (2009 Edition)

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

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

The Contractor shall submit, in writing, the proposed Method of Handling Traffic (MHT) for the initial phase of construction. When a different MHT is required for a subsequent construction phase, it must be submitted two weeks prior to starting that phase. The MHT shall have signature lines for the TCS, Prime Contractor and the Engineer. All proposed MHT's shall be approved, in writing, by the Engineer. Approval of the proposed MHT is intended to indicate those items for which payment is to be made. Such approval does not relieve the Contractor of liability specifically assigned to him under the contract.

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

1. During the construction of this project, traffic shall use the present traveled roadway unless identified on the plans or approved by the Engineer.
2. The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless approved by the Engineer.
3. All construction vehicles shall be equipped with flashing amber lights. Equipment to be used at night shall also be equipped with flashing amber lights. Flashing amber lights on vehicles and equipment shall be visible from all directions.

TRAFFIC CONTROL PLAN - GENERAL

4. Except for construction equipment necessary to complete the work, the Contractor will be allowed to park only the following vehicles within the roadway construction limits: one vehicle for the Project Superintendent and one vehicle for each Traffic Control Supervisor. These vehicles shall be designated in advance of construction by the Contractor. All parking of equipment shall be outside of the clear zone.
5. Workers shall not access the work areas by crossing roadways unless proper traffic control or other necessary precautions are provided. Suitable transportation to the work site for personnel whose vehicles are parked off site shall be provided by the Contractor.
6. Restricted Work Times. This project includes restrictions to work times and days that affect traffic during holidays, holiday eves, holiday weekends, special events, and other circumstances as described later in the special provision. Wherever other laws, ordinances, regulation, or orders are more restrictive, they shall take precedence over these requirements.

Restrictions are as follows:

- i Work is restricted to the hours of 7:00 a.m to 7:00 p.m., Monday through Friday or as directed and approved by the Engineer.
 - ii Work that reduces lanes of traffic on holidays or any day of a three-day or four-day holiday weekend will not be permitted. Holidays on which this restriction applies shall consist of those holidays recognized by the State of Colorado listed in the first paragraph of subsection 101.36.
7. Request for each lane closure shall be made at least 48 hours in advance of the time the lane closure is to be implemented. Lane closures on Marksheffel Rd will not be allowed during peak travel periods, as determined by the County, unless approved by the Engineer. Lane closures will not be allowed to remain unless being utilized continuously for the purpose for which they were set up.
 8. The Contractor shall coordinate and cooperate fully with the County, utility owners, and other contractors, to assure adequate and proper traffic control is provided. The Contractor shall coordinate and cooperate fully with others providing traffic control for other operations to assure that work or traffic control devices do not interfere with the free flow of traffic except as allowed by the approved Method of Handling Traffic.
 9. The Traffic Control Supervisor shall be responsible for preparing the final TCP and MHTs for all phases of construction. The following design criteria shall be incorporated into the TCP:
 - a. Minimum 11' lane widths.
 10. Construction Access Plan. The Contractor shall prepare and submit a construction access plan as part of the method of handling traffic, which shall be approved by the Engineer prior to beginning work. This plan shall contain, but not be limited to a diagram showing the access to and from each affected roadway, location and duration of each signing and flagger position, and a narrative explanation.

Access Maintenance Plan. The Contractor shall maintain access to all adjacent properties at all times, unless otherwise directed by the Engineer. The Contractor shall prepare and submit an Access Maintenance Plan as part of the method of handling traffic, which shall be approved by the Engineer prior to beginning work. The Access Maintenance Plan shall be developed in coordination with, and based on the requirements of the affected property owners and tenants.

TRAFFIC CONTROL PLAN – GENERAL

Seven days prior to construction, the Contractor shall coordinate with property owners regarding any construction activities adjacent to their property.

This plan shall detail all barricades, ramps, signs, and temporary means of access required for the property owners or tenants. Five working days prior to commencing any work which affects access to a property, the Access Maintenance Plan must be submitted for the affected properties and incorporated in the MHT.

The Access Maintenance Plan shall include documentation of the required coordination, including the approval signature of each affected owner or tenant. Should the Contractor be unable to obtain approval and signatures, documentation of the efforts made to obtain said approval and signatures must be submitted.

All accesses shall be maintained on surfaces equal to or better than those existing at the time the access is first disturbed. Utilization of materials to be incorporated permanently into the work may be permitted, however any degradation or other contamination or destruction shall be corrected at the Contractor's expense prior to acceptance.

All costs incidental to the maintenance of access will not be paid for separately, but shall be included in the work unless otherwise specified.

11. Maintenance of Travel Ways. The contractor shall maintain aspects of the roadway as follows:

- i The Contractor shall remove and reset all existing signs prior to performing any work that affects or obstructs those signs.
- ii Whenever the Contractor removes, obliterates, or covers in any way, any pavement markings, they shall be replaced on a daily basis prior to opening affected areas to traffic. All pavement markings shall be placed in accordance with the Contract.
- iii Traffic shall be carried on a paved surface at all times unless otherwise approved by the Engineer.
- iv During non-working hours, the roadways shall be restored to safe travel conditions for the free flow of traffic. All maintenance required to restore the roadways to this condition, including pavement patching and grading, shall be done prior to opening the areas to traffic or completing work for the day.
- vi All accesses shall be maintained on surfaces equal to or better than those existing at the time the access is first disturbed, unless approved by the Engineer.

All costs incidental to the foregoing requirements shall be included in the original contract prices for the project, including any additional traffic control items required for haul routes into or away from the project.

UTILITIES

Known utilities within the limits of this project are:

Utility	Owner/Company	Contact	Phone Number	Email
Water, Sanitary Sewer	Widefield Water and Sanitation District	Rob Bannister	719-390-7111	rob@wwsdonline.com
Storm Sewer	City of Fountain	Bob McDonald	719-393-4930	RMcdonald@fountaincolorado.org
Electric	City of Fountain	Carl Christian	719-322-2070	carl@fountaincolorado.org
Water, Irrigation	City of Fountain	Taylor Murphy		tmurphy@fountaincolorado.org
Telephone, Fiber Optic	CenturyLink	Ken Davis Robert McLeod	719-636-4413 303-949-2187	Ken.davis2@centurylink.com rmcleod@terratechllc.net
Telephone, Television	Comcast	Tod Bell	719-313-1567	Tod_Bell@comcast.com
Gas	Black Hills Energy	Adam Magoon	888-890-5554	Adam.magoon@blackhillscorp.com
Gas	Colorado Interstate Gas	Jim Pagonis	719-520-3727	jim_pagonis@kindermorgan.com
Electric	Mountain View Electric Association	Jennifer Radcliffe	719-494-2599	Jennifer.r@mvea.coop
Sewer	Fountain Sanitation District	Jim Heckman	719-382-5303	info@fsd901.org
Sewer	Lower Fountain Metro Sewage	Jim Heckman	719-382-5303	info@fsd901.org
Fiber, Electric	CDOT	Todd Ausbun	719-546-5758	Todd.ausbun@state.co.us

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

Some pothole data may be available from other sources and will be provided to the Contractor, if available. Please refer to the project construction drawings for more specific information on where these utilities may be in conflict with the proposed work. The Contractor is responsible for ensuring that all potential conflicts are identified and accommodated.

It will be the Contractor's responsibility to ensure that existing utilities are located and protected during construction. It is quite possible that some existing utilities are located within the pavement excavation zone and will require relocation and/or protection during construction. The Contractor shall identify any utilities that are located beneath the roadway prism and provide pothole information relative to the location, depth, and size of the utility. This work shall be completed prior to beginning excavation in those areas. Any utility work identified for relocation, as determined by the Engineer, shall be coordinated with the respective utility company and included in the project scheduling.

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

Potholing of utilities.

Other work as encountered.

The Contractor shall be responsible for coordinating the adjustment of all utilities on this project. The Contractor shall keep each utility company advised of any work being done to their facilities, so that each utility company can coordinate their inspections for final acceptance with the Engineer.

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UTILITIES

Provide written notice to each utility company, with a copy to the Engineer, prior to any work by a utility company that is to be coordinated with project construction. A minimum of two (2) calendar weeks of prior notice is required.

The Contractor will ensure full compliance with the Environmental Health and Safety Management Plans throughout the full duration of this project. The Contractor will comply with any special construction or safety requirements of each utility company as it may affect his work.

If needed, or as directed by the Engineer, the Contractor shall provide traffic control for any utility work to be coordinated with the project's construction, in accordance with an approved Method of Handling Traffic (MHT). Payment to be made via contract bid item(s).

The work listed below is expected to be performed by the utility owners or their agents:

Mountain View Electric Association: Provide utility service to the proposed traffic signal

If an impact is identified in the field, The Contractor shall perform preparatory work for each utility work element. The Contractor shall provide an accurate construction schedule that includes all utility work elements to the owner of each impacted utility and provide each utility owner with periodic updates to the schedule. The Contractor shall conduct necessary utility coordination meetings and provide other necessary accommodations as directed by the Engineer. The Contractor shall notify each utility owner in writing, with a copy to the Engineer, prior to the time each utility work element is to be performed by the utility owner. Prior to excavating, the Contractor shall positively locate all potential conflicts with existing underground utilities and proposed construction, as determined by the Contractor according to proposed methods and schedule of construction. The Contractor shall modify construction plans to avoid existing underground facilities as needed, and as approved by the Engineer. Please note that UNCC marks only its members' facilities. Other facilities, such as ditches and drainage pipes may exist, and it is the Contractor's responsibility to investigate, locate and avoid such facilities.

GENERAL:

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

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

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

REVISION OF SECTION 103
COLORADO RESIDENT BID PREFERENCE

Section 103 of the Standard Specifications is hereby revised for this project as follows:

Subsection 103.01 shall include the following:

- (a) *Colorado Resident Bid Preference.* A resident bidder shall be allowed a preference against a nonresident bidder from a state or foreign country equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident.

Resident bidder means:

- (1) A person, partnership, corporation, or joint venture which is authorized to transact business in Colorado and which maintains its principal place of business in Colorado: or,
- (2) A person, partnership, corporation, or joint venture which is authorized to transact business in Colorado, which maintains a place of business in Colorado, and which has paid Colorado unemployment compensation taxes in at least seventy-five percent of the eight quarters immediately prior to bidding on a construction contract for a public project.

To determine the resident bid preference status of a bidder, the bidder shall submit a completed Form 604 with the proposal. Failure to submit the residency Form with the proposal will be justification for and may result in the rejection of the proposal and forfeiture of the proposal guaranty.

The proposals will be treated as follows:

- (1) All proposals will be checked for accuracy by the Department.
- (2) The dollar amount of the checked proposal from nonresident bidders will be adjusted by a percentage equal to the percentage preference given or required by the state or foreign country of the bidder's residency. If the state or foreign country does not give or require a residency preference, no adjustment in the proposal dollar amount will be made.
- (3) Adjusted proposals from nonresident bidders will then be compared to proposals from resident bidders, and the bidder with the lowest total will be considered the apparent low bidder.
- (4) Should a nonresident bidder be the apparent low bidder, in accordance with paragraph (3) above, an award will be made on the basis of the original proposal, not the adjusted proposal.
- (5) The Department will proceed with its normal award procedure.

October 1, 2021

REVISION OF SECTION 105
CONSTRUCTION DRAWINGS

Section 105 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 105.02(f).

1
 REVISION OF SECTION 105
 CONTROL OF WORK
 (TABLE 105-1)

**Revise Section 105 of the Standard Specifications as follows:
 Table 105-1 shall be replaced with the following:**

**Table 105-1
 CONTRACTOR SUBMITTALS
 (including Contractor Qualifications)**

Section No.	Description	Type	Contractor P.E. Seal Required?	Review Time (working days)
202	Bridge Removal Plan	Other	Yes	10
206	Shoring	Working Drawing	Yes*	10
502	Piling Equipment Testing	Other	No	10
502	Welding	Qualifications	No	10
503	Assembly and Placement of Reinforcing Steel	Shop Drawing	Yes	30
503	Drilled Shafts	Qualifications	No	30
504	Soil Nail Wall	Qualifications	No	15
504	Soil Nail Wall (Contractor Alternative & Sacrificial)	Shop Drawing	Yes*†	10
504	Hybrid Wall (Contractor Alternative)	Shop Drawing	Yes*	10
504	MSE Wall	Qualifications	No	10
504	MSE Walls (Contractor Alternative)	Shop Drawing	Yes	15
504	MSE Walls (Default Design)	Shop Drawing	No	15
504	Geomembrane and Joints	Working Drawing	No	10
508	Timber Structures	Shop Drawing	No	20

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 REVISION OF SECTION 105
 CONTROL OF WORK
 (TABLE 105-1)

Table 105-1 (continued)
CONTRACTOR SUBMITTALS
(including Contractor Qualifications)

Section No.	Description	Type	Contractor P.E. Seal Required?	Review Time (working days)
509	Steel Structures	Shop Drawing	Yes*	20
509 and 618	Erection Plan	Other	Yes	5
509	Fracture Critical Plan	Other	No	15
512	Bearing Devices Type II	Shop Drawing	No	15
512	Bearing Devices Type III	Shop Drawing	Yes	15
514	Pedestrian and Bikeway Railing	Working Drawing	No	10
518	Elastomeric Expansion Devices	Working Drawing	No	10
518	Expansion Devices: 0-4"	Shop Drawing	Yes	15
518	Expansion Devices: 0-6", 9", 12"...	Shop Drawing	Yes	15
518	Modular Bridge Expansion Joint Design	Other	Yes	10
518	PPC End Dam	Qualifications	No	15
601 and 618	Precast Panel Deck Forms	Working Drawing	No	10
601	Permanent Steel Bridge Deck Forms	Shop Drawing	Yes	10
601	Falsework	Working Drawing	Yes	10
602	Reinforcing Steel	Working Drawing	No	10
603	Precast Culvert	Shop Drawing	Yes*	20
606	Bridge Railing	Working Drawing	No	10
607	Sound Barriers (Alternative)	Shop Drawing	Yes	15
607	Sound Barriers (Default Design)	Working Drawing	No	10
613	Light Standards (Low Mast)	Working Drawing	Yes	10
613	Light Standards (High Mast)	Working Drawing	Yes	10
614	Overhead Sign Structures	Shop Drawing	Yes*	15
614	Variable Message Signs (Cabinet and tilting bracket)	Working Drawing	Yes	10
614	Traffic Signal Pole (Mast Arm)	Shop Drawing	No	15

3
 REVISION OF SECTION 105
 CONTROL OF WORK
 (TABLE 105-1)

Table 105-1 (continued)
CONTRACTOR SUBMITTALS
(including Contractor Qualifications)

Section No.	Description	Type	Contractor P.E. Seal Required?	Review Time (working days)
614	Traffic Signal Pedestal Pole	Working Drawing	Yes	10
614	Traffic Signal Equipment	Working Drawing	No	10
618	Prestressed Concrete (Pre-tensioned)	Shop Drawing	Yes*	20
618	Prestressed Concrete (Post-tensioned)	Shop Drawing	Yes*	10
618	Steel Diaphragms between Prestressed Girders	Working Drawing	No	10
618	PT Grouting	Qualifications	No	10
622	Buildings	Shop Drawing	Yes	Varies
628	Prefabricated Pedestrian Bridges	Shop Drawing	Yes*†	20
641	Shotcrete	Qualifications	No	10
641	Shotcrete	Shop Drawing	No	10
715	Anchor Bolts	Working Drawing	No	10
Project Specials	As noted in project specials	Qualifications	No	Varies, 10 min.
Project Specials	As noted in project specials	Varies	Varies	Varies

*An electronic PE seal is required where the Contractor has provided the design for the item, or performed engineering to modify the details shown on the plans. The PE seal is not required where complete details are provided on the plans.

†Independent design check required for rating per Bridge Rating Manual.

‡Submittal only, no review required.

Table 105-1 may not be all inclusive. The Contractor shall provide all submittals required by the Contract, including those not listed in the table.

October 26, 2021

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REVISION OF SECTION 105 CONTROL OF WORK

Revise Section 105 of the Standard Specifications to include:

In 105.21 Acceptance, add this under (b) as the new third paragraph:

If not included in the Partial or Final Acceptance letter, no later than 3 working days after the acceptance letter is provided to the Contractor, the Engineer will provide in writing a detailed list of all remaining documentation required by the Contract. Upon reviewing and accepting the remaining documentation, and with no other outstanding issue(s), the Engineer will release retainage as follows:

1. 65% of the current retainage shall be released.
2. If the release of retainage is less than \$10,000, no retainage will be released.
3. Retainage will be released only to the extent that the remaining retainage shall not be less than \$20,000.

October 1, 2021

REVISION OF SECTION 106
BUY AMERICA REQUIREMENTS
NON-FEDERAL AID

Section 106 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 106.11(a) and replace it with the following:

(a) Federal *Buy America* requirements for iron and steel do not apply to this project.

REVISION OF SECTION 106
COUNTRY OF ORIGIN

Section 106 of the Standard Specifications is hereby revised for this project as follows:

Subsection 106.11 shall include the following:

- (c) *United States of America and Foreign Item Reporting.* The Contractor shall make a good faith effort to provide a list of the five costliest items incorporated into the project that consist of 50 percent or more steel or iron when delivered to the construction site. This list shall include the item name, the cost, and the country of origin of the item. The following shall be used to establish the country of origin of the item:
- (1) If the item is completely iron or steel, it will be considered to have been manufactured in the United States if all of the manufacturing processes for the final product took place in the United States.
 - (2) If the product is only partially made of steel or iron, it shall be considered to have been manufactured in the United States if all of the manufacturing processes for the final product took place in the United States, irrespective of the country of origin of the item's subcomponents.

The list of items shall be submitted within 15 days of the final acceptance date.

REVISION OF SECTION 107 WATER QUALITY CONTROL

Section 107.25 of the Standard Specifications is hereby deleted and replaced as follows:

107.25 Water Quality Control. The project work shall be performed using practices (including but not limited to those listed below) that minimize the pollution of any State waters, including wetlands.

(a) Definitions.

- (1) Areas of Disturbance (AD). Locations where any activity has altered the existing soil cover or topography, including vegetative and non-vegetative activities during construction.
- (2) Construction Site Boundary/Limits of Construction (LOC). The project area defined by the Environmental Clearance document.
- (3) Discharge of Pollutants. One or more pollutants leaving the Limits of Construction (LOC) or entering State waters or other conveyances.
- (4) Limits of Disturbed Area (LDA). Proposed limits of ground disturbance as shown on the Plans.
- (5) Pollutant. Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal, or agricultural waste, as defined in the Colorado Code of Regulations (CCR) [5 CCR 1002-61, 2(76)]
- (6) Pollution. Man-made, man-induced, or natural alteration of the physical, chemical, biological, and radiological integrity of water. [25-8-103 (16), CRS]
- (7) State waters. Defined in Section 101.

(b) Construction Requirements

The Contractor shall comply with the “Colorado Water Quality Control Act” (Title 25, article 8, CRS), the “Protection of Fishing Streams” (Title 33, Article 5, CRS), the “Clean Water Act” (33 USC 1344), regulations promulgated, certifications or permits issued, and to the requirements listed below. In the event of conflicts between these requirements and water quality control laws, rules, or regulations of other Federal, or State agencies, the more restrictive laws, rules, or regulations shall apply.

If the Contractor determines construction of the project will result in a change to the activities or LDA, the Contractor shall detail the changes in a written report to the Engineer. Upon receipt of the report, the Engineer will coordinate with the Region Planning and Environmental Manager (RPEM) regarding the change. The Engineer, within five days after receipt of the report, will approve or reject in writing the request for change. If approved, the Engineer will detail a course of action including revision of existing permits or obtaining new permits.

If construction activities result in noncompliance of any permit requirement, the project will be suspended and the permitting agency notified, if required. The project will remain suspended until the Engineer receives written approval by the permitting agency.

The Contractor is legally required to obtain all permits associated with project specific water quality activities within, or off the Right of Way, such as borrow pits, concrete or asphalt plant sites, waste disposal sites, or other facilities. It is the Contractor’s responsibility to obtain these permits. The Contractor shall consult with the Engineer, and contact the Colorado Department of Public Health and Environment (CDPHE) or other appropriate federal, state, or local agency to determine the need for any permit.

The Contractor shall conduct the work in a manner that prevents pollution of any adjacent State waters, as defined in section 101. Erosion control work shall be performed in accordance with Section 208, this

REVISION OF SECTION 107 WATER QUALITY CONTROL

subsection, and all other applicable parts of the Contract.

Prior to construction, the Stormwater Management Plan (SWMP) Administrator, identified in Section 208, shall identify and describe all potential pollutant sources, including materials and activities, and evaluate them for the potential to contribute pollutants to stormwater discharges associated with construction activities. The list of potential pollutants shall be continuously updated during construction. At a minimum, each of the following shall be evaluated for the potential for contributing pollutants to stormwater discharges and identified in the SWMP, as described in Section 208:

- (1) All exposed and stored soils.
- (2) Vehicle tracking of sediments.
- (3) Management of contaminated soils.
- (4) Vehicle and equipment maintenance and fueling.
- (5) Outdoor storage activities (building materials, fertilizers, chemicals, etc.).
- (6) Significant dust or particle generating processes.
- (7) Routine maintenance involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.
- (8) On-site waste management practices (waste piles, dumpsters, etc.).
- (9) Dedicated asphalt and concrete batch plants.
- (10) Concrete truck and equipment washing, including the concrete truck chute and associated fixtures and equipment.
- (11) Concrete placement and finishing tool cleaning.
- (12) Non-industrial waste sources that may be significant, such as worker trash and portable toilets.
- (13) Loading and unloading operations.
- (14) Other areas or procedures where spills could occur.

The SWMP Administrator shall record the location of potential pollutants on the site map, if applicable. Descriptions of the potential pollutants shall be added to the SWMP.

Prior to construction the Contractor shall submit a Spill Response Plan for any petroleum products, chemicals, solvents, or other hazardous materials in use, or in storage, at the work site. See Section 208 for Spill Response Plan requirements. Work shall not be started until the plan has been submitted to and approved by the Engineer.

On site above ground bulk storage containers with a cumulative storage shell capacity greater than 1,320 U.S. gallons, or storage containers having a "reasonable expectation of an oil discharge" to State waters, are subject to the Spill Prevention, Control and Countermeasure Plan (SPCC) Rule. Oil of any type and in any form is covered, including, but not limited to: petroleum; fuel oil; sludge; oil refuse; oil mixed with wastes other than dredged spoil. EPA Region 8 is responsible for administering and enforcing the SPCC plan requirements in Colorado. Prior to start of work, the Contractor shall submit a SPCC Form, if applicable, which has been approved by the EPA for the project.

The Contractor shall obtain a Construction Dewatering (CDW) permit from CDPHE anytime uncontaminated groundwater, including groundwater that is commingled with stormwater or surface water, is encountered during construction activities and the groundwater or commingled water needs to be discharged to State waters. If contaminated groundwater is encountered, a Remediation permit may

REVISION OF SECTION 107 WATER QUALITY CONTROL

be needed from CDPHE in accordance with Section 250.

Water from dewatering operations shall not be directly discharged into any State waters, unless allowed by a permit. Water from dewatering shall not be discharged into a ditch unless:

1. Written permission is obtained from the owner of the ditch.
2. It is covered in the approved CDW or Remediation Permit that allows the discharge.
3. A copy of this approval is submitted to the Engineer. A copy of the Permit shall be submitted to the Engineer prior to dewatering operations commencing.

Construction Dewatering may be discharged to the ground on projects where CDPHE's Low Risk Guidance Document for Discharges of Uncontaminated Groundwater to Land are met. The conditions of this guidance are:

1. The source of the discharge is solely uncontaminated groundwater or uncontaminated groundwater combined with stormwater and does not contain pollutants in concentrations that exceed water quality standards for groundwater referenced above.
2. Discharges from vaults or similar structures shall not be contaminated. Potential sources of contamination include process materials used, stored, or conveyed in the structures, or introduced surface water runoff from outside environments that may contain oil, grease, and corrosives.
3. The groundwater discharge does not leave the project boundary limits where construction is occurring.
4. Land application is conducted at a rate and location that does not allow for any runoff into State waters or other drainage conveyance systems, including but not limited to streets, curb and gutter, inlets, borrow ditches, open channels, etc.
5. Land application is conducted at a rate that does not allow for any ponding of the groundwater on the surface, unless the ponding is a result of implementing control measures that are designed to reduce velocity flow. If the control measures used result in ponding, the land application shall be done in an area with a constructed containment, such as an excavation or berm area with no outfall. The constructed containment shall prevent the discharge of the ponding water offsite as runoff.
6. A visible sheen is not evident in the discharge.
7. Control measures are implemented to prevent any sediment deposited during land application from being transported by stormwater runoff to surface waters or other conveyances.
8. All control measures used shall be selected, installed, implemented, and maintained according to good engineering, hydrologic, and pollution control practices. The selected control measures shall provide control for all potential pollutant sources associated with the discharge of uncontaminated groundwater to land. The discharge shall be routed in such a way that it will not cause erosion to land surface. Energy dissipation devices designed to protect downstream areas from erosion by reducing the velocity of flow (such as hose attachments, sediment and erosion controls) shall be used when necessary to prevent erosion.

All dewatering operations shall be recorded in the SWMP as follows:

REVISION OF SECTION 107 WATER QUALITY CONTROL

1. The source is identified in the SWMP and updated by the Contractor.
2. The SWMP describes and locates the practices implemented at the site to control stormwater pollution from the dewatering of groundwater or stormwater.
3. The SWMP describes and locates the practices to be used that will ensure that no groundwater from construction dewatering is discharged from the LOC as surface runoff or to surface waters or storm sewers.
4. Groundwater and groundwater combined with stormwater do not contain pollutants in concentrations exceeding the State groundwater standards in Regulations 5 CCR 1002-41 and 42.

If surface waters are diverted around a construction area and no pollutants are introduced during the diversion, a CDW Permit is not required. If the diverted water enters the construction area and contacts pollutant sources (e.g. disturbed soil, concrete washout, etc.), the Contractor shall obtain a CDW permit for the discharge of this water to State waters or to the ground.

At least 15 days prior to commencing dredging or fill operations in a watercourse, the Contractor shall provide written notification to owners or operators of domestic or public water supply intakes or diversion facilities, if these facilities are within 20 miles downstream from the dredging or fill operations. Notification shall also be given to Owners or operators of other intakes or diversions that are located within five miles downstream from the site of the project. Identities of downstream owners and operators can be obtained from Colorado Division of Water Resources, Office of the State Engineer.

Temporary fill into wetlands or streams shall not be allowed, except as specified in the Contract and permits. If such work is allowed, upon completion of the work all temporary fills shall be removed in their entirety and disposed of in an upland location outside of flood plains unless otherwise specified in the Contract.

Construction operations in waters of the United States as defined in 33 CFR Part 328.3, including wetlands, shall be restricted to areas and activities authorized by the U.S. Army Corps of Engineers as shown in the Contract. Fording waters shall be allowed only as authorized by the U.S. Army Corps of Engineers 404 Permit. Wetland areas outside of the permitted limits of disturbance shall not be used for storage, parking, waste disposal, access, borrow material, or any other construction support activity.

Pollutant byproducts of highway construction, such as concrete, asphalt, solids, sludges, pollutants removed in the course of treatment of wastewater, excavation or excess fill material, and material from sediment traps shall be handled, stockpiled, and disposed of in a manner that prevents entry into State waters, including wetlands. Removal of concrete waste and washout water from mixer trucks, concrete finishing tools, concrete saw, and all concrete material removed in the course of construction operations or cleaning shall be performed in a manner that prevents waste material from entering State waters and shall not leave the site as surface runoff. A minimum of ten days prior to the start of the construction activity, the Contractor shall submit in writing a Method Statement for Containing Pollutant Byproducts to the Engineer for approval.

The use of chemicals such as soil stabilizers, dust palliatives, herbicides, growth inhibitors, fertilizers, deicing salts, etc., shall be in accordance with the manufacturer's recommended application rates, frequency, and instructions.

All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with the original manufacturer's label. Materials shall not be stored in a location where they may be carried into State waters at any time.

Spill prevention and containment measures conforming to Section 208 shall be used at storage, and equipment fueling and servicing areas to prevent the pollution of any State waters, including wetlands. All

REVISION OF SECTION 107 WATER QUALITY CONTROL

spills shall be cleaned up immediately after discovery, or contained until appropriate cleanup methods can be employed. Manufacturer's recommended methods for spill cleanup shall be followed, along with proper disposal methods. When required by the Colorado Water Quality Control Act, Regulation 5 CCR 1002-61, spills shall be reported to the Engineer and CDPHE in writing.

The Contractor shall prevent construction activities from causing grass or brush fires.

The construction activities shall not impair Indian tribal rights, including, but not limited to, water rights, and treaty fishing and hunting rights.

Prior to start of work, the Contractor shall certify in writing to the Engineer that construction equipment has been cleaned prior to initial site arrival. Vehicles and equipment shall be free of soil and debris capable of transporting noxious weed seeds or invasive species onto the site. Additional equipment required for construction shall also be certified prior to being brought onto the project site.

Vehicles which have been certified by the Contractor as having been cleaned prior to arrival on site may be cleaned on site at an approved area where wash water can be properly contained. Vehicles leaving and reentering the project site shall be recertified.

At the end of each day the Contractor shall collect all trash and dispose of it in appropriate containers.

All construction site wastes shall be properly managed to prevent potential pollution of State waters. Construction waste that is considered a pollutant or contaminant shall be collected and disposed of in appropriate containers. This material may be stockpiled on the project when it is contained or protected by an appropriate control measure.

Discharges from the project area shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality.

Stormwater Construction Permit. A Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) is not required for this project. A CDPS-SCP will be obtained from CDPHE, if any of the following activities apply:

- (1) Construction sites that will disturb one acre or more; or
- (2) Construction sites that are part of a common plan of development or sale; or
- (3) It is specified in the contract; or

Stormwater discharges that are designated by the division as needing a stormwater permit because the discharge:

1. Contributes to a violation of a water quality standard; or
2. is a significant contributor of pollutants to State waters.

Dewatering, erosion control for dewatering, and disposal of water resulting from dewatering operations, including all costs for permits, will not be measured and paid for separately, but shall be included in the work.

The Contractor shall be liable for any penalty (including monetary fines) applied to the Department caused by the Contractor's noncompliance with any water quality permit or certification. Monetary fines shall be deducted from any money due to the Contractor. If the monetary fine is in excess of all the money due to the Contractor, then the Contractor shall pay to the Department the amount of such

REVISION OF SECTION 107 WATER QUALITY CONTROL

excess.

The Contractor shall not receive additional compensation, or time extensions, for any disruption of work or loss of time caused by any actions brought against the Contractor for failure to comply with good Engineering, hydrologic and pollution control practices.

If a spill occurs as a direct result of the Contractor's actions or negligence, the cleanup of such spill shall be performed by the Contractor at the Contractor's expense.

Areas exposed to erosion by fire resulting from the Contractor's operations shall be stabilized in accordance with Section 208 by the Contractor, at the Contractor's expense.

REVISION OF SECTION 108
EXTENSION OF CONTRACT TIME

Revise Sections 108 of the Standard Specifications as follows:

Add the following to Subsection 108.08(d):

- (d) *Extension of Contract Time*. The Contractor shall orally notify the Engineer as soon as the Contractor recognizes a potential project delay. The Contractor or Engineer shall document the discussion in writing. This discussion and documentation are not considered an official notice of a delay.

The Contractor shall provide a written notice of delay within seven days of determining the need for additional contract time. The notice of delay shall describe the nature and specific cause of the delay. Failure to submit the written notice of delay within seven days constitutes a waiver of entitlement to additional time or compensation.

The Contractor shall submit the time extension request and supporting analysis within 30 days of the written delay notice. The request shall include a schedule analysis with all information needed to support the time extension request pursuant to one of the following methods including an explanation for selecting that method:

- (1) Time Impact Analysis (TIA) for all forward-looking analyses of time impacts following the guideline AACE® International Recommended Practice No. 52R-06 Prospective Time Impact Analysis – As Applied in Construction.
- (2) Forensic Schedule Analysis for all time impacts absorbed into the schedule following the AACE® International Recommended Practice 29R-03 Forensic Schedule Analysis.
- (3) Other acceptable method of schedule analysis, as approved by the Engineer.

The analyses shall show a delay to the critical path in order to obtain a contract time extension. The Contractor shall demonstrate that efforts were made to avoid the delay by resequencing the work or by using other reasonable alternatives. Failure to submit the documentation to support the time extension request within 30 days of the Contractor's written notice of delay constitutes a waiver of entitlement to additional time or compensation. The Engineer's review of the time extension request will not exceed 15 days.

1

REVISION OF SECTION 601
CONCRETE MIX DESIGNS

Revise Section 601 of the Standard Specifications for this project as follows:

Revise Subsection 601.05, second paragraph as follows:

- (11) For air entrained concrete, report the SAM number according to AASHTO TP118 Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method (Super Air Meter). The SAM meter readings for each step shall be included. Perform a SAM leak test prior to the SAM testing. Results of the leak test shall be included in the SAM data.

REVISION OF SECTION 630
TRAFFIC CONTROL MANAGEMENT

Revise Section 630 of the Standard Specifications as follows:

Add the following to Subsection 630.11:

The traffic control diary requires a signature of the Traffic Control Supervisor.

Traffic Control Supervisors are required to always have in-use Methods of Handling Traffic available on a project.

630.11 (5, iv)

630.11 (5, iv)

Traffic Control Supervisor's name

630.11 (8)

Overseeing all requirements covered by the Contract that contribute to the convenience, safety and orderly movement of traffic. Have an up-to-date copy of the MUTCD and applicable standards and specifications available at all times on the project.

Traffic Control Supervisor's name and signature

630.11 (8)

Overseeing all requirements covered by the Contract that contribute to the convenience, safety and orderly movement of traffic. Have an up-to-date copy of the MUTCD, in-use MHTs, and applicable standards and specifications available at all times on the project.

**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 from 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 Part 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.

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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.

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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 the 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.

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- 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.

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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 though 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).

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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.

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- (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.
 - (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.

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- 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 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 through 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.

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- d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and women 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 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.