



THE CITY OF COLORADO SPRINGS
and the
PIKES PEAK RURAL
TRANSPORTATION AUTHORITY



REQUEST FOR PROPOSAL

Pre-Solicitation Posted July 12, 2007
Posted to Web-site July 26, 2007

RFP Number: **R07-T108 LJ**

NON-REFUNDABLE FEE: **\$100.00**
(Hard Copy Only)

CIMARRON BRIDGE REPLACEMENT

CITY OF COLORADO SPRINGS
PUBLIC WORKS/CITY ENGINEERING DIVISION
&
PIKES PEAK RURAL TRANSPORTATION AUTHORITY

PRE-PROPOSAL CONFERENCE:

AUGUST 2, 2007, 9:00 A.M.

A pre-proposal conference is scheduled for **August 2, 2007, 9:00 A.M.**, at City Hall, City Council Chambers, 107 North Nevada Avenue, Colorado Springs, Co. 80903. See Section I 1.1

PROPOSALS DUE DATE

THURSDAY, AUGUST 23, 2007, CLOSE OF BUSINESS 5:00 P.M.

Contact

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SECTION I

1.0 PROPOSAL INFORMATION

Section I provides general information to potential proposers on subjects such as fees, where to submit proposals, number of copies, amendments, proprietary information designation, and other similar administrative elements.

Request for Proposal (RFP) Number R07-T108 LJ is being issued and posted **July 26, 2007** on the City's web-site www.springsgov.com/contracting. Pre-solicitation Notice posted July 12, 2007.

1.1 PRE-PROPOSAL CONFERENCE

A pre-proposal conference is scheduled for **August 2, 2007, 9:00 A.M.**, at City Hall, City Council Chambers, 107 North Nevada Avenue, Colorado Springs, Co. 80903.

This pre-proposal conference is not mandatory; however, contractors, suppliers, and vendors are strongly urged to attend in order to voice their comments, concerns and/or questions.

1.2 NON-REFUNDABLE FEE FOR SPECIFICATIONS/DRAWINGS

Non-refundable fee for hard copy of the Proposal documents and Drawings: **\$100.00**. The City of Colorado Springs does not accept cash. The City does accept Visa or Master Card or checks made payable to the City of Colorado Springs. The City will furnish both the Proposal Documents and Drawings on a CD ROM at no charge.

1.3 SUBMISSION OF PROPOSAL

All proposals shall be submitted in a sealed envelope/container and received by the City of Colorado Springs Contracting Office prior to the closing date and time. Proposals shall be clearly marked: **"R07-T108 LJ CIMARRON BRIDGE REPLACEMENT"**.

- A. Sealed offers are to be submitted to:
- Lee M. Jenniges, CPPO
 - Senior Contracting Specialist
 - 30 S. Nevada Avenue, Suite 201
 - Colorado Springs, CO 80903

*******NO LATE OFFERS WILL BE ACCEPTED*******
FACSIMILE OR TELEGRAPHIC PROPOSALS WILL NOT BE ACCEPTED

- B. Closing Date: **Thursday, August 23, 2007, Close of Business (5:00 P.M.)**

1.4 NUMBER OF COPIES

Applicants shall submit one unbound original set and **six (6)** copies of the proposal documents. You may submit your copies of the proposal using CD ROMs in Word Format as a Word Document. If your firm submits their copies of the proposal using CD ROMs, 6 copies of the CD ROM must be submitted. This will greatly facilitate the evaluation process. The proposal shall remain the property of the City of Colorado Springs. The unbound original hard copy shall be clearly marked '**ORIGINAL**'. **Note:** The project schedule must be submitted on a CD ROM in PDF format and in Microsoft Project 2003 format.

1.5 PROPOSAL INFORMATION

- A. All questions regarding proposal preparation, the selection process, specifications and interpretations of the terms and conditions of the RFP shall be **submitted in writing** no later than **5:00 P.M., Thursday, August 9, 2007.**

- B. Following the award of a contract, responses to this solicitation may be subject to release as public information unless the response or specific parts of the response can be shown to be exempt from public information. Proposers are advised to consult with their legal counsel regarding disclosure issues and take the appropriate precautions to safeguard trade secrets or any other proprietary information. The City of Colorado Springs assumes no obligation or responsibility for asserting legal arguments on behalf of potential proposers.
- C. This is not a public bid opening, therefore, the City of Colorado Springs will not release any information pertaining to the number of offers received, names of proposers, or pricing until an award is made. The City of Colorado Springs will confirm receipt of your proposal if requested.

1.6 CONFIDENTIAL OR PROPRIETARY INFORMATION

If a proposer believes that parts of an offer are confidential, then the proposer must so specify. The proposer must stamp in bold letters the term CONFIDENTIAL on that part of the offer which the proposer believes to be confidential. The proposer must submit in writing specific detailed reasons, including any relevant legal authority, stating why the proposer believes the material to be confidential. Vague and general claims as to confidentiality will not be accepted. The City of Colorado Springs will be the sole judge as to whether a claim is general and/or vague in nature. All offers and parts of offers, which are not marked as confidential, will be automatically considered public information after the contract is awarded. The successful offer may be considered public information even though parts are marked confidential.

1.7 AMENDMENTS

In the event that it becomes necessary to revise any part of this RFP, or if additional information is necessary to enable the proposer to make an adequate interpretation of this RFP, a supplement to the RFP will be provided to each proposer. Amendments to this RFP may be issued at any time prior to the time set for receipt of proposals. The proposers are required to acknowledge receipt of any amendments by submitting a signed copy of each amendment issued. Signed copies must be submitted as part of the signed proposal submittal. The City of Colorado Springs will post all addenda on the City's web-site www.springsgov.com. It is the Proposer's responsibility to check the web site for posted addenda.

1.8 WITHDRAWAL OR MODIFICATION OF OFFERS

Any proposer may modify or withdraw an offer in writing at any time prior to the close date. (See 1.3 above).

1.9 ACCEPTANCE

- A. Any offer received shall be considered an offer, which may be accepted by the City of Colorado Springs based on initial submission without discussions or negotiations.
- B. Acceptance time. By submitting an offer in response to this solicitation the proposer agrees that any offer it submits may be accepted by the City of Colorado Springs at anytime within 120 days from the close date. (see 1.3 above).
- C. The City of Colorado Springs reserves the right to reject any or all offers and to waive informalities and minor irregularities in offers received, and/or to accept any portion of the offer if deemed in the best interest of the City of Colorado Springs. Failure of the proposer to provide in its offer any information requested in the RFP may result in rejection for non-responsiveness.

1.10 PROPOSAL PREPARATION COST

The cost of proposal preparation is not a reimbursable cost. Proposal preparation costs shall be at the Proposer's expense and are the Proposer's total responsibility.

1.11 AWARD

Please note: THIS **IS NOT A SEALED BID OR LOW BID PROCESS**. The City of Colorado Springs intends to make an award using the evaluation criteria and other factors, to determine the "Best Value" for the City of Colorado Springs and the Pikes Peak Rural Transportation Authority (PPRTA) as indicated in this Request for Proposals (RFP). See Section IV for Evaluation Elements.

1.12 CONTRACT ADMINISTRATION

The Colorado Springs Public Works, City Engineering Division shall be responsible for administration of the contract for compliance with all aspects of the final contract, plans and specifications.

1.13 SUBSTANTIVE PROPOSALS

The respondent shall certify (a) that his proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation; (b) that he has not directly or indirectly induced or solicited any other respondent to put in a false or sham proposal; (c) that he has not solicited or induced any other person, firm, or corporation from proposing; and (d) that he has not sought by collusion to obtain for himself any advantage over any other respondents or over the City of Colorado Springs.

1.14 GOVERNING LAW

The laws of the State of Colorado shall govern any contract executed between the successful proposer and the City of Colorado Springs. Further, the place of performance and transaction of business shall be deemed to be in the County of El Paso, State of Colorado, and in the event of litigation, the exclusive venue and place of jurisdiction shall be the District Court of the Fourth Judicial District, El Paso County, Colorado.

1.15 INQUIRIES

Questions about the RFP shall be in writing and directed to the Contract Specialist, at the following addresses. A written response to any inquiry will be provided in the form of an Amendment to the solicitation to each Proposer.

Lee M. Jenniges, CPPO, Senior Contracting Specialist
City Contracts Office, 30 S. Nevada Ave. Suite 201, Colorado Springs, CO 80901
Phone: 719-385-5266, Fax: 719-475-8477, ljenniges@springsgov.com

1.16 SCHEDULE OF EVENTS

The Request for Proposal schedule of events is tentatively scheduled as follows:

Advertise Requirement	July 12, 2007
Issue Request for Proposal	July 26, 2007
Pre-proposal Conference	August 2, 2007 – 9:00 AM City Hall 107 N. Nevada – City Council Chambers.
Cut-off date for all Questions	August 9, 2007 5:00 P.M.
Proposal Submittal Due Date	August 23, 2007
Short List Selection (optional)	TBD
Interviews (optional)	TBD
Award of Contract (Letter of Intent)	TBD
Commence Full Service	October 1, 2007

1.17 TERMINOLOGY

Throughout this solicitation the terms bidder, offeror or proposer shall mean the firm responding to this solicitation. The term Invitation for Bid (IFB) may be used within this solicitation, the Special Provisions, the General Provisions, the Specifications or the Plans. These references have not been individually corrected to indicate Request for Proposals due to formatting issues and time constraints only. However, all contractors responding to or reviewing this solicitation are hereby advised that this solicitation is a Request for Proposals (RFP) and shall be received, considered, evaluated and awarded based on the City's Procurement Rules and Regulations related to Requests for Proposals (RFP) and as indicated in Section IV of this solicitation..

By submitting a Proposal in response to this solicitation, contractors understand that this solicitation will be awarded based on "Best Value" to the City of Colorado Springs and the Pikes Peak Rural Transportation Authority (PPRTA) as specified in Section IV, Evaluation Criteria and Contract Award.

1.18 PLANS/DRAWINGS

All offerors are advised that the Plans and specifications included in this solicitation are 95% revisions. It is the offeror's responsibility to call to the City's attention any major defects, contradictions or errors that they may find when reviewing the drawings and preparing their proposals. The Plans and specifications will be finalized during negotiations with the successful Contractor.

1.19 SALES TAX

No State of Colorado, or El Paso County Sales or Use Taxes shall be included in the cost proposal for the work covered by this Contract. The contractor shall apply to the Colorado Department of Revenue for a tax-exempt certificate for this project. The tax-exempt certificate shall be submitted to the City at the earliest possible date, but no later than 30 days after award of the contract unless otherwise agreed upon with the City. The contractor shall utilize the tax-exempt certificate and tax exempt project number when purchasing all equipment, materials and supplies to be incorporated in this project.

The Contractor and the Contractor's subcontractors ***shall include in their cost proposal all City of Colorado Springs Sales and Use Taxes*** and other applicable taxes on the work covered by the Contract. For all equipment, materials and supplies incorporated into the work purchased from vendors or suppliers not licensed to collect City Sales Tax, City Use Tax is due and payable to the City. The contractor shall execute and deliver, and shall cause the Contractor's subcontractors to execute and deliver to the City Sales Tax Office, certificates listing all said equipment, materials and supplies and the corresponding use Tax due, along with payment for said taxes. Any outstanding taxes due may be withheld from the final payment due the contractor. Forms and instructions can be downloaded at www.springsgov.com/salestax.

Our Registration Numbers are as follows:
 City of Colorado Springs
 Federal I.D.: 84-6000574
 Federal Excise: A-138557
 State Sales Tax: 98-03479

1.20 ILLEGAL ALIENS - PUBLIC CONTRACTS FOR SERVICES

Illegal Aliens - Public Contracts for Services - Compliance with Title 8, Article 17.5, Colorado Revised Statutes:

The Contractor acknowledges, understands and agrees, that:

- (a) In the performance of any work or the provision of any services by the Contractor under this Contract, the Contractor shall not knowingly employ or contract with an illegal alien to perform work under this contract; or

- (b) Enter into a contract with any subcontractor that fails to certify to the contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract or under the subcontract to this contract;
- (c) The contractor has verified or attempted to verify through participation in the basic pilot program that the contractor does not employ any illegal aliens and, if the contractor is not accepted into the basic pilot program prior to entering into a public contract for services, that the contractor shall apply to participate in the basic pilot program every three months until the contractor is accepted or the public contract for services has been completed, whichever is earlier. This provision shall not be required or effective in this Contract if the basic pilot program is discontinued. Basic pilot program" means the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, that is administered by the United States department of homeland security.
- (d) The contractor is expressly prohibited from using basic pilot program procedures to undertake preemployment screening of job applicants while this Contract and any services under this Contract is being performed.
- (e) If the contractor obtains actual knowledge that a subcontractor performing work under the public contract for services knowingly employs or contracts with an illegal alien, the Contractor shall:
 - (1) Notify the subcontractor and the City within three days that the contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
 - (2) Terminate the subcontract with the subcontractor if within three days of receiving the notice the subcontractor does not stop employing or contracting with the illegal alien; except that the contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
- (f) The Contractor shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the department may undertaking pursuant to the authority established in Section 8-17.5-102 C.R.S.
- (g) If the contractor violates or fails to comply with any provision of C.R.S. 8-17-101 et seq, the City may terminate this Contract for breach of contract. If this contract is so terminated, the Contractor shall be liable for any actual and consequential damages to the City.

SECTION II

BACKGROUND - SCOPE OF WORK

2.0 BACKGROUND INFORMATION

The existing Cimarron Bridge over the Union Pacific Railroad (UP) and Conejos Street was constructed in 1958. It is nearing end of the typical 50+ year design life. In 1992, ownership transferred from the Colorado Department of Transportation (CDOT) to the City as part of the Highway 24 Bypass Project. Serious substructure problems were discovered in 2002 based on a bi-annual bridge inspection by LONCO Inc. At that time, the bridge had the worst rated bridge condition of any of the 160 major bridge structures in the City. City Council authorized emergency funding to accomplish repairs in 2002-2004, totaling approximately \$800,000.

On August 9, 2006, a hole (approximately 4 feet in diameter) was reported in the concrete deck on the south $\frac{1}{2}$ (eastbound lanes) of the Cimarron St. Bridge over Conejos St./Railroad tracks. The bridge was immediately closed to all traffic. The City's Public Works Department responded and determined that the north $\frac{1}{2}$ (westbound lanes) was structurally adequate, and this half of the bridge was re-opened to one lane of traffic in each direction later that evening. An inspection by the City's (and CDOT's) Structural Bridge Consultant, LONCO, Inc., on August 10, 2006, confirmed that the north $\frac{1}{2}$ of the bridge was structurally adequate and safe for vehicles up to 5 tons in weight. However, one localized area of repair on the north $\frac{1}{2}$ was determined necessary and was completed on August 26, 2006, by installing a steel plate across the two travel lanes.

This Cimarron Bridge was included for replacement in the designated list of capital improvement projects for the Pikes Peak Rural Transportation Authority (PPRTA) approved by voters in November 2004. This bridge was also expected to be replaced in conjunction with the Cimarron @ I-25 Interchange, anticipated for funding from Referenda C & D on the 2005 statewide ballot. However, Referendum D failed to gain approval from the Colorado voters and this interchange project could not be funded.

Based on direction received from the City Council and the PPRTA Board, the City completed the preliminary (30%) design of the bridge replacement in late December 2006. Rockrimmon Constructors completed the work for early demolition of the south $\frac{1}{2}$ of the bridge in March, 2007. The PPRTA Board, at the March 14, 2007 meeting, approved a contract with CH2M Hill for final design and it is now essentially complete.

Bridge replacement is to be constructed one-half at a time. Two lanes of traffic on the north $\frac{1}{2}$ of the bridge (5-ton load limited) should be maintained, while the south $\frac{1}{2}$ of the bridge is demolished and reconstructed. With construction of a wider cross-section 6-lane bridge, 4 lanes of traffic can be accommodated when the south $\frac{1}{2}$ is complete, and load restrictions can be removed. The north $\frac{1}{2}$ can then be reconstructed.

It is the intent of this RFP to make an award for a firm fixed price type contract based on unit prices and quantities in the cost proposal. The purpose of this project is to construct the bridge and all associated improvements shown on the plans.

The City of Colorado Springs plans to award the contract based on a "Best Value" selection after careful review and consideration based on the evaluation criteria listed in Section IV.

Competitive negotiation as described further in this document is a part of the process used in this Request for Proposal. This process allows the City the flexibility it needs to arrive at a mutually agreeable final contractual agreement.

Through this Request for Proposal, the City seeks to:

- (a) Determine final pricing;
- (b) Specify the terms and conditions that will govern any resulting contract; and
- (c) Select the successful proposer.

This Request for Proposal states the instructions for submitting proposals, and the procedure and criteria by which a successful contractor will be selected.

All cost information must be contained only within the Cost Proposal section and nowhere else in the Proposal. The respondent must submit pricing as requested in the RFP.

Successful firm must be prepared to perform construction beginning on or around **October 15, 2007**.

2.1 GENERAL SCOPE OF WORK

The Scope of Services to be provided shall include, but not be limited to: preparation and submittal of necessary permits, and construction of the Cimarron Bridge Replacement Project, as per the specifications, drawings and contract documents.

Proposers are expected to examine the drawings, specifications, proposal documents, proposed contract forms, terms and conditions, and all other instructions and solicitation documents. Proposers are expected to visit the job-site to determine all requirements and conditions that will affect the work. Failure to do so will not relieve a proposer from responsibility to know what is contained in this request for proposal, or site conditions affecting the work.

2.2 POTENTIAL PERMITS

The table below is a list of potential permits and/or agreements required for the project. Copies of any permits or agreements that have already been obtained by the City of Colorado Springs are available for review by all proposers.

Permit	Permitting Agency	Responsibility to Obtain Permit
Air Quality Permit	El Paso County/ Colorado Department of Public Health and Environment	Contractor
CDPS Stormwater Construction Permit	Colorado Department of Public Health and Environment	Contractor
Construction Dewatering Permit	Colorado Department of Public Health and Environment	Contractor
Excavation Permit	City of Colorado Springs	Contractor
Concrete Permit	City of Colorado Springs	Contractor
City Forester's Permit	City of Colorado Springs	Contractor
Depredation Permit	U.S. Fish and Wildlife	Contractor
Existing Grade Separation Improvement Agreement	Union Pacific Railroad	City of Colorado Springs
Contractor's Right of Entry Agreement	Union Pacific Railroad	Contractor

The contractor shall be responsible to investigate and assess the requirements for all necessary environmental/drainage/construction permits and railroad agreements. The Contractor shall furnish in the proposal a written list of all permits required for the proper completion of the Contract. The list shall clearly identify the type of permit or permits that must be obtained before work on any particular phase or phases of work can be started. The contractor shall comply with all conditions of the permits and agreements during the course of the construction. Permit fees for the City of Colorado Springs permits are waived for this project. The Contractor shall pay the fees for all other permits. City and/or other agency fines are the sole responsibility of the Contractor.

2.3 CONSTRUCTION SCHEDULE

Time is of the essence on this project. The contractor shall submit with his proposal a detailed Critical Path Method (CPM) construction schedule that will clearly identify all major activities together with milestone events. (Must be submitted on CD ROM) See Section III.

2.4 COSTS

The respondents are expected to identify the cost to construct the Cimarron Bridge Replacement, preparation and submittal of necessary permits, and firm unit costs for each item specified. The actual quantities ordered may fluctuate up or down. The unit prices proposed by each respondent will remain firm and will not be renegotiated if the estimated quantities are not met or are exceeded. All unit prices shall include all necessary overhead and profit. Items not listed in the schedule of values such as overhead, profit, mobilization, de-mobilization, bonding, etc shall be distributed throughout the respondent's Unit Prices for the items listed in 10.5 Cost Proposal.

2.5 WARRANTY

In addition to the requirements covered by the Standard General Conditions of the contract all work shall be warranted for a 2-year period from the date of issue of the Construction Completion Certificate. Any Manufacturer time extended warranty for items shall be included.

2.6 REQUIRED INFORMATION

All record drawings with "As Built" information accurately displayed and certified correct by the Contractor's Site Superintendent will be delivered to the City at the completion of the contract and prior to final payment. In addition the following listed items must also be submitted prior to final payment.

- Product data, material and finishes, and related information,
- Operations and maintenance data,
- Warranties and bonds,
- Field test results,
- Inspection certificates,
- Manufacturer's certificates,
- Sales Tax Certificates

All information is to be bound and labeled in a 3 ring binder for easy reference.

2.7 CONTRACT DURATION

The contract duration will be negotiated at the time of the award; however it is the City's intention to have this project completed before December 31, 2008. Proposals that indicate a project completion beyond this date may be deemed non-responsive or scored lower than proposers that meet or exceed the December 31, 2008 completion date.

2.8 PROJECT DIRECTION

Primary interfaces of the selected contractor will be through the City's delegated Project Manager. The Project Manager will be responsible for the direction, review and approval of all work.

2.9 BILLING/DELIVERY INFORMATION

An invoice/request for payment shall be submitted in duplicate monthly to the City of Colorado Springs, City Engineering Division, 30 South Nevada Avenue, Suite 403, Colorado Springs CO, 80903. (719) 385-5466. All invoices/request for payments shall contain the following information: Name of the contractor, contract number, itemized list of construction/services/supplies furnished, and date furnished. All invoices shall be billed on a net 30 basis utilizing the standard city form (to be provided by the City prior to the start of construction). No late charges shall be assessed to, or paid by the City of Colorado Springs/PPRTA. Unless otherwise notified in writing, all work produced shall be delivered to the City of Colorado Springs City Engineering Division.

2.10 BOND REQUIREMENTS

The Contractor shall furnish to the City of Colorado Springs one (1) original copy of each; Performance Bond, Labor and Materials Payment Bond, and a Maintenance Bond in the amount of 100% of the total contract within ten (10) calendar days after notification of award of a contract. The cost of all bonds shall be included in Contractor's cost proposal offer.

2.10.1 Bonds shall:

- Be for the full amount of the contract price.
- Guarantee the Contractor's faithful performance of the work under this contract, and the prompt and full payment for all labor and materials involved therein.
- Guarantee protection to the City of Colorado Springs and the Pikes Peak Rural Transportation Authority against liens of any kind.
- Be, when a surety bond is furnished, from a surety company operating lawfully in the state of Colorado and shall be accompanied with an acceptable "Power of Attorney" form attached to each bond copy.
- Be issued from a surety company that is acceptable to the City of Colorado Springs.
- Be submitted using the forms in Section X, 10.6" of this solicitation.

2.11 INSURANCE REQUIREMENTS

The successful proposer shall carry, at his own expense, in reliable insurance companies that are approved by the City of Colorado Springs, the minimum insurance coverage. See Section X, 10.4..

In addition, the successful proposer shall carry, at his own expense, insurance coverage set forth in the Contractor's Right of Entry Agreement with the Union Pacific Railroad. Said insurance shall remain in full force and effect by Contractor during the performance of said work upon and adjacent to Railroad's property and thereafter until Contractor removes all tools, equipment and materials from Railroad's property and cleans up the premises to a presentable condition satisfactory to Railroad.

2.12 PARTNERING

It is the City's intent to utilize a Consultant to provide professional partnering and facilitation services for this capital improvement project. The City will pay the cost of the

Partnering Consultant. The Contractor's personnel costs for participating in the Partnering shall be distributed throughout the respondent's Unit Prices for the other items included in the contract.

Many of the primary objectives for using partnering/facilitation services on this project include:

- Create a positive team approach for the purpose of successfully completing this contract on time and within budget.
- Ensure all parties assume responsibility for success or failure of the project.
- Utilize the strengths of each party to the contract to develop and achieve mutual goals.
- Develop a continuous focus on mutual goals by all team members in a trusting atmosphere.
- Complete the project within budget, on schedule and in accordance with the Contract through efficient and effective contract performance and mutual cooperation.
- Develop agreed upon procedures and processes for problem solving, dispute resolution, requests for change orders, etc.

SECTION III

3.0 PROPOSAL CONTENT/FORMAT

Your written proposal should include the information in the format outlined below and limited to no more than 50 pages. **A page shall be defined as 8-1/2" x 11", single sided with a minimum font of 10.** We recommend that you include concise, but complete information as requested emphasizing why you believe your firm is uniquely qualified for this project. Short listed firms may be required to make a formal, in person presentation, to the selection committee. **Note:** Schedule is to be submitted on a CD ROM and will not count against the 50 page limit.

3.1 COVER LETTER

The cover letter shall be a maximum of two pages in length. Include the following elements of information in the letter as a minimum:

- RFP number and project name.
- Statement that the firm is qualified to perform the work.
- Certification that the information and data submitted is true and complete to the best knowledge of the individual signing the letter.
- Name, telephone number, e-mail address and fax number of the individual to contact regarding the submittal.
- The signature of an authorized principal, partner, or officer of the firm.

3.2 SUBMISSION CHECKLIST

See 10.7.

3.3 COST PROPOSAL

Cost proposal shall be submitted in a separate sealed envelope clearly marked 'COST PROPOSAL'. Only one copy of the cost proposal is required. The cost proposal is of critical importance to the City of Colorado Springs. Applicants shall provide a complete cost proposal for all construction and deliverables. The total cost proposal will remain firm and fixed for the entire contract period of performance.

The proposers are expected to identify the total cost to construct Cimarron Bridge in accordance with the specifications, drawings and contract documents. The contract will be executed on a unit price basis, however, payment shall not exceed the total contract amount unless a Change Order has been previously approved by the City Project Manager.

Cost proposals shall clearly indicate the cost breakdown and firm fixed amount for the complete removal and construction replacement of the Cimarron Bridge. Refer to 10.5 Cost Proposal.

Change Order costs. The respondent shall provide documentation indicating all markups associated with approved change orders to include percentages for overhead and profit. No markups will be allowed that are not provided in the cost proposal.

3.4 CONSTRUCTION APPROACH AND SCHEDULE

Applicant shall provide a detailed construction schedule for the project. Indicate a complete understanding of the project through a detailed breakdown of each phase of the proposed work schedule. Indicate a clear methodology and approach to constructing the project, as quick as possible, to minimize disruption to the traveling public and adjacent property owners. The construction schedule submitted shall meet the requirements for the "Project Schedule" as described in Section 104 of the General Provisions of the City of Colorado Springs Standard Specifications Manual. Contractors who demonstrate the

ability to finish this project well in advance of December 31, 2008 will improve their "Best Value" score. Printed copies of the schedule(s) may be submitted on up to 11 x 17 and each 11 x 17 page will still be considered one page.

In this section, please submit the following information:

- A. Provide a Detailed Construction Schedule with dates, outlining major construction phases and sequences. Include an allowance for bad weather days and train traffic.
- B. Provide a detailed approach to construction traffic control in relation to overall construction phases. Provide the number of nights where Cimarron Street will be closed during each phase. The maximum number of Cimarron Street nighttime closures will be negotiated with the successful proposer and will be incorporated into the final contract.
- C. Provide the dates and durations where Conejos Street will be closed during each construction phase. The maximum number of days that Conejos Street will be closed will be negotiated with the successful proposer and will be incorporated into the final contract.
- D. Provide the number of days where reduced laneage is needed in Phase 3 (one lane each way) across the new Cimarron Bridge. The maximum number of days that this reduced laneage is allowed will be negotiated with the successful proposer and will be incorporated into the final contract.
- E. Provide details of railroad flagging requirements in relation to overall construction phases including the estimated hours and duration of flagging for each phase. Provide a total estimate of the railroad flagging costs associated with the proposed Construction Schedule. The maximum railroad flagging costs will be negotiated with the successful proposer and will be incorporated into the final contract. It is the City's intention to directly reimburse the Union Pacific Railroad up to the amount included in the final contract. Actual labor and material costs above this amount associated with the Railroad's work and materials on the Cimarron Bridge Replacement Project will be directly paid by the proposer to the Union Pacific Railroad at no cost to the City.
- F. Provide the proposed approach to coordinating with utilities and railroad. Identify key processes to be used to avoid delays.
- G. Address any potential problems that your firm foresees with this project and how you would make adjustments if encountered.

3.5 QUALIFICATIONS

The City is interested in determining that the successful proposer has the necessary qualifications and resources to take on this project and insure timely completion. In this section, please submit the following information:

- A. Provide a brief history and overview of your company and its organizational structure, including number of years in business.
- B. Provide the availability of your firm and subcontractors to begin the project immediately and continue efficiently and uninterrupted through project completion.
- C. Provide a detailed list and references of similar projects that were completed by your firm with a minimum of five in the last five years. See Section X, 10.3.
- D. Letter of reference and recommendation from bonding company acknowledging your firm's bonding capacity and performance.

- E. Address your firm's past experience with partnering and facilitation services and your successes or failures utilizing partnering and facilitation services.

3.6 EXPERIENCE WORKING/COORDINATION WITH RAILROADS

Provide your firm's background and experience working on projects that include railroad right-of-ways, permits, and coordination. Provide a detailed list and references of similar projects that included roadway grade separations over railroads that were completed by your firm with a minimum of three in the last five years. See Section X, 10.3.

3.7 PERSONNEL TO INCLUDE SUBCONTRACTORS

Provide information pertaining to the proposed management of this project. In this section, please submit the following information:

- A. Provide resumes of Project Manager and key personnel responsible for major construction operations showing qualifications and experience with similar projects.
- B. Identify the percentage of the total project work that will be done by your firm versus all subcontractors. Provide a list of any sub-contractors that will perform 10% or more of the total contract value on this project with addresses and phone number.
- C. Provide an organizational chart indicating line of responsibility and communications.

SECTION IV

4.0 EVALUATION CRITERIA

The following criteria listed in order of importance will be used in the evaluation of proposals.

4.1 COST PROPOSAL

See Schedule III, 3.3.

4.2 CONSTRUCTION SCHEDULE

See Schedule III, 3.4.

4.3 QUALIFICATIONS

See Schedule III, 3.5.

4.4 EXPERIENCE WITH RAILROADS

See Schedule III, 3.6

4.5 PERSONNEL TO INCLUDE SUBCONTRACTORS

See Schedule III, 3.7

4.6 OVERALL QUALITY OF PROPOSAL

The overall quality and completeness of the proposal submitted. This is an opportunity for all respondents to demonstrate their expertise after thoroughly analyzing all the specifications, drawings and construction documents. Quality shall be deemed to mean easy to read and understand.

4.7 SELECTION-COMMITTEE

A Selection Committee will screen all submissions. Proposals will be ranked according to evaluation criteria, as outlined above. Through this process, the City will determine which proposals are acceptable or unacceptable. The City, in writing, will notify participating firms whose proposals are deemed to be unacceptable. Those firms offering proposals deemed to be acceptable by the City will be evaluated by the Selection Committee.

The selection committee may determine it necessary to require “oral presentations/interviews” with the “short listed” firms considered to be in the competitive range. If oral presentations/interviews are conducted, they will also be scored. The committee may request revisions to the proposal from each of the proposers at the conclusion of the interviews. However, if it is determined necessary to seek revisions to the proposals at the conclusion of interviews, then all proposers interviewed will be requested to submit revisions, and the revisions will be scored accordingly.

4.8 AWARD OF CONTRACT

The City and the Pikes Peak Rural Transportation Authority (PPRTA) reserve the right to award this Contract to the firm that through the evaluation process is determined to be the “Best Value” to the City of Colorado Springs and the Pikes Peak Rural Transportation Authority (PPRTA). “Best Value” does not necessarily mean “Best Price” or “Best Qualified”. It means the firm who is evaluated using the criteria above that has demonstrated their ability to meet **all** the requirements of this Request for Proposal in a manner that is most beneficial to the City of Colorado Springs and the Pikes Peak Rural Transportation Authority (PPRTA). The City and PPRTA will select the firm, and a contract prepared by the City and PPRTA will be awarded to the successful proposer.

SECTION V**5.0 CONTRACT TERMS AND CONDITIONS****5.1 AGREEMENT**

Contract terms and conditions are outlined in the sample Construction Contract provided in Section X as 10.1 and Section VII “General Provisions”. The successful proposer shall be required to execute a Contractor’s Right of Entry Agreement with Union Pacific Railroad. The agreement terms and conditions are outlined in the sample Contractor’s Right of Entry Agreement provided in Section X as 10.9.

5.2 PERIOD OF PERFORMANCE

The final Contract Period of Performance will be negotiated at the time of award. However, the City intends to have the project completed prior to December 31, 2008, or by the Contractor’s proposed and accepted schedule completion date, whichever is earlier.

5.3 INDEMNIFICATION

Contractor agrees that Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents, from and against any and all loss, damage, injuries, claims, cause or causes of action, or any liability whatsoever resulting from, or arising out of, or in connection with the Contractor’s performance under this Agreement.

5.4 ASSIGNMENT

Contractor shall not assign or otherwise transfer this Agreement or any right or obligation hereunder without the prior written consent of the City.

5.5 LAW

This Agreement is subject to and shall be interpreted under the law of the State of Colorado, and the Charter, City Code, Ordinances, Rules, and Regulations of the City of Colorado Springs, Colorado, a Colorado Home Rule City. Court jurisdiction shall exclusively be in the District Court for El Paso County. Contractor shall insure that Contractor is familiar with, and complies with, applicable Federal, State, and local laws and regulations as now written or hereafter amended.

5.6 INTEGRATION

This is a completely integrated contract and contains the entire Agreement between the parties. Prior written or oral agreements if any shall be deemed of no effect and shall not be binding upon either party.

5.7 KEY PERSONNEL

The key personnel listed in the proposal will be the individuals used in the performance of the work. If any of the key personnel leave employment or are otherwise not utilized in the performance of the work, approval to substitute must be obtained from the City, by the Contractor. Any substitute shall have the same or a higher standard of qualifications that the key personnel possessed at the time of Contract award.

5.8 CITY/PPRTA JOINT CONTRACT TERMS AND CONDITIONS

PPRTA Funding Special Provision: Joint Contracts - City of Colorado Springs and the Pikes Peak Rural Transportation Authority (PPRTA).

This contract is a joint contract between the Contractor, the City of Colorado Springs, and the Pikes Peak Rural Transportation Authority. The Parties therefore Agree to the following:

1. This PPRTA Funding Special Provision shall supersede any contrary provision of this Contract.
2. The Contractor acknowledges and understands that this contract is funded in whole or in part by the PPRTA and administered by the City. Both the City and the PPRTA are Parties to this Contract.
3. The Contractor acknowledges and understands that all payments under this contract shall be made to the contractor by the PPRTA. PPRTA funding obligations shall be paid by PPRTA warrants. In the event there is Joint City / PPRTA funding, then payment to the Contractor by the PPRTA shall consist of Warrants from the City and Warrants from the PPRTA. The Contractor agrees to accept all payments made or proffered by the PPRTA under this Contract.
4. All bonds under this Contract shall include the City of Colorado Springs and the PPRTA as Obligees.
5. All insurance policies provided by the Contractor pursuant to this contract except Workers Compensation Insurance shall name both the City of Colorado Springs and the PPRTA as additional insureds. All insurance policies provided by any sub-contractor for any work pursuant to contracts with the Contractor, except Workers Compensation Insurance, shall also name both the City of Colorado Springs and the PPRTA as additional insureds. All insurance policies required for work on or adjacent to Union Pacific Railroad Company property shall meet all requirements of the executed Contractor's Right of Entry Agreement with Union Pacific Railroad Company.
6. Law: This contract is subject to and shall be interpreted under the law of the State of Colorado, and the Charter, City Code, Ordinances, Rules and Regulations of the City of Colorado Springs, Colorado, a Home Rule City and the Resolutions, Rules and Regulations of the PPRTA. Court venue and jurisdiction shall exclusively be in the Colorado District Court for El Paso County, Colorado. The Parties agree that this contract shall be deemed to have been made in, and the place of performance is deemed to be in, the City of Colorado Springs, El Paso County, State of Colorado. The Contractor shall insure that the Contractor and the Contractor's employees, agents, officers and subcontractors are familiar with, and comply with, applicable Federal, State, and Local laws and regulations as now written or hereafter amended.
7. Appropriation and availability of funds: In accord with the Colorado Constitution, Article X, Section 20, and the City Charter, performance of the City's obligations under this Contract is expressly subject to appropriation of funds by the City Council for this contract and the availability of those appropriated funds for expenditure. Further, in the event that funds are not appropriated in whole or in part sufficient for performance of the City's obligations under this Contract, or appropriated funds may not be expended due to Constitutional or City Charter spending limitations, then the City and the PPRTA may terminate this Agreement without compensation to the Contractor. Performance of the PPRTA's obligations under this Contract are expressly subject to appropriation of funds by the PPRTA and the availability of those funds for the payment of obligations incurred under this contract. Further, in the event that PPRTA funds are not appropriated in whole or in part sufficient for performance of the PPRTA's obligations under this Contract, or appropriated funds may not be expended legal limitations on non-availability, then the City and the PPRTA may terminate this Contract without compensation to the Contractor.

8. Indemnification: The Contractor agrees that the Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents, and the PPRTA, its officers, employees and agents, from and against any and all loss, damage, injuries, claims, cause or causes of action, or any liability whatsoever resulting from, or arising out of, or in connection with the Contractor's obligations or actions under this Contract.
9. Warranties: All warranties provided by Contractor under or pursuant to this Contract to the City shall also apply to the PPRTA.
10. Final Payment: Final payment under this Contract shall be made in accord with the terms of this Contract, except that final payment shall be made by the PPRTA, and the making and acceptance of final payment shall constitute a waiver of all claims by the Contractor against the City and the PPRTA.
11. Termination or default of Contract: In all contract provisions giving the City the right to terminate, for convenience or otherwise, or giving the City rights in the event of default by the contractor, the term City shall include the PPRTA.
12. Change Orders:
 - a) The Contractor agrees and acknowledges as a part of this Contract that no change order or other form or order or directive may be issued by the City which requires additional compensable work to be performed, which work causes the aggregate amount payable under this Contract to exceed the amount appropriated for this Contract, unless the Contractor has been given a written assurance by the City that lawful appropriations to cover the costs of the additional work have been made or unless such work is covered under a remedy-granting provision of this Contract.
 - b) The Contractor further agrees and acknowledges as a part of this Contract that no change order or other form or order or directive which requires additional compensable work to be performed under this Contract shall be issued by the City unless City or PPRTA funds are available to pay such additional costs, and, regardless of any remedy-granting provision included within this Contract, the Contractor shall not be entitled to any additional compensation for any additional compensable work performed under this Contract, including but not limited to emergency work, and expressly waives any rights to additional compensation, whether by law or equity, unless, prior to commencing the additional work, the Contractor was given a written change order describing the additional compensable work to be performed, and setting forth the amount of compensation to be paid, which change order was signed by the authorized City representative. It is the Contractor's sole responsibility to know, determine, and ascertain the authority of the City representative signing any change order under this Contract.
 - c) Any budget changes or significant changes to the design, requirements or scope of the Contract shall require the approval of the City and the PPRTA.

SECTION VI

NOT USED

SECTION VII**GENERAL PROVISIONS**

All bids submitted as a result of City of Colorado Springs Invitations for Bids (IFB) shall be in accordance with the latest version of the City's Procurement Rules, Regulations and Information. The latest version is posted on the City's web-site at www.springsgov.com/Contracting, and can be reviewed or downloaded.

DEFINITIONS AND TERMS

Also see Procurement Rules 1-103 Terms Defined

City	City of Colorado Springs, Colorado.
Contract Documents	Contract Documents shall consist of Advertisement for Bids, Instructions to Bidders, Form of Bid or Proposal, Addenda, the signed Agreement, surety bonds, insurance documents, the General and Special Provisions of the Contract, the Plans, the Specifications, the Drawings, including all modifications thereof incorporated in any of the documents before execution of the agreement. The term Plans shall include the term Drawings unless otherwise specified.
Contractor	The person, persons, firm, or corporation to whom a contract is awarded by the City and who is subject to the terms of said contract. Contractor shall include the agents, employees, workmen, Contractors and any assignees of said contract.
Due Date and Time	The scheduled date and time for the receipt of bids, and opening thereof.
Engineer	The City Engineer of Colorado Springs or, designated representative.
Project Engineer/Manager	The individual representing the City of Colorado Springs responsible for Managing and oversight of the Contract.
Notice	Any written notice served pursuant to the terms of the contract. Notice shall be deemed to have been duly served if delivered in person or by registered mail to: <u>Pre-award</u> The Contracting Specialist listed in the Invitation for Bid, City of Colorado Springs, City Contracts, 30 South Nevada Ave., Room 201, Colorado Springs, CO 80903. <u>Post award</u> The Project Manager listed in the Invitation for Bid, City of Colorado Springs, City Engineering, 30 South Nevada Ave., Room 403, Colorado Springs, CO 80903.

CITY OF COLORADO SPRINGS/PPRTA

Notice to the Contractor will be to the Chief representative of the Contractor at the site of the project in person; or by registered mail to the place stated in the papers prepared by the Contractor to accompany their proposal as the address of their permanent place of business; or as to the Surety on the performance bond by registered mail to the Surety at the home office of such surety.

Project	The entire improvement proposed by the City to be construed in whole or in part pursuant to the contract.
Proposal Form or Bid Proposal	A contract document prepared by the City upon which the bidder shall submit their bid.
Subcontractor	A person, firm, or corporation, other than the Contractor, supplying labor or materials, or both, or equipment furnished at the site of the project under an Agreement with the Contractor.
Surety	The person, firm, or corporation that has executed as surety the Contractor's Bid, Performance, Payment and Maintenance Bonds.
Calendar Day	Each and every day shown on the calendar, beginning and ending at midnight.

SECTION 100

PROSPECTIVE BIDDERS

100.01 PROCUREMENT RULES AND REGULATIONS

All formal Invitation for Bids (IFB) and/or Request for Proposals (RFP) advertised by the City of Colorado Springs are solicited in accordance with the City's Procurement Rules and Regulations. The City's Procurement Rules and Regulations can be reviewed and/or downloaded from the City Contracts web-site (see 100.01).

100.02 Advertisement for Bids

All bids estimated to exceed \$50,000.00 will be formally advertised under normal conditions. Formal bids will be advertised at least one time as a legal notice in the Colorado Springs Gazette Telegraph, and posted on the City's web-site at www.springsgov.com/Contracting.

All interested bidders may register via the City's web-site through CityWire to receive notification of bids posted on the web-site. This registration allows bidders to be automatically notified when a formal solicitation is advertised for the service or commodity they registered to provide.

100.03 Invitation for Bids - Content

The Invitation for Bids shall include the following: (a) Instructions and information to bidders concerning the bid submission requirements, including the time and closing date, the address of the office to which bids are to be delivered; (b) The project description, basis of award, delivery or performance schedule and inspection and acceptance requirements; (c) The contract terms and conditions, including warranty and bonding or security requirements as applicable.

Project specific requirements, terms and conditions, etc. for each solicitation will be modified to reflect the contractual requirements for that particular Invitation for Bids or Request for Proposals. These types of requirements will be specified in Instructions to Bidders, Terms and Conditions, General Provisions, and Specifications.

100.04 Equal Opportunity

The City Contracts Office shall be responsible for ensuring the procurement of products, commodities, and services are in a manner that affords all responsible businesses a fair and equal opportunity to compete.

SECTION 101

CONTRACT DOCUMENT INTERPRETATION

101.01 Intent of Contract Documents

- A. The sections of the contract documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intent of the contract documents is to include in the contract price the cost of all labor and materials, water, fuel, tools, plant, equipment, light, transportation, and all other expenses as may be necessary for the proper execution of the work.
- B. Any work shown on the Plans and not covered in the Specifications, or included in the Specifications and not shown on the Plans, shall be executed by the Contractor as though shown both on the Plans and included in the Specifications. If the Plans and Specifications should be contradictory in any part, the Specifications shall govern. Special specifications shall govern over standard specifications.

- C. If the Contractor, in the course of the work, finds any discrepancy between the Plans and the physical layout, or any errors or omissions in Plans or layout, he shall immediately so inform the Engineer, and the Engineer shall promptly verify them. Any work done after such discovery without written consent of the Engineer authorizing the same shall be done at the Contractor's risk.
- D. Any incidental and/or appurtenant items not specifically called for in the Plans and Specifications, but which are necessary to complete the work in accordance with the requirements of good practice, as determined by the Engineer, shall be included as a part of the Contractor's bid price and furnished at no additional cost to the Owner.
- E. In interpreting the contract documents, words describing materials or work which have a well known technical or trade meaning, unless otherwise specifically defined in the contract documents, shall be constructed in accordance with such well known meaning recognized by architects, engineers, and the trade.

101.02 Order of Precedence

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order: (a) Terms and Conditions; (b) Proposal Requirements; (c) Contract Form; (d) other documents, exhibits, and attachments (excluding the contract drawings); (e) the specifications; and (f) the contract drawings.

101.03 Special Provisions, Special Specifications

Special Provisions or Special Specifications may be written to expand upon, modify or cancel these general provisions or the standard specifications. If the special provisions and general provisions are contradictory, the special provisions shall govern. If the special specifications and standard specifications are contradictory, the special specifications shall govern.

101.04 Standard Manufacturer

Wherever the terms "standard", "recognized" or "reputable" manufacturers are used, they shall be construed as meaning manufacturers who have been engaged in the business of fabricating materials, equipment, or supplies of the nature called for by the Specifications for a reasonable period of time prior to the date set for opening of bids, and who can demonstrate to the satisfaction of the City that said manufacturer has successfully installed equipment, materials, or supplies of the type proposed to be furnished in at least three instances and that the performance of such materials, equipment, or supplies for a period of over twelve months prior to the date fixed for opening bids shall, prima facie, be deemed to have been engaged in such business for a reasonable length of time.

101.05 "Or Equal" Clause

Whenever in any section of the contract documents, any article, material, or equipment is defined by describing a proprietary product, or by using the name of manufacturer or vendor, the term "or equal" if not inserted, shall not be construed in such a manner as to exclude manufacturers' products of comparable quality, design, and efficiency, subject to review and approval by the Engineer. The Engineer may require that proposed equals be submitted for review and approval.

101.06 Time of Essence

In as much as the Contract concerns a needed improvement, the provisions of the Contract relating to the time of performance and completion of work are of the essence of this Contract. The Contractor shall begin work on the day specified in the Notice to Proceed and shall prosecute the work diligently so as to assure completion of the work within the number of calendar days or date specified, or the date to which the time for completion may have been extended.

101.07 Partial Waiver or Waiver by Acquiescence

Partial waiver or waiver by acquiescence of any of the general or special provisions of this contract shall not constitute waiver of any of the other provisions contained in the Contract Documents.

SECTION 102**COMPLIANCE WITH LAWS****102.01 Laws and Regulations**

This contract is subject to and shall be interpreted under the laws of the State of Colorado, and the Charter, City Code, Ordinances, Rules and Regulations of the City of Colorado Springs, Colorado, a Colorado Home Rule City. Court Jurisdiction shall exclusively be in the District Court for El Paso County. The Contractor shall insure that the Contractor and the Contractor's employees, agents, and officers are familiar with, and comply with, applicable Federal, State, and Local laws and regulations as now written or hereafter amended.

102.02 Public Improvement Assessment

If the cost of the improvement to be constructed under the contract is to be assessed upon the owners of land benefited by such improvement, upon complaint of any such landowner that the improvement is not being constructed in accordance with the contract, the City Council may consider the complaint and make such order in the premises as shall be just to ensure compliance with the contract.

102.03 ALL LEGAL PROVISIONS INCLUDED

It is the intention and agreement of the parties to this contract that all legal provisions of law required to be inserted, shall be and are inserted. However, if by mistake or otherwise, some such provision is not inserted, or is not inserted in proper form, then upon application of either party, the contract shall be amended so as to strictly comply with the law and without prejudice to the rights of either party.

102.04 Severability

If any provisions of this contract shall be held unconstitutional, illegal, or void, such finding shall not affect any other provisions of this contract.

102.05 Requirements for Corporations or Individuals Domiciled Outside the State of Colorado

Unless otherwise decided by reason of the amount of the Contract involved, or other good reason, before or at the time that the Contract is awarded to a corporation outside the State of Colorado, such corporation must have carried out the proper procedure authorized to do business in the State of Colorado, designate a place of business therein, and appoint an agent for service of process. Such corporation must furnish the City with a certificate from the Secretary of the State of Colorado to the effect that a Certificate of Authority to do business in the State of Colorado has been issued by his office and there shall also be procured from the Colorado Secretary of State a photostatic or certified copy of the designation of place of business and appointment of agent for service of process, or a letter from the Colorado Secretary of State that such designation of place of business and agent for service of process have been made. In the event the successful bidder is an individual operating a sole proprietorship, a partnership or joint venture, the execution of these Contract Documents by such successful bidder shall amount to an appointment of the Sheriff of El Paso County, Colorado, as the agent for service of process of such successful bidder for any and all disputes that may arise under the Contract with acknowledgment that the State of Colorado shall be the proper venue for determination of such a dispute.

102.06 Licenses and Permits

It shall be the responsibility of the successful bidder to obtain, at his expense, all necessary licenses and permits to do the project, in accordance with applicable Federal, State and local laws, regulations and ordinances. Typical permits and fees include, but are not limited to, Excavation/Boring Permits, Concrete Construction Permits, Fugitive Dust Permits, Regional Building Permits, Pavement Degradation fees, as well as Traffic Control and Barricade Plans to be approved by the City Traffic Division for all work within public rights-of-way and easements i.e. (curb and gutter, sidewalks, pedestrian ramps and cross pans).

SECTION 103**AWARD AND EXECUTION OF CONTRACT****103.01 Award**

The contract shall be awarded to the lowest responsive and responsible bidder in the best interests of the City as specified in the Instructions to Bidders of the Invitation for Bids or Request for Proposals.

103.02 Contracts Executed

Each contract must be executed in three (3) original counterparts and no more. There shall be executed original counterparts of the Contractor's Performance, Labor and Material Payment and Maintenance Bonds in equal number to the executed original counterparts of the contract. Each Bond counterpart shall have an original Power of Attorney attached. One (1) copy will be delivered to the Contractor. The successful bidder shall provide compensation insurance and public liability and property damage insurance as outlined in the contract. The costs of executing the bonds, contract and insurance, including all notarial fees and expense, are to be paid by the Contractor to whom the contract is awarded.

103.03 Verbal Agreements

No verbal agreements or conversations with any agent or employee of the City either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the contract.

103.04 Contract Security

The Contractor shall furnish good and sufficient Performance, Labor and Material Payment and Maintenance Bonds on the form attached hereto in an amount not less than the full amount of the contract price as security for the faithful performance of the contract, for the payment of all persons performing labor and furnishing material in connection with the work, and for all guarantees of materials and workmanship required in the Contract. If at any time during the continuance of the contract a surety on the Contractor's bond or bonds becomes irresponsible, the City shall have the right to require additional and sufficient sureties which the Contractor shall furnish within ten (10) days after written notice to do so. Any additional surety bonds shall cover the entire original contract amount and any increases thereto.

103.05 Bond Forms

Bonds shall be furnished on forms prepared by the City. Copies of the City's Bond Forms will be included in the Exhibits Section of the Invitation for Bids.

103.06 Independent Contractor

In the performance of the Contractor's obligations under this contract, it is understood, acknowledged and agreed between the parties that the Contractor is at all times acting and performing as an Independent Contractor, and the City shall neither have nor exercise any control or direction over the manner and means by which the Contractor performs the Contractor's obligations under this contract, except as otherwise stated within the contract terms. The Contractor understands and agrees that the contractor and the contractor's employees, agents, servants, or other personnel are not City

employees. The Contractor shall be solely responsible for payment of salaries, wages, payroll taxes, unemployment benefits or any other form of compensation or benefit to the Contractor or any of the Contractor's employees, agents, servants or other personnel performing services or work under this contract, whether it be of a direct or indirect nature. Further in that regard, it is expressly understood and agreed that for such purposes neither the Contractor nor the Contractor's employees, agents, servants or other personnel shall be entitled to any City payroll, insurance, unemployment, worker's compensation, retirement or any other benefits whatsoever.

SECTION 104

THE CONTRACT: FOLLOWING EXECUTION

104.01 Materials

Unless otherwise stipulated in the contract, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light power, transportation, and other facilities necessary for the execution and completion of the work. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

104.02 Schedule

The Contractor shall be responsible for planning, scheduling, and reporting the progress of the work to ensure timely completion of the work as called for in the Contract Documents. The Contractor shall prepare a Project Schedule that shall be used for coordination, for evaluation of progress, and for the evaluation of changes to the Contract. The Schedule shall include all activities, including those of subcontractors, Contractor's engineers and surveyors, and suppliers. Seasonal and weather constraints, utility coordination, railroad restrictions, right of way restrictions, traffic constraints, environmental constraints, other project interfaces, expected job learning curves and other constraints shall be considered when preparing the Project Schedule, including any phasing or sequencing of the work specified in the Contract Documents. Days scheduled as no work days shall be indicated. The Schedule shall consist of a Methods Statement as defined in part A. below and a progress schedule consisting of (1) a Critical Path Method (CPM) schedule as defined in part B. below, or (2) a Bar Chart schedule as defined in part C. below. A CPM Schedule shall be required if the contract exceeds \$250,000 or if the construction period exceeds 150 calendar days, unless the Contract Documents stipulate otherwise. The CPM Schedule shall utilize Primavera's Suretrak Project Manager software or be capable of being read and manipulated by Suretrak Project Manager software. The Schedule shall show all work completed within the contract time.

The Contractor shall submit two copies of all required schedule information as described below. Schedules, schedule updates, diagrams and reports using CPM shall also be submitted electronically in the appropriate software format. All schedules, diagrams, and reports shall include a title, project number, date of preparation, and the name of the Contractor.

The Bar Chart or Critical Path Method 90-day schedule shall be submitted at least 10 working days prior to the start of the work. The Project Engineer's review of the Schedule will not exceed 5 working days. Work shall not begin until the Schedule is accepted in writing, unless otherwise approved by the Project Engineer.

- A. **Methods Statement.** A Methods Statement shall be prepared for the prominent features listed in the Contract Documents, and for any feature not listed in the Contract Documents that the Contractor considers a controlling factor for timely completion. The Methods Statement shall be a detailed narrative describing each feature and all work necessary to complete the feature. The Methods Statement shall be submitted with the Contractor's schedule. The following format is required:

1. Feature: Name of the feature;
2. Responsibility: Contractor, subcontractor, supplier, utility, etc. responsible for the feature;
3. Procedures: Procedures to be used to complete the work. The procedure to be used shall include general information regarding methods such as forming, excavation, pouring, heating and curing, backfill and embankment, trenching, protecting the work, etc. When separate or different procedures are to be employed by the Contractor due to seasonal or project phasing requirements, such differing procedures shall be described in the procedure statement;
4. Production Rates: The planned quantity of work per day for each feature;
5. Labor Force: The labor force planned to do the work;
6. Equipment: The number, types, and capacities of equipment planned to do the work;
7. Work Times: The planned time for the work to include:
 - a. number of work days per week
 - b. number of shifts per day
 - c. number of hours per shift

At the Project Engineer's request, the Contractor shall update the Methods Statement, or any part thereof, and submit it with the Job Progress Narrative Report or Schedule Update, whichever is earlier.

- A. Critical Path Method. CPM is a scheduling method which shows the interdependencies between work activities. The critical path is that path through the schedule which, if delayed, will cause a delay to project completion.

The progress schedule shall include as a minimum the prominent features of this project as listed in the Contract Documents. The progress schedule shall include all activities for all work on the project, including subcontracted work, delivery dates for critical material, submittal and review periods, milestone requirements and no work periods. Where the project has specific phases, each phase shall be described separately for each applicable prominent feature.

Construction activity duration shall not exceed 15 calendar days unless approved by the Project Engineer. Series of activities that have aggregate durations of five calendar days or less may be grouped in a single activity. For example, "form, reinforce, and pour pier" could be defined as a single activity rather than three. Single activities or a series of grouped activities of at least 1 calendar day duration may also need to be included in the Project Schedule as determined by the Project Engineer (e.g. same activities but noted separately by location).

Time Scaled Logic Diagram: This diagram shall show the logical progression of all activities required to complete the work defined in the Contract Documents. Activity information shall include activity ID, description, duration, early start and finish dates, late start and finish dates, total float, and responsibility.

1. 90-Day Schedule. The 90-day Schedule shall provide all necessary detail for procurement, construction and submittal activities required during the first 90 days of contract time. This submittal shall include a Time Scaled Logic Diagram.
2. Project Schedule. The Project Schedule submittal shall consist of a Time Scaled Logic Diagram and Schedule Report. It shall be prepared in full and submitted to the Project Engineer within 45 calendar days after the Project Engineer's acceptance of the 90-day Schedule. The Project Engineer's review of the Project Schedule will not exceed one week. Revisions required

as a result of the Project Engineer's review shall be submitted within one week. Work shall not continue beyond the initial 90 days until the Project Schedule is accepted in writing, unless otherwise approved by the Project Engineer.

The Project Schedule shall cover the time from the Day of Notice to Proceed to the predicted completion date.

The Schedule Report shall tabulate for each activity the activity ID, description, duration, earliest start and finish date, latest start and finish date, total float time, and responsibility. Other reports and scheduling documentation may be requested by the Project Engineer

3. Schedule Updates. The Contractor shall update the 90-day Schedule or the Project Schedule to reflect actual construction progress of all work activities on the project. Updates shall show the previous 30 days progress and a 60-day projection for all work started, completed, or in progress during this three month window.

The Project Schedule shall be updated as of the cutoff date for the monthly progress pay estimate and submitted to the Project Engineer before the payment of the progress pay estimate is approved.

Each of the diagrams, charts, and reports shall comply with the requirements for the Project Schedule above, except that they shall also include the actual completion dates and percentages of completion for the appropriate activities.

B. Bar Chart. The Bar Chart shall be time scaled and shall show the following:

1. The prominent features, as listed in the Contract Documents.
2. Any feature not listed in the Contract Documents that the Contractor considers a controlling factor for timely completion.
3. The number of days required to complete each feature and its relationship in time to other features.
4. Sufficient space for each feature to permit two additional plots parallel to the original time span plot.
5. The anticipated delivery dates for equipment or materials in any feature that could affect timely completion of the project.
6. Critical completion dates for any activity within any feature that could affect timely completion of the project.
7. Connecting lines between features that show the intended progression of activities.

The Project Schedule shall cover the time from the Day of Notice to Proceed to the predicted completion date. The Project Schedule shall be updated as of the cutoff date for the monthly progress pay estimate and submitted to the Project Engineer before the payment of the progress pay estimate is approved. The Contractor shall provide a copy of the original bar chart showing, for each feature, the days actually worked and the anticipated days required to complete.

A Job Progress Narrative Report shall be submitted bi-weekly as a minimum and with all Schedule updates. It shall detail the description of job progress, problem areas, current and anticipated delaying factors and their anticipated effects, impacts to job milestones or project completion, any corrective action proposed or taken, and any minor revisions to the Schedule. If the Job Progress Narrative Report indicates problem areas and impacts to job milestones or project completion, a revised Schedule Update shall also be submitted as specified below.

Revision of the Schedule may be required, as determined by the Project Engineer, for: a major revision in the schedule logic or methods of construction; the addition, deletion, or revision of activities required by contract modification; delays in milestones or the completion of the project; or for prosecution of work that revises the phasing or staging which is represented on the plans or on the progress schedule. If in the opinion of the Project Engineer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve project progress, including those steps that may be required by the Project Engineer, without additional costs to the City. In those circumstances where the Contractor is behind schedule, the City may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit such changes and revisions to the schedule to the Project Engineer for approval that will demonstrate how the approved rate of required progress will be regained. Failure of the Contractor to comply with the requirements of the Project Engineer under this subsection shall be grounds for a determination by the City that the Contractor is not prosecuting the work with sufficient diligence to ensure timely completion of the contract as required.

If it is determined that a revision to the Schedule is required, it shall be provided to the Project Engineer for review within 15 calendar days of written notification. The Project Engineer's review of the revised schedule will not exceed 5 working days. Revisions required as a result of the Project Engineer's review shall be submitted within 5 working days. When accepted by the Project Engineer in writing, the revised schedule shall become the Project Schedule.

The Contractor shall participate in the Project Engineer's review and evaluation of the submittals. Meetings will be held to review progress and planning when requested by the Project Engineer or Contractor. The Project Engineer may request additional project scheduling information and documentation as deemed necessary, including reports and other information that may be reasonably generated using CPM software if required by the contract.

The Contractor shall prosecute the work according to the Schedule. The Contractor shall be responsible for assuring that its subcontractors, suppliers, and engineers/surveyors, at any tier, also prosecute the work according to the Schedule. The City shall be entitled to rely on the Contractor's Schedule for planning and coordination.

Acceptance of the Contractor's Schedule by the Project Engineer is not to be construed as relieving the Contractor of obligation to complete the contract work within the contract time allowed for the portion of the work or the entire Contract, or granting, rejecting or in any other way acting on the Contractor's request for extension of contract time, or claims for additional compensation.

All costs relating to preparation, submittal, and acceptance of the Schedule, reports and revisions, and all requirements of this subsection will not be paid for separately, but shall be included in the work.

Failure of the Contractor to comply with the requirements of this subsection shall be grounds for a determination by the Project Engineer that no further progress payments are to be made until the Contractor is in full compliance.

- C. Project Coordination. The Contractor shall be responsible to coordinate and schedule their work to include utility work anticipated or otherwise. Various City and private utility agencies may be working to install and/or inspect their utilities within the project area. Reasonable delays should be expected for utility lowering, relocations and placement. These delays shall not be reason for granting any monetary change or performance time alteration to the contract. As

a minimum, the Contractor's Project Schedule shall reflect coordination with the following:

1. City of Colorado Springs City Engineering Division
2. City of Colorado Springs Traffic and Transportation Engineering Division
3. Colorado Springs Utilities (water, wastewater, gas, electric)
4. City of Colorado Springs Parks, Recreation and Cultural Services Department
5. Telecommunication Companies

D. Contractor Early Finish or Voluntary Acceleration. Early finish or voluntary acceleration of the schedule by the Contractor is acceptable provided:

1. At the time the Contractor submits the Project Schedule indicating an early finish or voluntary acceleration, the City is notified in writing of actions on the City's part necessary to accommodate the change(s).
2. The City agrees to such change(s) in writing.
3. The City is compensated by the Contractor for any inconvenience or expense associated with the change(s).
4. There is no increased Contract cost.

104.03 Schedule of Values

- A. Promptly following the execution of the contract documents for all lump sum contracts, the Contractor shall prepare and transmit to the Engineer two copies of an itemized breakdown showing the unit quantities of each major construction item and the corresponding unit prices. Such unit prices shall contain all costs including profit and overhead of each item complete in place. The total cost of all the items shall equal the contract price for the project. This breakdown, when approved by the Engineer, will be used primarily in determining payment due the Contractor on periodical estimates. If, in the opinion of the Engineer, any unit price submitted by the Contractor is unbalanced, a detailed breakdown of the items contained in the unit will be required.
- B. For contracts bid on a unit price basis, payment shall be made based on the actual number of units installed or performed that are complete, however, payment shall not exceed the total contract amount unless previously approved by Change Order.

104.04 Surveys

- A. Unless otherwise specified in the Contract documents, the City will furnish all site surveys, easements, pipeline licenses, etc., necessary to authorize construction of any permanent works required in the Contract, where such work is to be done on property other than the City's.
- B. The project limits of construction shall be within the public right-of-way and/or easements. The Contractor shall not trespass on premises outside of the limits of construction for this project, unless permission to do so is granted by the property owner in writing. Copies of any such grant shall be furnished to the City prior to the performance of any work outside the limits of construction.

104.05 Taxation

The Contractor's payment or exemption of State of Colorado, El Paso County and City Sales and Use Taxes shall be as specified in the as specified in the Instructions to Bidders of the Invitation for Bids or Request for Proposals.

104.06 Assignment of Contract

No assignment or transfer by the Contractor of this contract or any part thereof or of the funds to be received thereunder by the Contractor will be recognized unless such assignment has had the prior written approval of the City and the surety has been given

due notice of such assignment. Such written approval by the City shall not relieve the Contractor of the obligations incurred by them under the terms of this contract. In addition to the usual recitals in assignment contracts, the following language must be set forth:

It is agreed that the funds to be paid to the assignee under this assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

104.07 Subcontracts

The Contractor shall as soon as practical after signing the contract, notify the Project Engineer/Manager in writing, giving the names and qualifications of all subcontractors proposed for work within fifteen (15) business days of notice of award. The City shall have the right to reject subcontractors who are debarred or suspended from doing business with the City of Colorado Springs. The Contractor shall notify the Engineer of each subcontract he awards, giving:

- A. Name, address, and telephone number of the subcontractor
- B. Branch of work covered
- C. Total price of subcontract
- D. Date of subcontract

It shall be the responsibility of the Prime Contractor to file with the Engineer copies of applicable permits and licenses required to do the subcontracted work.

104.08 Other Contracts

The City may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with City employees and shall carefully adapt their scheduling and performance of the work to accommodate the additional work, heeding any direction that may be directed by the Project Engineer/Manager. The Contractor shall not commit or permit any act, which will interfere with the performance of work by any other contractor.

SECTION 105

CONSTRUCTION SITE

105.01 Lands to be Used for Work

- A. The City shall provide as indicated the lands upon which the work under this contract is to be done, right-of-way for access to same, and such other lands which are designated on the Drawings for the use of the Contractor, unless otherwise noted in the contract documents.
- B. The Contractor shall provide at their expense and without liability to the City any additional land and access thereto that may be required for temporary construction facilities, or for storage of materials. All such costs will be considered as having been included in the bids for the contractor.

105.02 Storage of Materials

The Contractor shall confine their equipment, apparatus, the storage of materials and operations of Contractor's workmen to limits indicated by law, ordinances, permits, or directions of the City and shall not encumber the project site with materials or equipment not necessary for the project.

105.03 Loading of Structures

The Contractor shall not load or permit any part of the structure to be loaded with a weight that will endanger the structure's safety. The Contractor shall enforce the Engineer's instructions regarding signs, advertisements, fires, and smoke.

105.04 Sanitary Provisions

The Contractor shall provide and maintain on the construction work at all times suitable sanitary facilities for use of those employed on this contract without committing any public nuisance. All toilet facilities shall be subject to the approval of the El Paso County Health Department.

105.05 Accident Prevention

Precaution shall be exercised at all times for the protection of persons, including employees, and property. The safety provisions of all Federal, State and Municipal laws and any other codes relating to the public safety, shall be strictly observed, and the contractor shall, at all times, whether or not so specifically directed by the Engineer, take the necessary precautions to ensure the protection of the public.

Piling, sheeting and shoring shall be utilized where required to prevent any excessive widening or sloughing of the trench which may be detrimental to human safety, traffic flow, the pipe being placed, trees, or to any existing structure.

Excavated materials shall be placed a safe distance from the sides of the trench. Heavy equipment shall not be used or placed near the sides of the trench unless the trench is adequately braced. If the Engineer or any City Safety Officer or their designated representatives become aware of failure to comply with applicable safety regulations, the Engineer or City Safety Officer or their designated representatives may inform the contractor who shall take immediate steps to remedy the noncompliance. The Engineer or City Safety Officer or their designated representatives shall give written notification to the contractor directing them to correct the unsafe acts or conditions. If the contractor fails to comply with such a notification, the Engineer or City Safety Officer or their designated representatives may issue a "stop work" order in accordance with Section 108.06 of the General Provisions of this contract, and work shall only be resumed after adequate corrective actions have been taken to comply with the safety deficiencies the Contractor has been notified of. Stoppage of work because of noncompliance with prescribed accident precaution measures shall not be subject to claim for changed condition or changes in work, nor for extension of completion time.

105.06 Protection of the Public Works and Property

- A. The Contractor shall provide and maintain all necessary watchmen, barricades, lights, and warning signs and take all necessary precautions for the protection of the public. The contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the City's property from injury or loss arising in connection with the contract. The Contractor shall make good any damage, injury, or loss to their work and to the property of the City resulting from lack of reasonable protective precautions except such as may be due to errors in the contract documents, or caused by agents or employees of the City. The Contractor shall check all cautionary signs at least once a day during this contract.
- B. The Contractor shall continuously maintain adequate protection of all their work from damage and shall protect the City's and adjacent property from injury arising in connection with this contract.
- C. The Contractor will be responsible for any and all damage to property, public or private, that may be caused by their operations in the performance of this contract, and the Contractor shall defend any suit that may be brought against

themselves or the City on account of damage inflicted by their operations, and shall pay any judgments awarded to cover such damage.

- D. The contractor shall be responsible for the restoration of all existing surface or subsurface improvements where damaged as a result of construction at no additional cost to the City.

105.07 Public Roads

The Contractor in executing the work on this project shall not unnecessarily impede or interfere with traffic on public highways or streets. Detours, including surfacing, guard rails, temporary bridges and culverts, as may be shown on the drawings, or ordered by the Engineer to accommodate the general public, residents adjacent to the improvements, and the United States mail shall be provided and maintained by the Contractor in a good workmanlike manner. Any call out of City Barricade Crews shall be charged to and paid for by the Contractor.

All work done within the public right-of-way and/or easements requires an approved Traffic Control Plan by the City Traffic Engineering Division.

The Contractor shall provide and maintain in place all barricades, warning signs, lights and other safety devices required to protect the work, divert traffic, and warn pedestrians of open excavation, unfilled trenches, and other areas or conditions which might be hazardous or dangerous during the daylight or dark. Detour routings must first be submitted to the Traffic Engineer for review and approval and shall be signed for the entire route of the detour as required to return the traffic to their street or origination. Detours shall be maintained throughout the period of construction in such a manner as to provide the least amount of disruption to normal traffic flow

All signing and barricading shall conform to the latest edition of the Manual of Uniform Traffic Control Devices for Street and Highways, refer to Section 800. The Traffic Engineer may require flag persons or off-duty police officers for traffic direction. Any call out of the City Barricade crews shall be charged to the Contractor.

105.08 Failure to Maintain Safe Site

In case of injury to persons or property by reason of failure to erect and to maintain necessary barricades, safeguards, and signals, or by reason of any act of negligence of the Contractor, or Contractor's subcontractors, agents, or employees, during the performance of this contract, the City may withhold payments due the Contractor so long as shall be reasonably necessary to indemnify the City on account of any such injuries, but the City's payment or failure to pay any sum shall not be considered as a waiver of its right under the indemnity provision of this contract.

105.09 Pollution

The Contractor shall at all times ensure compliance with applicable Federal, State, and Municipal air, water, and noise pollution laws and ordinances. The Contractor shall at all times have the proper sprinkling equipment available and shall apply water in the amount determined by each site condition or as directed by the Engineer. The Contractor shall obtain all necessary permits at Contractor's expense, which may include, but not be limited to, El Paso County or a State Air Emission permit, State of Colorado Construction Activity permit, State of Colorado Dewatering permit and Section 404 Corp of Engineers permit, unless otherwise specified in the Invitation for Bids.

105.10 Clean-Up

The Contractor shall at all times keep the work area including storage and staging areas, free from accumulations of waste materials. The Contractor is also responsible for any costs associated with cleanup of debris from the work site or storage areas that may inadvertently be scattered outside the area by weather or vandalism. Upon completion of the work, the Contractor shall leave the work area in a clean neat, and orderly condition satisfactory to the Project Engineer/Manager.

105.11 Protection of Existing Curbs, Gutters and Driveways

The Contractor shall exercise care in protecting existing curbs, gutters and driveways. Curbs, gutters and driveways damaged by the Contractor's operations shall be removed and replaced by the Contractor at Contractor's expense.

105.12 Temporary Construction

All temporary facilities, including the Contractor's field office which they may maintain at the site, and additional offices erected by subcontractors, shall be neatly constructed and arranged on the site in an orderly manner. The Contractor shall prepare and submit to the Engineer, for approval prior to starting work, a construction plan layout, showing arrangement of storage areas, temporary buildings, equipment, and work areas. The Contractor shall provide suitable weather-tight storage sheds of capacity required to contain all materials which might be damaged by storage in the open. The Contractor shall at all times keep copies of all contract documents readily accessible at their office at the site.

105.13 Temporary Water Supply

The Contractor shall provide at Contractor's own expense temporary water connections and water supply necessary for the prosecution of the work and permit all contractors on the work to use this supply at a reasonable prorated charge, or by submetering. The Contractor shall pay for all water consumed in the work, and shall arrange with municipal authorities for temporary connections and payment of service charges. (Use most current Code of the City of Colorado Springs). Upon completion of the contract work, all temporary waterlines shall be removed.

105.14 Temporary Electric Light and Power

The Contractor shall arrange with the City Utility Departments for temporary electric light and power necessary for the prosecution of the work. The Contractor shall pay for all electric current consumed, and shall permit all contractors on the work to use this supply at a reasonable prorated charge, or by submetering.

105.15 Temporary Heat

The Contractor shall provide adequate, temporary heat required during construction. Until the building or work area is enclosed, heavy tarpaulin shall be used to enclose any space requiring heating or protection from weather during construction operations. After the heating plant is in operating condition and the building is enclosed, heat may be provided from the permanent heating plant if such is approved by the Engineer. In such case, the Contractor shall arrange to operate the plant, connect permanent or temporary radiation or unit heaters, and so maintain the plant during operation that it will be turned over to the City undamaged at the completion of the work. The Contractor shall provide all fuel required. In no case shall salamander heating be used in finished or plastered surfaces; instead, gas-steam radiators, unit heaters, or other suitable and approved means shall be used if the permanent heating plant is not available.

105.16 Temporary Enclosures

The Contractor shall provide and maintain temporary enclosures for the work as may be required to permit continuation of interior work during inclement weather, if wall and roof construction has progressed sufficiently to make interior work possible.

SECTION 106**INSURANCE AND INDEMNITY****106.01 Contractor's Insurance**

The Contractor shall secure and maintain during the life of this contract such insurance policies as will protect Contractor and Contractor's Subcontractors, the City, and each of their officers, agents and employees from claims for bodily injuries, death, or property damage, which may arise from operations under this contract whether such operations be by the Contractor or by any Subcontractor or anyone employed by them directly or

indirectly. The Contractor shall not commence work under this contract until Contractor has obtained all insurance required and such insurance has been approved by the City of Colorado Springs. Also, the Contractor shall not allow any Subcontractor to commence work on any subcontract until all similar insurance required of the Subcontractors has been obtained. The following insurance policies are required:

Worker's Compensation Insurance

Contractor shall take out and maintain during the period of this contract, Colorado Worker's Compensation Insurance for the Contractor and all employees of the Contractor. If any service is sublet by the Contractor, the Contractor shall require the subcontractor to provide the same coverage for the subcontractor and the subcontractor's employees. Worker's Compensation Insurance shall include occupational disease provisions covering any obligations of the Contractor in accordance with the provisions of the Worker's Compensation Act of Colorado.

Employer's Liability. The Contractor shall take out and maintain during the life of this contract, Employer's Liability Insurance with a limit of \$100,000 in an insurance company authorized to write such insurance in all states where the Contractor will have employees located in the performance of this contract and the Contractor shall require each of his Subcontractors similarly to maintain Employer's Liability Insurance on his employees.

Public Liability. The Contractor shall maintain during the life of this contract such Public Liability Insurance as shall protect the Contractor against claims for damages resulting from (a) bodily injury, including wrongful death, and (b) property damage, which may arise from operations under this contract whether such operations be by the Contractor or by any Subcontractor or anyone directly or indirectly employed by either of them.

The Public Liability Insurance required by the preceding sub- paragraph shall include the following extensions of coverage:

1. The coverage shall be provided under a Comprehensive General Liability form of policy or similar thereto.
2. X.C.U. Coverage - If the contract requires any work procedures involving blasting, excavating, tunneling, or other underground work, the City may require Standard Blasting or Explosion Coverage, Standard Collapse Coverage and Standard Underground Coverage, commonly referred to as XCU property damage liability coverage. If this coverage is required, it will be specified in the contract and the limits shall be specified in the Special Provisions.
3. The property damage coverage shall include a Broad Form Property Damage Endorsement.
4. Contractual Liability coverage shall be included.
5. Protective Liability coverage shall be included to protect the Contractor against claims arising out of operations performed by Contractor's Subcontractors.
6. Products Liability and/or Completed Operation coverage shall be included.

Automobile Liability. The Contractor shall take out and maintain during the life of the contract such comprehensive Automobile Liability Insurance as shall protect the Contractor against claims for damages resulting from (1) bodily injury, including wrongful death, and (2) property damage, which may arise from the operations of any owned, hired or non-owned automobiles used by or for the Contractor in any capacity in connection with the carrying out of this contract.

- A. Other forms of insurance shall also be provided if specified in the Special Provisions.
- B. The minimum acceptable policy limits for each project shall be as set forth below or as specified in the Special Provisions. The required insurance coverage shall in no way lessen or limit the liability of the Contractor under the terms of the contract. The Contractor shall procure and maintain at Contractor's own cost and expense, any additional kinds and amounts of insurance that in Contractor's own judgement, may be necessary for his proper protection in the prosecution of the work.

Statutory Workmen's Compensation

Insurance Coverage	Minimum Limits
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Employer's Liability	
each person	\$ 100,000

Comprehensive General Liability

Insurance Coverage	Minimum Limits
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Bodily Injury:	
each occurrence	\$ 500,000
aggregate	\$1,000,000

Property Damage:	
each occurrence	\$ 500,000
aggregate	\$ 500,000

Comprehensive Automobile Liability

Bodily Injury:	
each person	\$ 500,000
each accident	\$ 500,000

Property Damage:	
each accident	\$ 500,000

- C. The Contractor and all Subcontractors shall include the City of Colorado Springs and the City's officers, agents and employees as "additional insured parties" on each policy for each project, except for Worker's Compensation Coverage.
- D. The Contractor shall furnish the Project Engineer with applicable Insurance Policies or Certificates of Insurance with required insurance coverage. They shall contain a provision that thirty (30) days written notice shall be given to the City prior to cancellation or revisions to any of the insurance. These Policies or Certificates of Insurance will be subject to City approval prior to execution of the contract.

106.02 Indemnification

Contractor agrees that the Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents, from and against any and all loss, damage, injuries, claims, costs, including attorney's fees, cause or causes of action, or any liability whatsoever resulting from, or arising out of, or in connection with the Contractor's obligations or actions under this contract, or from any act or obligation of any subcontractor, laborer, materialman or agent of the Contractor.

This indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable for or by the Contractor or any subcontractor, manufacturer or supplier under Workmen's Compensation Act, disability benefit acts or other employee benefit acts.

106.03 Third Party Liability

It is specifically agreed between the parties executing this contract that this contract is not intended by any of the provisions to create in the public or any member thereof any third party beneficiary rights whatsoever, or to authorize anyone not a party to this contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this contract.

106.04 Risk Insurance

Unless otherwise set forth in the Contract Documents, the City shall not maintain risk insurance on the project.

SECTION 107

ROYALTIES, PATENT INFRINGEMENTS, SPECIAL LICENSES AND PERMITS

107.01 Royalties and Patents

The Contractor shall pay all applicable royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights and save the City harmless from loss on account thereof except that the City shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, unless the City has notified the Contractor prior to the signing of the contract that the particular process, design, or product is patented or is believed to be patented.

107.02 Permits, Licenses and Regulations

Permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor. The Contractor shall be responsible for all water and wastewater tap fees and water and wastewater connection fees as set forth in the Code of the City of Colorado Springs, as amended. Projects that involve Building Permits and sprinkler systems will require water or wastewater connection fees or both.

Licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the City, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Plans and Specifications are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work.

Prior to the start of construction, the Contractor shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work. Copies of the fully executed permits shall be furnished to the Engineer. It is the responsibility of the Contractor to be aware of the terms and conditions of all permits, and it is the Contractor's responsibility that the terms and conditions are satisfied." (REF. 102.06, 105.09)

WORK PROVISIONS AND RULES

108.01 Commencement and Completion of Work

- A. Preconstruction Conference. After issuance of Notice of Award, or as otherwise established by the City, a preconstruction conference shall be held for review of the construction schedule, Contractors written list of Subcontractors and suppliers, project contracts, utility support plan, water control plan, Traffic Control Supervisor name and telephone number, gradations, test results, certifications, to review procedures for handling shop drawings and other submittals, processing applications for payment, and other pertinent items.
- B. The Contractor shall commence work within ten (10) calendar days after the date specified on the Notice to Proceed and complete the contract within the number of calendar days or by the date specified in the proposal form. (Unless otherwise noted the number of days set out in proposal form are calendar days).
- C. The dates fixed for commencement and completion of the work may be extended by the Engineer. All requests for extension of time by the Contractor shall be made in writing to the Engineer and shall set forth the reasons for such requests. The Engineer shall fix the period of extension, if any. The Engineer's decision shall be binding upon the parties hereto. Requests for extension of time received twenty (20) or more days after the occurrence of the delay will not be honored. No requests for extension of time shall be honored if submitted after the completion date.
- D. If satisfactory execution and completion of the contract shall require work or materials in greater amounts or quantities other than those set forth in the contract, then the contract time shall be adjusted at the time of the execution of the Change Order. No allowance will be made for delays or suspension of the prosecution of the work due to the fault of the Contractor.

108.02 Failure to Complete Work on Time, Liquidated Damages

If the Contractor fails to fully perform and complete the work in conformity to the provisions and conditions of the contract within the specified time limit set forth in the contract, including any extensions granted hereto, the Contractor shall pay to the City for each calendar day of delay until such time the contract is complete, liquidated damages at the applicable daily rate below. The amounts shown are considered to be liquidated damages to reimburse the City for the additional cost of construction engineering and contract administration services and in no case are considered a penalty.

Original Contract Amount	Amount of Liquidated Damages Per Day
Less than \$50,000 \$300.00	
\$50,000 to \$100,000 \$500.00	
\$100,000 to \$500,000	\$700.00
\$500,000 to \$1,000,000	\$900.00
Over \$1,000,000 \$1500.00	

108.03 Work in Bad Weather

No construction work shall be done during stormy, freezing, or inclement weather, except such as can be done satisfactorily, and in a manner to secure first class construction throughout, and then only subject to permission of the Engineer.

The granting of a time extension for inclement weather does not imply or guarantee that additional compensations for incidental and appurtenant work caused by such weather will be approved or authorized by the Engineer. The Contractor is instructed to include as part of the Contractor's total bid price the costs for such weather delays as can be reasonably anticipated. The Engineer will be the sole judge as to the reasonableness of delays for inclement weather.

108.04 EXCUSABLE DELAYS

The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause if:

1. The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include:
 - (i) Acts of God or of the public enemy,
 - (ii) Acts of the Government in either its sovereign or contractual capacity,
 - (iii) Acts of another Contractor in the performance of a contract with the Government,
 - (iv) Fires,
 - (v) Floods,
 - (vi) Epidemics,
 - (vii) Quarantine restrictions,
 - (viii) Strikes,
 - (ix) Freight Embargos,
 - (x) Unusually severe weather, or
 - (xi) Delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the Subcontractors or Suppliers.

108.05 Emergency Work

In an emergency affecting the safety of life or of the work or of adjoining property, the Contractor is, without special instructions or authorization from the Engineer, hereby permitted to act at Contractor's discretion to prevent such threatening loss or injury. Contractor shall also act, without appeal, if so authorized or instructed by the Engineer. Any compensation claimed by the Contractor on account of emergency work shall be determined by agreement or in accordance with the changes in Work Provision of this contract.

108.06 Authority of the Engineer

- A. The Engineer shall perform technical inspection of the work. The Engineer has authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the contract. The Engineer shall also have authority to reject all work and materials, which do not conform to the contract and to decide questions, which arise in the execution of the work.

The Engineer shall, within a reasonable time after their presentation to the Engineer, make decisions in writing on all claims submitted to the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. The Engineer's decisions shall be final.

Suspension of Work

The Project Engineer/Manager may order the Contractor, by giving fifteen (15) days written notice, to suspend, delay, or interrupt all or any portion of the work

required by the contract for a period of up to 10 ten calendar days, for the convenience of the City at no additional cost.

108.07 Construction Observation and Inspection

- A. The Engineer shall at all times have access to the work and the Contractor shall provide proper equipment, materials and labor as required for such access and inspection.
- B. All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. The Engineer shall have the right to reject materials and workmanship, which are defective, or require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the City. If the Contractor does not correct such condemned work and remove rejected materials within a reasonable time fixed by written notice, the City may remove them and charge the expense to the Contractor.
- C. Should it be considered necessary or advisable by the Engineer at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall on request promptly furnish necessary facilities, labor and materials. If such work is found to be defective in any material respect due to fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus fifteen (15) percent, will be allowed the Contractor.
- D. All materials to be incorporated in the work, all labor performed, all tools, appliances, and methods used shall be subject to the inspection and approval or rejection of the Engineer.
- E. If the Engineer shall point out to the Contractor, Contractor's foreman, or agent any neglect or disregard of the contract provisions, such neglect or disregard shall be remedied and further defective work be at once discontinued.
- F. The Contractor shall execute the work only in the presence of the Engineer or authorized representative, unless provision has been made for the work to proceed without complete engineering supervision or inspection. The presence of the Engineer or authorized representative shall in no way relieve the Contractor of the responsibility of this contract, or be any warrant for the furnishing of bad material or poor workmanship.
- G. The observation of the work by the Engineer is intended to aid the Contractor in applying labor, materials, and workmanship in compliance with the contract provisions. Such observation, however, shall not relieve the Contractor from any of Contractor's contract obligations.

108.08 Contractor Cooperation

- A. Discrepancies: If the Contractor, as the work progresses, finds any discrepancies between the Plans and physical conditions or any errors in the Plans or layout as given by the stakes or instructions, it shall be the Contractor's duty to inform the Engineer in writing and the Engineer shall address such discrepancy in a reasonable period of time. Any work done after such discovery until authorized will be done at the Contractor's risk.

Workmen, Methods and Equipment: Permission from the Engineer to use any particular methods, equipment or appliances shall not be so construed as to

relieve the Contractor from furnishing other equipment or appliances or adopting other methods when those in use prove unsatisfactory to the Engineer, or as to bind the Engineer to accept work which does not comply with the contract.

All work under this contract shall be performed in a skillful and professional manner. The Project Engineer/ Manager shall have the authority to notify the Contractor in writing, that the Contractor remove from the work site any employee the Project Engineer/Manager deems incompetent, careless, or otherwise objectionable to the general public or the City of Colorado Springs.

108.09 Contractor's Responsibility for Work

- A. Until the work is accepted by the Engineer as evidenced by the issuance of the Certificate of Completion, the Contractor shall have the charge and care thereof and shall take every necessary precaution against injury or damage to any part thereof by action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expense thereof.
- B. The Contractor shall be responsible for the preservation of all public and private property, trees, fences, monuments, and other property, along and adjacent to the improvements and shall use suitable precautions necessary to prevent damage to pipes, conduits, and other underground structures. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work, or in consequence of the nonexecution thereof on the part of the Contractor, such property will be restored by the Contractor and at Contractor's expense to a condition similar, or equal to that existing before such damage or injury to the satisfaction of the City's Project Manager.
- C. It shall be the responsibility of the Contractor, when moving or operating equipment, to make all arrangements for temporary crossings of telephone, transmission, pipe lines, railroad tracks, and irrigation ditches. This work shall not be paid for as a separate item but shall be considered as incidental to the project.

108.10 Protection of Utilities

- A. The Contractor's attention is directed to the fact that utilities may encroach on the construction of this project, and also to the importance of protecting all public/private utilities encountered on this project. These may include telecommunications, cablevision, traffic signal lines and power lines, water lines, sewer lines, gas lines, railroad tracks, and other overhead and underground utilities.

Any information concerning underground utilities shown on the drawings is intended to be merely an aid to the Contractor. The accuracy of information with respect to underground utilities is not guaranteed. The Contractor shall make their own investigation, including exploratory excavations, to determine the locations and type of existing mains or service laterals or appurtenances when their presence can be inferred from the presence of other visible facilities, such as building, manholes, inlets, meters and junction boxes, on or adjacent to the site of the work. If the Contractor discovers utility facilities not identified in the plans or specifications or in a position different from that shown in the plans and specifications, the Contractor shall immediately notify verbally and in writing the Engineer and Owner of the utility facility.

- B. Before any excavation is begun in the vicinity of water lines, railroad tracks, or structures, sewer lines, telecommunication conduits or cablevision line, each utility company, department, or company concerned must be notified in advance

of such excavation, and such excavation shall not be made until an authorized representative of the utility concerned is at the site.

- C. All utilities encountered must be kept in operation by the Contractor and must be protected and/or repaired at the Contractor's own expense, unless otherwise specified in the contract documents. The Contractor shall be held liable for all damages to any and all public utilities encountered on the project, which damages are due to the Contractor's operations. Such damages shall include all physical damages to utilities and also all damages due to interruption of service of such utilities, when such damages and interruptions are caused by the Contractor's operations.
- D. Where alterations or moving of utilities is not required to permit construction of the project, the Contractor shall take such measures as the Engineer may direct to properly protect these utilities throughout his construction operations and shall cooperate at all times with the proper authorities and/or owners in maintaining service of railroads, conduits, pole lines, transmission lines, pipe lines, sewers, etc., affected by this project.
- E. The costs of damages due to the Contractor's operation or the cost of protecting utilities where alteration or moving is not required to permit construction of the project shall be included in the original contract price for the project.
- F. Should any pipe line, water lines, or gas mains, electrical conduits, sewer pipes, overhead wiring, telecommunication lines, power lines, or any other such utilities, not specifically mentioned and provided for elsewhere as a part of this contract, have to be moved, repaired, reconditioned, or revised due to the construction, or moved temporarily to permit construction of the project the party or parties owning and operating such utilities shall perform the actual work of moving, repairing, reconditioning, or revising such utilities. The cost of this work shall be borne by the utility companies involved, unless other agreements are reached with the City.
- G. Existing Utilities
 - 1. Existing Gas Lines: As of April 1, 1983, Federal law requires anyone who uncovers a gas line to report it to the gas company and allow it to be inspected by the gas company personnel before it is backfilled. The Gas Department is to be notified prior to any excavation around gas lines. A Gas Department inspector is to be notified and present on site prior to construction activities around gas lines.
 - 2. Existing Sewer Mains and Services: All relocation, replacement protection shown on the plans or determined necessary by the inspector shall be performed according to the latest Wastewater Department Standard Specifications. Minimum 48 hours notice must be given to the Wastewater Department prior to any related work.

The Contractor shall adjust sanitary sewer manhole rims to an elevation acceptable to the City Wastewater Department. The Contractor shall contact the City Wastewater Department twenty-four (24) hours prior to manhole rim adjustments.
 - 3. Existing Water Mains and Services: All relocation, replacement or protection shown on the plans or determined necessary by the inspector shall be performed according to the latest Water Department Standard Specifications and the Water Service Standard Specifications. Minimum 48-hour notice must be given to the Water Department prior to any related work. The Water Department reserves the right to schedule any

operations at their discretion and to provide for any requirements determined necessary to perform the work. The Contractor shall coordinate with the Water Department and receive their approval prior to performance of the work.

H. Utility Support Systems:

1. If required by the contract documents, or requested by the Engineer, the Contractor shall submit shop drawings for the method of temporary support for all existing utilities during construction. The temporary support details for existing utilities shall be submitted for review and approval prior to performance of the work. Shop drawings must bear the seal of a Professional Engineer registered in the State of Colorado, unless so waived by the City.
 2. Regardless of City approved shop drawings, the Contractor shall be responsible for the satisfactory support of the utility system and any damages that may occur to the utility involved.
- I. Electric Utility Installation: Any electric facilities unless otherwise noted are to be relocated or modified by the City of Colorado Springs Electric Department. The Contractor shall coordinate the work with the Electric Department and the Electric Department's Contractor.
- J. Telecommunication Agencies: Any telephone facilities unless otherwise noted are to be relocated or modified by the respective private utility company. The Contractor shall coordinate the work with the respective private utility company.
- K. Cablevision: The television utilities are to be relocated by Cablevision. The Contractor shall coordinate the work with Cablevision.

108.11 Labor

- A. The Contractor shall employ only competent and skilled workmen and foremen in the conduct of work on this contract. The Contractor shall at all times enforce strict discipline and good order among Contractor's employees. The Engineer shall have the authority to order the removal from the work of any Contractor's employee who refuses or neglects to observe any of the provisions of these Plans or Specifications, or who is incompetent, abusive, threatening, or disorderly in conduct, and any such person shall not again be employed on the project.
- B. Colorado labor shall be employed to perform the work to the extent of not less than eighty percent (80%) of each type or class of labor in the several classifications of skilled and common labor employed on this project, as required and defined in Section 8-17-107 C.R.S. 1973.
- C. Eight (8) hours shall constitute a day's labor and Monday through Friday shall constitute a workweek. In no event shall the City be responsible for overtime pay.

108.12 Employment of Labor

The Contractor shall comply with, and protect and hold the City harmless from any violation of all laws and lawful rules and regulations, both of the State of Colorado and of the United States, relating to Workmen's Compensation, unemployment compensation, Social Security, payment for overtime, and all other expenses and conditions of employment under this contract.

108.13 Equal Employment Opportunity

During the performance of this contract, the Contractor agrees as follows:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, sex, color or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, sex, color or national origin. Such actions shall include, but not be limited to, the following: 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.

The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, sex, color or national origin.

108.14 Federal Funds

- A. If this contract is a Federally assisted construction contract all applicable federal requirements, terms and conditions, provisions and forms will be included in the bidding documents. Additionally, the Contractor agrees as follows:

The Contractor shall complete and submit with its bid all federal forms and certifications included in the bidding documents.

- B. The Contractor will send to each labor union or representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the labor union or workers representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- C. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- D. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Secretary of Labor, State of Colorado Civil Rights Commission and any other governmental agency entity which may be assisting with the funding under this contract for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- E. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further government contracts or Federally assisted construction contracts in accordance with the procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or otherwise provided by law.

- F. The Contractor include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the city, state, or any federal governmental entity may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event the Contractor becomes involved in, or threatened with, litigation with a subcontractor or vendor as a result of such direction by the city, state, or any federal governmental entity, the Contractor may request the city, the state, or the United States to enter into such litigations to protect the interests of such governmental entity.

108.15 Superintendence

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Engineer and with other Contractors or utility company employees in every way possible. The Contractor shall have at all times, on the work, as Contractor's agent, a competent superintendent capable of reading and thoroughly understanding the Plans and Specifications, and who shall have the necessary authority to receive and promptly execute the instructions and orders from the Engineer or the Engineer's authorized representative. Such superintendent shall be furnished irrespective of the amount of work sublet. The Contractor shall supply the Engineer with a list of phone numbers at which the Contractor, his superintendent and foreman can be reached at any time. The assigned Superintendent must adhere to the cooperation requirements specified in Section 108.08 and is subject to removal if so ordered in writing by the Engineer/Project Manager.

108.16 Preparation

All vegetation, stumps, and debris and other objectionable objects shall be removed from the area staked out by the Engineer, and where necessary from the area immediately adjacent thereto. Such debris shall be hauled from the site of the construction and wasted as directed by the Engineer.

108.17 Staking Work

- A. The Engineer shall provide reference points (horizontal and vertical control) only, unless otherwise noted in the bid proposal and project specifications. The Contractor shall engage the services of a licensed surveyor or surveying firm (hereinafter referred to as the Surveyor) to be approved by the Engineer. The Surveyor shall perform all detailed construction layout and staking including the staking of all storm sewer, street improvements, and utility relocations in accordance with the plans and specifications. The Contractor shall be responsible for the correctness and accuracy of the detailed layout of finished structures.
- B. Any instrument man or survey assistant employed on the work by the Contractor or his Subcontractors who is judged by the Engineer to be incompetent shall be removed from the work and replaced by a competent individual.

108.18 Deviation Allowed

Finished surfaces in all cases shall conform with lines, grades, cross sections and dimensions shown on the approved drawings or described in the Specifications. Deviations from the approved drawings and working drawings as may be required by the expedencies of construction will, in all cases, be determined by the Engineer and authorized in writing. If the Engineer deems it inexpedient to correct work injured or done in an unauthorized manner, an equitable deduction from the contract price of the work done shall be made by the Engineer subject to approval of the City Engineer.

108.19 Right-of-Way

The City's right-of-way will in general be adequate for construction purposes. Nothing marked on the drawings shall be interpreted as giving the Contractor exclusive occupancy of the territory provided by the City. The City and its employees for any purpose, and other contractors of the City, for any purpose required by their respective contracts, may enter upon or occupy portion of the land furnished by the City. When the territory of one contract is a necessary or convenient means of access for the execution of another contract, such privileges of access or any other reasonable privilege shall be granted by the Contractor to the extent, amount, in the manner and at times necessary. No such joint occupancy or use of the territory shall be made the basis of any claim for delay or damages.

108.20 Shop Drawings and Submittals

- A. The Contractor shall submit to the Engineer all shop drawings, submittals and schedules required for the work, including those pertaining to structural and reinforcing steel within fifteen calendar days from the date of the Notice of Award. The Contractor shall make any corrections in the drawings required by the Engineer, and resubmit the same without delay.
- B. Three final copies of all shop drawings, submittals and schedules shall be submitted to the Engineer, who after checking will retain two copies and return one copy to the Contractor. The Engineer's approval of shop drawings of equipment and material shall extend only to determining the conformity of such equipment and materials with the general features of the design drawings prepared by the Engineer. It shall be the responsibility of the Contractor to determine the correctness of all dimensions and minor details of such equipment and materials so that when incorporated in the work, correct operations will result.

108.21 Record Drawings

The Contractor shall maintain an up-to-date set of contract documents, legibly marked, depicting all constructed improvements at the site or as otherwise specified and shall submit a complete set labeled "Project Record" to the Engineer upon completion of the project.

- A. Drawings:
 - 1. Depths of various elements of foundation in relation to finish floor datum.
 - 2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements and project survey control.
 - 3. Location of internal utilities and appurtenances concealed in the construction, referenced to permanent surface improvements and project survey control.
 - 4. Field changes of dimensions and detail.
 - 5. Changes made by Field Order or by Change Order.
 - 6. Details not on original Contract Drawings.
- B. Specifications and Addenda:
 - 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.

108.22 Materials

- A. Unless otherwise stipulated in the Specifications, all workmanship, equipment, materials, and articles incorporated in the work covered by this contract are to be new and of the best grade of their respective kinds for the purpose. The Contractor shall furnish to the Engineer for the Engineer's approval, the name of the manufacturer of machinery, mechanical and other equipment, which he contemplates installing, together with their performance capacities and other pertinent information including but not limited to instruction manuals pertaining to the use and operation of such machinery, mechanical and other equipment.
- B. When required by the Specifications, or when called for by the Engineer, the Contractor shall furnish for approval full information concerning the materials or articles which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials, and articles installed or used without such approval shall be at the risk of subsequent rejection.

108.23 Testing of Materials

- A. Tests and Inspections. The City will employ and pay for the services of an approved testing laboratory to perform specified services for the field testing of:
Soil Compaction Control
Cast-in-Place Concrete
Asphalt Concrete Pavement

The Contractor shall perform, or arrange for the performance, and pay all costs in connection therewith, all other tests and inspections required by the contract documents. The Contractor shall pay for all testing laboratory services in connection with tests verifying conformance of proposed materials and installation with project requirements including, but not limited to, mix designs, riprap, gradation tests for embedment, fill and backfill materials. The City shall pay for testing laboratory services in connection with tests on materials after incorporation into the project, unless retesting of materials is necessary because of the failure of the materials to meet the project requirements. The Contractor shall obtain the City's written acceptance of the testing laboratory before having services performed.

- B. Requirements for Independent Testing Consultants.
Comply with "Recommended Requirements for Independent Laboratory Qualifications", latest edition, published by the personnel, facilities, equipment and other qualification data, including; Report of inspection of facilities made by the American Council of Independent Laboratories, and basic requirements of ASTM E-329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction", latest edition.

Submit to the City for prior approval, the name and address of the proposed testing laboratory with description of personnel, facilities, equipment and other qualification data. Certificate of calibration of applicable testing equipment made by an accredited calibrated agency within 12 months prior to submittal date.

- C. Test Reports
Testing agency shall be instructed to submit directly to the City three (3) copies of all reports of tests or inspections made, showing compliance, irregularities or deficiencies, identifying project, date of test, location in project, applicable specification section, applicable standard(s) for compliance, observations relating to compliance, name and signature of inspector.
- D. Contractor Responsibilities

Furnish access to the work, materials, equipment and labor required to accommodate inspections and test when testing laboratory is retained by the City. In the event retesting of materials, or recompaction is necessary because of the failure of the materials or compaction to meet the project requirements, the cost of said retesting shall be borne by the Contractor. Cost of said retest will be deducted from the final payment amount due the Contractor, or invoiced directly to the Contractor at the City's discretion.

108.24 Differing Site Conditions

- A. The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Project Engineer/Manager of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract.
- B. The Project Engineer/Manager shall promptly investigate the site conditions after receiving the notice. If the Engineer/Project Manager determines that conditions do materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions encountered, an equitable adjustment shall be made under this clause and the contract modified accordingly.
- C. No request by the Contractor for an equitable adjustment to the contract shall be allowed, unless the Contractor has given the proper written notice and the Project Engineer/Manager determine the condition is in fact a Differing Site Condition; furthermore, the City of Colorado Springs shall not be liable for an equitable adjustment under this clause if the Contractor disturbed or repaired the condition without prior inspection by the Project Engineer/Manager, or if the contract is completed.

108.25 Changed Conditions

- A. When additional information regarding foundation or other conditions becomes available as a result of the excavation work, further testing, or otherwise, it may be found desirable and the City shall have the right to change the location, alignment, dimensions, or design of the work to meet such conditions.
- B. During the progress of the work, the City may find it advisable, and it shall have the right to omit portions of the work and to increase or decrease any items as may be deemed necessary or desirable without changing the unit prices in the proposal, provided such increase or decrease does not exceed fifteen percent (15%) of the total monetary value of the original contract. If the material or labor involved in such a change is not included in the unit prices of the contract, but forms an inseparable part of the work to be done under this contract, and the delay involved in asking for the advertising for bids and the letting of a new contract therefore might result in damage, injury, or impairment of the plant, work system or other property belonging to the City, the City may, in its discretion, declare an emergency and require the Contractor to proceed with such alterations and additions. The Contractor will not, however, be required to perform such extra work and furnish such extra materials without a written Change Order from the Engineer. The parties hereto shall agree upon any sum to be paid for said work in advance of performing it. The Contractor shall make no claims for extra work unless the work was performed as authorized by a properly executed Change Order. Additional compensation or credit for work covered by a Change Order must be determined by one or a combination of the following methods:
 - 1. Unit bid prices previously approved.

2. An agreed lump sum.
3. The actual cost of:
 - a. Labor (including foremen and extra supervision if required).
 - b. Materials entering permanently into the work.
 - c. Rental cost of construction plant and equipment used for the work.
 - d. Power and fuel required for the operation of power equipment used for change order work.
 - e. The Contractor shall furnish a breakdown of cost including but not limited to bills, payrolls, invoices and vouchers covering the cost of the work. To this cost there shall be added a fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of the cost of work. The fee shall be compensation to cover the cost of management, insurance, benefits, bond, profit and any other general expenses.

The cost of Subcontractor's work shall be determined according to methods 2 and 3, above, to which the Contractor may add a maximum of fifteen percent (15%), which amount shall be compensation for the cost of the Contractor's management, insurance, benefits, bond, profit, and any other general expenses.

108.26 Changes in the Work

The City may make written changes in the Plans and Specifications or scheduling of the contract within the general scope of this contract at any time by a written order. If such changes add to or deduct from the Contractor's cost of the work, the contract price shall be adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for an extension of time caused thereby shall be allowed and adjusted at the time of ordering such change or at such time as it can be ascertained.

- A. In giving instructions, the Engineer shall have authority to make minor changes in the work not involving extra cost, and not inconsistent with the purpose of the work. No extra work or change shall be made unless in pursuance of a written order by the Engineer, and no claim for an addition to the contract sum shall be valid unless the additional work was so ordered.
- B. The Contractor shall proceed with the work as changed and the value of any such extra work or change shall be determined as provided for in the Agreement.
- C. It shall be expressly understood and agreed to by the contractor that no claim for extra work, will be recognized by the City unless same has been ordered in writing by the Engineer and unless claim for such added work has been filed by the Contractor within five (5) days after the end of the calendar month in which such alleged extra work was performed.

108.27 Protests

If the Contractor considers any work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the Engineer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or ruling being made, as in writing, or written instruction or decision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within ten (10) days after date of receipt of the written instructions or decisions, he will file a written protest with the Engineer, stating clearly and in detail the basis of his objection. Except for such protests or objections as are made of record in the manner herein specified and within the limit stated, the written records, rulings, instructions, or decisions of the Engineer shall be final and conclusive. Instructions and decisions of the Engineer

contained in letters transmitting drawings to the Contractor shall be considered as written instructions or decisions subject to protest or objections as herein provided. In the event of a protest, the protest shall be presented to the City Engineer, the City Engineer's decision shall be final and conclusive.

108.28 Removal and Suspension for Defective Work

All work or material which has been rejected shall be remedied or removed and replaced in an acceptable manner. Additional compensation will not be allowed for such removal and replacement. Any work done beyond the lines and grades shown on the drawings, except as herein provided, will be considered as unauthorized and will not be measured or paid for. Work so done may be ordered removed at the Contractor's expense. Should the Contractor fail to comply promptly with any order of the Engineer made under the provisions of this paragraph, the Engineer shall have the authority to cause said work to be removed and to deduct the cost from any money due, or to become due, from the Contractor. At any time during the course of construction of this project if the provisions of the Plans, Specifications, or contract provisions are being violated by the Contractor or his employees, the Engineer shall have the right and authority to order all construction to cease or material to be removed, until arrangements satisfactory to the Engineer are made by the Contractor for resumption of the work in compliance with the provisions of the contract.

108.29 Cleaning Up and Final Inspection

- A. The Contractor shall at the completion of the work, remove all rubbish from and about the work and all tools, equipment, scaffolding, and surplus materials and shall leave the work clean and ready for use. In case of dispute, the City may remove the rubbish and surplus materials and charge the cost to the Contractor.
- B. All sewers, conduits, pipes, and appurtenances and all tanks, pump wells, chambers, buildings, and other structures shall be kept clean during construction and as the work or any part thereof approaches completion, the Contractor shall systematically and thoroughly clean and make any needed repairs to them. Contractor shall furnish at Contractor's own expense, suitable tools and labor for removing all water and cleaning out all dirt, mortar, and foreign substances. Any undue leakage of water into the structures such as to make the work, in the opinion of the Engineer, fall short of first class work, shall be promptly corrected by the Contractor at Contractor's own expense.

Cleaning and repairs shall be arranged, so far as practicable, to be completed upon finishing the construction work. Notice to begin the final cleaning, and repairing, if such is needed, will be given by the Engineer, who at the same time will make his final inspection of the work. The Engineer will not approve the final estimate of any portion of the work until after the final inspection is made and the work found satisfactory.

108.30 Cutting and Patching

- A. The Contractor shall do all cutting, fitting, or patching of work that may be required to make its several parts fit together or to receive the work of other contractors shown upon, or reasonably implied by the Plans and Specifications for the completed project.
- B. Any cost caused by defective or ill timed work shall be borne by the Contractor.

The Contractor shall not endanger any work by cutting, digging, or otherwise and shall not cut or alter the work of any other contractor without the consent of the Engineer.

108.31 Final Tests

After completion of the work, the Contractor shall make any and all tests required by the Specifications or by Municipal, State or Federal regulations, and where so provided in said regulations shall furnish the City with certificates of inspection by the Municipal,

State or Federal regulation bodies. The Contractor shall also make all tests required by the National Board of Fire Underwriters for the purpose of determining insurance rates or other protection of the City or the public.

108.32 Correction of Work after Final Payment

Neither the final payment nor any provision in the contract documents shall relieve the Contractor of the responsibility for negligence or faulty materials or workmanship within the extent and periods provided by law and by this contract.

108.33 Guarantees

- A. All work shall be constructed in compliance with standard construction codes, and all materials and workmanship must be guaranteed for a period of two years from the date of final acceptance. The Contractor guarantee period (two-year warranty period) will not begin until the contract is 100 percent complete, as determined by the Engineer. Acceptance of the 100 percent complete contract shall be requested in writing by the Contractor. Any item requiring repair and/or replacement prior to expiration of the two-year warranty period shall be guaranteed for a period of one-year after the date of said correction or repair or for the remainder of the two-year warranty period, whichever is longer.
- B. In placing orders for equipment, the Contractor shall purchase same only under a written guarantee from the respective manufacturers that the equipment supplied will function satisfactorily as an integral part of the completed project in accordance with the Plans and Specifications. Furthermore, the Contractor shall require that the manufacturer agree in writing at the time order of equipment is placed that manufacturer will be responsible for the proper functioning of the equipment in cooperation with the Contractor, and that whenever necessary during the installation period or tuning up period following construction period, the manufacturer will supply without additional cost to the City, such superintendence and mechanical labor and any adjustments and additional parts and labor needed to make the equipment function satisfactorily, even if the same was not shown on approved shop drawings.

SECTION 109

PAYMENTS AND ACCEPTANCE OF WORK

109.01 PAYMENTS AND RETAINAGE

Payments will be made, and required retainage withheld if applicable, in accordance with this section as the work progresses at the end of each month or as soon thereafter as practicable in compliance with Title 24, Article 91, Section 103 and Section 110, Colorado Revised Statutes, on statements made and approved by the Engineer. In preparing statements, only completed work will be taken into consideration. No payment will be made for materials in storage and/or delivered to the site, unless otherwise approved by the City.

Payment for work performed by the contractor under these contract documents will be made at the approved unit price or lump sum price for each of the several items as listed in the bid and measured as hereinafter specified. Such payment shall compensate the Contractor for all costs in connection with furnishing all labor, equipment and material required and performing the operations necessary to complete the item in accordance with the contract documents. All incidental work essential to the completion of the project in a workmanlike manner, and including cleanup and disposal of waste or surplus material, shall be accomplished by the contractor without additional cost to the City. The cleanup and disposal of waste or surplus material shall be performed during construction or as soon after as is reasonably possible in order to better maintain the aesthetics and safety of the construction area. The quantities listed in the bid are estimated quantities, and are listed only for convenience in comparing bids. Payment will be made for the

actual quantities constructed or installed, unless otherwise noted in these contract documents. However, any changes to plan quantity must be approved through proper change order procedures, said quantities being measured as specified in the contract documents.

- (1) If the contract exceeds ONE HUNDRED FIFTY THOUSAND DOLLARS (\$150,000.00), and is for the construction, alteration, or repair of any highway, public work, or public improvement, structure, and; the contractor has provided Performance, and Payment Bonds: the City of Colorado Springs shall authorize partial progress payments of the amount due under this contract monthly, or as soon thereafter as practicable, to the contractor, if the contractor is satisfactorily performing the contract. If the City of Colorado Springs finds that satisfactory progress is being achieved during any period for which progress is to be made, the City of Colorado Springs may authorize payment to be made in full without withholding retainage. However, if satisfactory progress has not been made, the City of Colorado Springs may retain a maximum of ten percent (10%) of the amount of the requested payment until satisfactory progress is achieved. When the work is substantially complete, the City of Colorado Springs may retain from the remaining unpaid balance that amount the City Contracting Manager, at the advice of the City's project manager, considers adequate for protection of the City, suppliers and subcontractor's, and shall release to the Contractor all the remaining funds associated with completed and acceptable work.

The withheld percentage of the contract price of any such work, improvement, or construction shall be retained on an invoice-to-invoice basis and shall not be cumulative. In other words, if the contractor is not performing satisfactorily the City of Colorado Springs will hold ten percent (10%) of what is actually due to the contractor. for example, if the contractor is behind schedule and has successfully completed fifty percent (50%) of the work, the City of Colorado Springs will only pay forty percent (40%) of the invoice, withholding ten percent (10%) of what is due until the contractor gets back on schedule. Once the City of Colorado Springs determines that satisfactory progress is being made in all phases of the contract, then no retainage will be held on successfully completed work.

- (2) Whenever a contractor receives payment pursuant to this section, the contractor shall make payments to each of the subcontractors of any amount actually received which were included in the contractor's request for payment to the City for such subcontracts. The contractor shall make such payments within seven (7) calendar days of receipt of payments from the City in the same manner as the City is required to pay the contractor under this section if the subcontractor is satisfactorily performing under the contract with the contractor. The subcontractor shall pay all suppliers, sub-subcontractors, laborers, and any other persons who provide goods, materials, labor, or equipment to the subcontractor any amounts actually received which were included in the subcontractor's request for payment to the contractor for such persons, in the same manner set forth in this subsection (2) regarding payments by the contractor to the subcontractor. If the subcontractor fails to make such payments in the required manner, the subcontractor shall pay those suppliers, sub-subcontractors, and laborers interest in the same manner set forth in this subsection (2) regarding payments by the contractor to the subcontractor.

At the time a subcontractor submits a request for payment to the contractor, the subcontractor shall also submit to the contractor a list of the subcontractor's suppliers, sub-subcontractors and laborers. The contractor shall be relieved of the requirements of this subsection (2) regarding payment in seven (7) days and interest payment until the subcontractor submits such list. If the contractor fails to make timely payments to the subcontractor as required by this section, the contractor shall pay the subcontractor interest as specified by contract or at the

rate of fifteen percent (15%) per annum, whichever is higher, on the amount of the payment which was not made in a timely manner. The interest shall accrue for the period from the required payment date to the date on which payment is made. Nothing in this subsection (2) shall be construed to affect the retention provisions of any contract.

- (3) **CONTRACTS UNDER ONE HUNDRED FIFTY THOUSAND DOLLARS:** If the contractor is not progressing in accordance with the project schedule or not performing quality work in accordance with the specifications, the Project Manager may, at that point start withholding retainage up to and including ten percent (10%) of the total contract amount.

109.02 Correction of Work before Final Payment

- A. The Contractor shall promptly remove from the premises all materials and work condemned by the Engineer as failing to meet contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute Contractor's own work in accordance with the contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.
- B. All removal and replacement work shall be done at the Contractor's expense. If the Contractor does not take action to remove such condemned work and materials within ten (10) days time thereafter, the City may, upon ten (10) days written notice, sell such materials at auction or at private sale and retain the proceeds without compensation to the Contractor.

109.03 Payments Withheld Prior to Final Acceptance of Work

The City may withhold or nullify the whole or part of any certificate of payment to such extent as may be necessary to protect it from loss caused by:

- A. Defective work not remedied.
- B. Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor.
- C. Failure of the Contractor to make payments properly to subcontractors or for material or labor.
- D. Damage to another contractor.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

109.04 Acceptance of Final Payment

- A. Upon notice that the work is fully completed, the Engineer will make a final inspection. If the Engineer finds the work acceptable under the contract and the contract is fully performed, the work may be finally accepted by the Engineer under the terms and conditions of the contract. The entire balance found by the Engineer to be due the Contractor, including the retained percentage, less any retention based on; (1) the Engineer's estimate of the fair value of the claims against the Contractor; and (2) the cost of completing the incomplete or unsatisfactory items of work with specified amounts for each incomplete or defective item of work; and (3) retentions required by law, shall be due and payable to the Contractor. The date of completion is the date as specified in the Certificate of Completion issued by the Engineer.
- B. Upon completion of the work under the contract and before the Contractor shall receive or be paid for the Engineer's final statement, the City Contracts Office shall publish in a newspaper published in the City of Colorado Springs, a notice

that the City has accepted such work as completed according to the Plans and Specifications and rules set forth in the contract; that the Contractor is entitled to final settlement; that after the final publication, the City will pay the full balance due under the contract; and that persons having claims for labor or material furnished the Contractor must present their claim to the City Contracts Office prior to the date specified for such payment. Nothing herein shall be construed as relieving the Contractor and the sureties on the Contractor's bonds from any claim or claims for work or labor done or materials or supplies furnished in the execution of the contract.

- C. The making and acceptance of the final payment shall constitute a waiver of all claims by the Contractor against the City.
- D. If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and the Engineer so certifies, the City may, upon Certificate of Completion by the Engineer, and without terminating the contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment and acceptance of the project shall constitute a waiver of all claims by the Contractor but acceptance shall not constitute a waiver of City claims against the Contractor.
- E. Advertising for Final Payment and processing of the Final Pay Request shall not take place until after the Contractor has submitted Sales and Use Tax Forms to the City of Colorado Springs and said forms have been reviewed and approved by the City Sales Tax Office.

SECTION 110

TERMINATION OF CONTRACT

110.01 The City's Right to Terminate Contract

- A. In accordance with the City Charter, performance of the City's obligations under this contract are expressly subject to appropriation of funds by the City Council. Further, in the event that funds are not appropriated in whole or in part sufficient for performance of the City's obligations under this contract, or appropriated funds may not be expended due to City Charter spending limitations, then the City may terminate this contract without compensation to the Contractor.
- B. If the termination is for failure of the contractor to fulfill the contract obligations, the City may terminate the subject contract for Default, and complete the work by contract or otherwise, and the contractor shall be liable for any additional cost incurred by the City. Prior to issuing a Termination for Default, the City will issue a Notice to Cure allowing the contractor a minimum of ten (10) calendar days to prepare a plan to correct whatever failures are causing the contract obligation failure(s). The City will have the right to accept the plan of correction or to continue with the Termination for Default.
- C. Where the contract has been terminated for Default by the City, said termination shall not affect or terminate any of the rights of the City as against the Contractor or his surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the City due the Contractor under the terms of the contract shall not release the Contractor or the Contractor's surety from liability for the Contractor's default.
- D. If the Contractor should become bankrupt and a relief from stay is granted to the City, or if the Contractor should make a general assignment for the benefit of Contractor's creditors, or if a receiver should be appointed on account of

Contractor insolvency, or if Contractor should persistently or repeatedly refuse or should fail, except in cases for which extensions of time are provided, to supply enough properly skilled workmen or materials, or if Contractor should fail to make payments to subcontractors or for material or labor so as to affect the progress of the work, or breach, or substantially violate any provision of the contract, then the City, upon the written notice of the Engineer may, without prejudice to any other right or remedy, terminate the contract for default and take possession of the premises and of all materials, tools, equipment, and other facilities installed on the work and paid for by the City, and finish the work by whatever method the City may deem expedient. In such cases, the Contractor shall not be entitled to receive any further payment under the contract.

- E. The City may also terminate this contract for convenience of the City, upon written notice to the Contractor, without additional compensation to the Contractor, unless the Contractor has started or performed portions of the contract prior to receiving such notice. If performance of the contract is underway, the City will be liable only for the portions of work actually satisfactorily completed up to the point of the issuance of the Notice of Termination for Convenience. In no event shall the City be liable for unperformed work or anticipated profits or overhead. Upon receipt of this notice the Contractor shall immediately: discontinue all services affected (unless the notice directs otherwise), and deliver to the City all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process.

110.02 Completion of Contracts in Default

- A. If for any reason a contract is declared in default, the City shall have the right without process or action at law to take over all or any portion of the work and complete it in any manner the City deems most appropriate. Written notice shall be given the Contractor by the City that the contract has been declared in default, and upon receiving such notice, the Contractor shall peaceably relinquish possession of the said work or the parts thereof specified in the notice.
- B. The City may, at its option and at a rental which it considers reasonable, retain all material, equipment, and tools on the work until the work has been completed.
- C. Neither the City nor any officer, agent or employee of the City shall be in any way liable or accountable to the Contractor or the Contractor's surety for the method by which the completion of the said work, or any portion thereof, may be accomplished or for the price paid. Should the cost of completing the work be in excess of the original contract price, the Contractor and Contractor's surety shall be responsible for such excess cost. Should the cost of such completion, including all proper charges, be less than the original contract price, the amount so saved shall accrue to the City. Neither by taking over the work nor by declaring the contract in default shall the City forfeit the right to recover damages from the Contractor or Contractor's surety for failure to complete the entire contract.

110.03 Removal of Equipment

Except as provided in Section 110.01 above, in the case of termination of this contract before completion from any cause whatever, the Contractor, if notified to do so by the City, shall promptly remove any part or all of Contractor's equipment and supplies from the property of the City, failing which the City shall have the right to remove such equipment and supplies at the expense of the Contractor.

SECTION VIII

SPECIAL PROVISIONS

This section contains any Special Provisions that are applicable on the subject project. If none are listed then none are applicable. In the event there are Special Provisions listed herein, and the terminology of the Special Provisions conflicts with the terminology in the "CITY OF COLORADO SPRINGS ENGINEERING DIVISIONS STANDARD SPECIFICATIONS", latest revision, the Special Provisions listed herein will take precedence.

8.01 DESCRIPTION OF WORK

The work to be done by the Contractor shall consist of the work described in Section II and performing all operations necessary for the construction of this work as described in the plans and specifications, including restoration of all areas disturbed by the construction activities to a condition better than the pre-construction condition.

The Contractor shall obtain all permits and furnish all transportation, materials, tools, equipment, labor and supplies necessary to complete in a workmanlike manner the improvements as shown and specified in these documents. The Contractor shall execute a Contractor's Right of Entry Agreement with Union Pacific Railroad Company and comply with all requirements of that agreement.

The Contractor shall be responsible for verification and acceptance of the existing site conditions prior to proposing on the project. The Contractor shall notify the engineer 48 hours prior to the commencement of construction activities.

The Contractor shall be responsible for all work, whether it be performed by himself or by others under a subcontract agreement.

All work required to construct all items in this contract shall be performed in a careful and orderly manner with due consideration given to protection of adjoining property, the public and workmen. Any damage to streets, utilities, public or private property, or the bench marks and construction staking due to the negligence of the Contractor, shall be repaired and restored to its original condition by the Contractor at his expense to the satisfaction of the Engineer. It will be the Contractor's responsibility to ensure that areas not in conflict with new work are not disturbed or damaged during the construction process.

8.02 PRECONSTRUCTION CONFERENCE

Within 10 calendar days after issuance of the Notice of Award, or as otherwise established by the Owner and Engineer, a preconstruction conference shall be held for review of the construction schedule, Contractors list of Subcontractors and suppliers, project contracts, Traffic Control Plan with Supervisor name and telephone number and certifications, procedures for handling shop drawings, processing Applications for Payment, and other pertinent items. The Contractor (and Subcontractor) should address any construction problems which may be foreseen in the execution of the project work at the preconstruction conference.

8.03 PUBLIC INFORMATION SERVICES

As a minimum, the contractor shall provide the following public information services on an ongoing basis throughout the duration of the project to affected property owners and to the City Representative as described herein:

- A. A Public Information Manager (PIM) shall be designated by the Contractor at the pre-construction conference. This person will be available on every working day, on-call at all times, and available upon the Engineer's request at other than normal working hours. The PIM is responsible for preparation and distributing construction and scheduling information for the duration of the project.

- B. The Contractor shall provide the PIM with a cellular phone and an answering machine. The answering machine, which will be in operation 24 hours a day, shall provide an updated message each week concerning forthcoming activities of the project and shall allow the caller to leave a message. The PIM shall respond to the callers within 24 hours. After responding to calls, the PIM will fill out a Communication Record summarizing how each call was responded to, note if further action is required, and distribute to project team. The PIM will also develop Frequently Asked Questions (FAQs) based on the calls and e-mails received for use on the project Website.
- C. Prior to the beginning of each different phase of construction, the PIM shall prepare information explaining the phase for distribution by the City Representative. Project information such as project schedules, upcoming closures and detours, phasing schedules and completion dates will be provided to the City Representative at least twice a month. The Contractor shall also post the phone number of the public information answering machine on traffic signs at each end of the project for the public to call for information and comments. Prior to the start of initial construction activity, notice information will be sent to impacted and interested stakeholders by mail or in person. The initial list will be provided by the City Representative. The PIM shall maintain the list throughout the duration of the project.
- D. In order to effectively communicate project information, the PIM may be required to meet periodically with businesses, neighborhood organizations and certain service clubs.
- E. The PIM shall maintain a log of the contacts made, information provided, comments received and responses provided. This log shall be provided to the City Representative and the Engineer at the end of each month, as a minimum.
- F. Responsiveness:
 - 1. In general, the PIM, acting as a good neighbor and guest in the project area, will be responsive to the requests and comments of impacted residents/businesses, thereby building a positive image of the Contractor and the City.
 - 2. The PIM shall respond to requests and inquiries within 24 hours.
 - 3. The PIM shall provide weekly construction status updates to the City Representative weekly media advisory, which will be drafted by the City Representative and faxed to Contractor for approval and/or changes within 3 hours. The City Representative will be notified immediately if there is any change to the media advisory. The Construction Status Update provides a summary of the projects ongoing work activities, the anticipated completion date, and the work schedule for the forthcoming week. The work schedule includes anticipated restrictions, closures and other traffic impacts.
 - 4. The PIM shall call the City Representative immediately regarding traffic shifts, detours, lane closures and any other construction activity that would impact motorists.
- G. The PIM shall develop and manage an e-mail distribution list of interested stakeholders and send, at a minimum, monthly updates to this list. Update text shall be approved by the City Representative prior to distribution.
- H. Availability:

1. The PIM shall attend weekly construction progress meetings and report on project communication activities.
2. The PIM shall be accessible by phone at all times; in the construction trailer, by cell phone when off the job site, at home in the evenings or on weekends in cases of emergency.

I. General:

The contract unit price includes full compensation for all notices, public information office, telephone lines, and all other labor and materials required to complete the item. The contract unit price includes all costs for materials, installation, maintenance, and removal of public information signs.

Partial payments for public information services will be made once each month as work progresses. The monthly partial payments will be determined by pro-rating the lump sum bid amount by the number of months in the actual construction schedule. The City Representative will monitor the PIM and all Public Information Services. When the Contractor provides acceptable public information services in accordance with these specifications, monthly payments for the pay item "Public Information Services" will be made. Failure to provide acceptable public information services will result in withholding of payment for this item.

If the contract time is exceeded, the contract will continue to provide Public Information Services at no additional cost to the City.

8.04 EROSION AND DRAINAGE CONTROL

Contractor shall provide for the drainage of stormwater and such water as may be applied or discharged on the site in performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site and adjacent property.

The Contractor shall prevent the pollution of drains and watercourses by sanitary waste, sediment, debris or other substances resulting from this work. He shall be required to clean up and isolate such materials on a continuing basis to prevent risk of washing into such drainage ways.

Since the affected areas of the project exceed 1 acre, a Stormwater Discharge Permit shall be required. Affected area includes excavations, material stockpiles and areas where equipment and vehicles disturb the ground. An exact definition should be obtained from the CDPHE.

8.05 CONSTRUCTION PHOTOGRAPHS

The contractor shall provide construction photographs on an ongoing basis throughout the duration of the project as described below:

- A. Preconstruction photographs will be required on the project.
- B. Photographs shall be 3" x 5" size or larger, glossy finish, in color and – mounted in 3-ring binders and a CD of all photographs.
- C. Each photograph shall be marked with date description and identification number.
- D. Each photograph must indicate a station reference to roadway or channel work as shown on the plans.
- E. The preconstruction photographs shall be delivered to and approved by the

CITY OF COLORADO SPRINGS/PPRTA
Engineer, prior to beginning of construction.

- F. The first set of photographs shall be taken before the Contractor moves on the site and the last shall be taken after completion.
- G. Construction photographs will not be paid for separately, but will be considered subsidiary to the work.

8.06 PROJECT SIGNS

The Contractor shall be responsible for installing and maintaining all project signs throughout the duration of the Contract. The City will furnish project signs with the PPRTA Logo for placement within the project by the Contractor. The Contractor shall be responsible for moving project signs and for installing completion signs after completion of the project. Project signs will not be paid for separately, but will be considered subsidiary to the work.

8.07 WORK HOURS

The Contractor shall conduct normal activities between the hours of 6:00 a.m. and 9:00 p.m. Work outside that time shall be considered night work and the Contractor shall notify the City's delegated Project Manager seven working days in advance of any night work. Between 6:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m. Monday through Friday, all work done shall be outside of the area used by the traveling public. All work shall be done behind the protection of temporary guardrail or other adequate protection as shown on the approved traffic control plans.

8.08 WORK SITE RESTRICTIONS

The Contractor shall confine the work activities to the area shown in the construction drawings. The Engineer will furnish the contractor with copies of all executed ROW and easement documents for the project. The established work zone shall be marked and secured with an appropriate fence. The fence type shall be approved by the Engineer based on discussions with individual property owners/tenants. Any additional work area required within adjoining private properties must be acquired by the Contractor by written permission from the property owner. The Contractor shall restore any damage or disruption to other properties utilized in the performance of this project to an equal or better than pre-construction condition at no cost to the City. The Contractor shall hold the City harmless from any claims to damage or disruption of private property.

Contractor personnel shall not unnecessarily enter upon private property without the express written consent of the landowner. The Contractor shall provide the Engineer with a copy of the written permission. The City will be held harmless of Contractor negligence in matters of trespassing.

8.09 COORDINATION WITH PROPERTY OWNERS

The Contractor shall be responsible for notifying the Property Owners at least 48 hours in advance of any construction that may affect access, parking and/or existing structures, including fences, adjacent to that property. Suitable access and parking will be maintained at all times. Relocating of fences and structures shall be coordinated with owners and shall include miscellaneous items including, but not limited to, temporary fence, sod replacement, sprinkler system modifications, railroad tie walls, etc. These items are considered to be incidental to the work and are to be included in the unit prices.

The Contractor shall coordinate the relocation of fencing, landscaping, sprinklers, control boxes, utility services, street signs and mail boxes and the salvaging of any materials suitable for re-use with the City Inspector and, if on private property, with the respective property owners.

The Contractor shall notify and coordinate the closing and construction of the driveways, curb, gutter and sidewalks with the Project Engineer and the adjoining property owners in

advance of work in writing. Any restrictions on street parking or traffic movement shall be coordinated with the City Traffic Engineer. The Contractor shall make every effort to minimize the inconvenience to the traveling and pedestrian public.

8.10 CONSTRUCTION TRAFFIC RESTRICTIONS

Construction shall conform to Section 800 of the City of Colorado Springs Standard Specifications and the City of Colorado Springs Supplement to the Manual on Uniform Traffic Control devices.

Throughout the duration of Phases 1 and 2 (construction of the south $\frac{1}{2}$ of the new bridge and roadway and demolition of the existing bridge on the north side), the Contractor shall:

1. Maintain a minimum of one through lane in each direction on Cimarron Street across the existing bridge over UPRR/Conejos Street;
2. Maintain a minimum of one through lane and one left turn lane in each direction on Cimarron Street at Sierra Madre;
3. Maintain a minimum of two through lanes and one left turn lane for westbound traffic on Cimarron Street at the I-25 ramps;
4. Maintain a minimum of one through lane and two left turn lanes for eastbound traffic on Cimarron Street at the I-25 ramps;
5. The Contractor will be allowed to close Cimarron Street across the existing bridge over UPRR/Conejos Street between the hours of 9:00 p.m. and 5:00 a.m. up to the maximum number of nights specified in the Contract. The maximum number of working nights will be specified in the final contract and will not be exceeded without prior written approval of the City's delegated Project Manager;
6. The Contractor will be allowed to close Conejos Street under the existing Cimarron Street Bridge up to the maximum number of days specified in the Contract. The maximum number of days closed will be specified in the final contract and will not be exceeded without prior written approval of the City's delegated Project Manager.

Throughout the duration of Phase 3 (construction of the north $\frac{1}{2}$ of the new bridge and roadway), the Contractor shall:

1. Maintain a minimum of two through lanes in each direction on Cimarron Street across the new bridge over UPRR/Conejos Street;
2. Maintain a minimum of two through lanes and one left turn lane for westbound traffic on Cimarron Street at the I-25 ramps;
3. Maintain a minimum of two through lanes and two left turn lanes for eastbound traffic on Cimarron Street at the I-25 ramps;
4. The Contractor will be allowed to close Cimarron Street across the existing bridge over UPRR/Conejos Street between the hours of 9:00 p.m. and 5:00 a.m. up to the maximum number of nights specified in the Contract. The maximum number of working nights will be specified in the final contract and will not be exceeded without prior written approval of the City's delegated Project Manager;
5. The Contractor will be allowed to close Conejos Street under the existing Cimarron Street Bridge up to the maximum number of days specified in the Contract. The maximum number of days closed will be specified in the final contract and will not be exceeded without prior written approval of the City's delegated Project Manager;
6. The Contractor will be allowed to reduce the through lanes in each direction on Cimarron Street across the new bridge over UPRR/Conejos Street to a minimum of one through lane in each direction on Cimarron Street across the new bridge over UPRR/Conejos Street up to the maximum number of days specified in the Contract. The maximum number of days with reduced laneage will be specified in the final contract and will not be exceeded without prior written approval of the City's delegated Project Manager.

All traffic lanes shall be a minimum of 10 feet wide. An additional 2 feet of clearance shall also be provided between any travel lane and temporary concrete barrier.

8.11 SOIL CONDITIONS

The Contractor assumes all risks connected with the surface and subsurface conditions actually encountered by him in performing the work, even though such actual conditions may result in the Contractor performing more or less work than he originally estimated.

The Contractor shall perform whatever exploratory excavations and tests he deems necessary to determine the site conditions.

The Contractor shall utilize all suitable excavated material as approved by the Engineer for raising grades and backfilling the new construction. Additional imported material shall be a well graded non-expansive inorganic soil or as herein after specified.

8.12 CONTRACTOR SUBMITTALS

Delete Section 108.20 Shop Drawings and Submittals of the General Provisions. Submittals for design, testing and shop drawings are detailed in Section IX, Specifications, "Revision of Section 108 – Work Provisions and Rules, Shop Drawings and Submittals". Failure of the Contractor to deliver submittals in sufficient time for the Engineer's review, shall not constitute a delay on the part of the City. Shop drawings and submittals Shop drawings and submittals shall be at a minimum of those items listed in Table 108-1 and any other additional submittals which may be required by the Engineer

8.13 UTILITIES

The size and location of all existing utilities as known to the Engineer have been noted on the plans for the information and guidance of the Contractor. The Contractor shall be responsible for the location and protection of all utilities located within his working area regardless of whether or not their existence or location is shown or noted on the drawings.

All overtime costs for inspection by City Utilities shall be the Contractor's expense.

It is the Contractor's responsibility to complete required work and to schedule inspections during normal working hours. The Contractor is responsible for contacting each affected utility for their inspectors' working hours. The Contractor is responsible to request an inspection two (2) **working days** in advance of the inspection. In the case of an overtime inspection, the request must be in writing. The City will not entertain any requests for time extensions for delays caused by the Contractor's failure to **properly** notify the affected utility of a required inspection or the Contractor's failure to complete the required work by the time of the scheduled inspection.

The accuracy of information furnished with respect to underground utilities is not guaranteed. The Contractor shall make his own investigations, including exploratory excavations, to determine the locations and type of existing mains and service laterals or appurtenances.

The Contractor shall notify all Public Utility companies who may have installations in the area where the work is to be performed and solicit their aid in locating horizontally and vertically utilities prior to any excavation. All utilities encountered must be kept in operation by the Contractor and must be protected and/or repaired at his own expense.

The Contractor shall notify all utility companies who may have installations in the area where the work is to be performed and solicit their aid in locating horizontally and vertically utilities prior to any excavation. All utilities encountered must be kept in operation by the Contractor and shall be protected and/or repaired at Contractor's expense.

City of Colorado Springs Utilities

Utility Problems or Questions	448-4800
Utility Notification Center of Colorado (UNCC)	800-922-1987

Miscellaneous Utility Services

Utility Notification Center of Colorado (UNCC)	800-922-1987
Engineering Division for Inquiries	385-5918

At least forty-eight (48) hours prior to commencing excavation, the Contractor shall call UNCC at 1-800-922-1987 between the hours of 7:30 A.M. and 4:30 P.M., Monday through Friday, for information concerning the location of buried utilities in the area of construction.

Below is a Pre-Excavation Checklist which the Contractor shall follow prior to commencing construction on the project.

Pre-Excavation List

_____	Utility Notification Center of Colorado (UNCC) Called at Least Two (2) Business Days Prior to Construction Telephone Number: 1-800-922-1987
_____	Utilities Marked and Located on the Ground
_____	Employees Briefed and Knowledgeable on Marking and Color Codes*
_____	Employees Trained on Excavation and Safety Procedure for Natural Gas Lines
_____	When Excavation Approaches Gas Lines, Employees Expose Lines by Careful Probing and Hand Digging

Standard Utility Marking Color Code

Natural Gas	Yellow
Electric	Red
Water	Blue
Wastewater	Green

"The Contractor shall be responsible for coordination and cost of all utility relocations indicated on the plans and not specified to be done by others. Utility locations shown on the plans are approximate."

The contractor shall coordinate work with various Utility companies and other construction taking place within project limits. Notify applicable Utility companies and other Contractors prior to commencing work, if damage occurs, or if conflicts or emergencies arise during work. The following utility companies are believed to have facilities within or near the project limits:

1. Gas: Colorado Springs Utilities
 - a. Contact Person: Tim Benedict
 - b. Telephone: (719) 668-3574
2. Water: Colorado Springs Utilities
 - a. Contact Person: Terry Foos
 - b. Telephone: (719) 668-8779
3. Sanitary Sewer: Colorado Springs Utilities

- a. Contact Person: Terry Foos
 - b. Telephone: (719) 668-8779
- 4. Electrical Distribution: Colorado Springs Utilities
 - a. Contact Person: Charlie Wadkowski
 - b. Telephone: (719) 668-5889
- 5. Electrical Transmission: Colorado Springs Utilities
 - a. Contact Person: Robert Wilford
 - b. Telephone: (719) 668-5421
- 6. Communications: Colorado Springs Utilities
 - a. Contact Person: Wayne Rust
 - b. Telephone: (719) 668-3996
- 7. Communications: Qwest Communications
 - a. Contact Person: Patti Moore
 - b. Telephone: (719) 278-4681
- 8. Communications: Qwest Communications (Long Haul)
 - a. Contact Person: Warren Northrup
 - b. Telephone: (719) 520-1529
- 9. Communications: Level 3/ICG
 - a. Contact Person: Joe McCain
 - b. Telephone: (719) 630-3231
- 10. Communications: Verizon/MCI
 - a. Contact Person: Leonard Sandoval
 - b. Telephone: (719) 475-3228
- 11. Television Cable: Comcast (Adelphia)
 - a. Contact Person: Jim Edie
 - b. Telephone: (719) 491-8231
- 12. UPRR Utilities
 - a. Contact Person: Clarence Styvar
 - b. Telephone: (307) 778-3540
- 13. Colorado Springs City Traffic
 - a. Contact Person: Rob Helt
 - b. Telephone: (719) 385-7603

The work described in the plans and specifications will require full coordination between the Contractor and Utility Companies and while performing their respective operations, so the utility work can be completed with minimum delays to all parties concerned.

The Contractor shall coordinate with businesses affected by any water service shut downs at least 48 hours prior to shut down.

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.

For utility work that is to be performed by a utility company, Contractor shall provide notice to the utility company that the site is ready for the utility work. The written notice, with a copy to the Engineer, shall be given a minimum of three weeks prior to the requested start of the utility 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.

8.14 TEMPORARY ASPHALT PATCHES

Cold or wet weather conditions that do not permit a permanent asphalt pavement replacement will require a minimum 2" bituminous pavement patch prior to opening the area to traffic as a temporary measure until the permanent asphalt pavement replacement can be installed. This item shall be incidental to any work requiring such

removal or asphalt and will be considered to be included in the unit price of the related item of work.

8.15 COORDINATION WITH ADJACENT PROJECTS

The contractor shall coordinate with all concurrent projects in the vicinity but not limited to those listed below:

COSMIX Project – Colorado Department of Transportation

- a. Contact Person: Tom McGhyghy, Colorado Department of Transportation
- b. Telephone: (719) 387-7550

The coordination shall include traffic control coordination to ensure traffic control plans and set-up does not conflict.

8.16 FINAL INSPECTION AND ACCEPTANCE

General provision 109.04 shall be supplemented by the following:

Upon written notice that the Contractor considers all work complete, the Engineer shall make a final inspection with the Owner and Contractor and shall notify the Contractor in writing of incomplete or defective work revealed by the inspection. The Contractor shall promptly remedy such deficiencies.

After the Contractor has remedied all deficiencies to the satisfaction of the Engineer and delivered all construction records (except preparation of record drawings which will be provided by the Inspector), maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection and other documents (all as required by the Contract Documents), the Owner and Contractor shall be promptly notified in writing by the Engineer that the work is acceptable.

SECTION IX

TECHNICAL SPECIFICATIONS

1.01 STANDARD SPECIFICATIONS

The Standard Specifications for this project shall be the “**CITY OF COLORADO SPRINGS ENGINEERING DIVISION STANDARD SPECIFICATIONS**”, revised March 2005, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

Any revisions to the City of Colorado Springs Engineering Division Standard Specifications can be found in the respective section of this document.

When it is unclear whether City of Colorado Springs Engineering Division Standard Specifications or Colorado Department of Transportation Standard Specifications for Road and Bridge Construction apply for an item of work, City of Colorado Springs Standard Specifications shall govern. If City of Colorado Springs Standard Specification does not exist, Colorado Department of Transportation Standard Specifications for Road and Bridge Construction shall apply.

All Contractors are required to have on the job site and utilize the current updated copy of the City of Colorado Springs Engineering Division Standard Specifications.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours.

1.02 ADDITIONAL STANDARD SPECIFICATIONS

Additional Standard Specifications shall be the “**COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**”, 2005 or specifications that are embodied herein in their entirety.

The items for which the CDOT Standard Specifications will be applicable are:

Section 201 – Clearing and Grubbing

Section 202 – Removal of Structures and Obstructions

Section 203 – Excavation and Embankment

Section 206 – Excavation and Backfill for Structures

Section 207 - Topsoil

Section 208 – Erosion Control

Section 212 – Seeding, Fertilizer, Soil Conditioner, and Sodding

Section 502 – Piling

Section 503 – Drilled Caissons

Section 507 – Slope and Ditch Paving

Section 512 – Bearing Device

Section 514 – Pedestrian and Bikeway Railing

Section 515 – Waterproofing Membrane

Section 518 – Waterstops and Expansion Joints

Section 601 – Structural Concrete

Sections 601 and 708 – Structural Concrete Stain

Section 602 – Reinforcing Steel

Section 606 – Guardrail and Bridge Rail

Section 607 – Fences

Section 609 – Curb and Gutter

Section 610 – Median Cover Material

Section 613 – Lighting

Section 614 – Traffic Control Devices

Section 618 – Prestressed Concrete

Section 618 – Erection of Pre-cast Concrete Members

Section 625 – Construction Surveying

Section 626 – Mobilization

Section 627 – Pavement Marking

Section 701 – Hydraulic Cement for Structures

Section 703 – Aggregates for Structures

Section 705 – Joint, Waterproofing, and Bearing Materials

Section 708 – Paints

Section 709 – Reinforcing Steel and Wire Rope

Section 711 – Concrete Curing Materials and Admixtures

Section 712 – Miscellaneous

Section 713 – Traffic Control Materials

Section 714 – Prestressed Unit Materials

Any revisions to the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction can be found in the respective section of this document.

All Contractors are required to have on the job site and utilize the current updated copies of the CDOT Standard Specifications for Road and Bridge Construction and Standard Plans - M&S Standards. Copies of both are available from CDOT.

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

1.03 UTILITY SPECIFICATIONS

Utility Standard Specifications shall be the utility department specifications (current issue or revision) as follows. The utility specifications shall be used for both construction and protection of the respective utility lines.

Wastewater Lines

The Standard Specifications for wastewater line construction and protection shall be the **“COLORADO SPRINGS UTILITIES WASTEWATER LINE EXTENSION AND SERVICE STANDARDS”, latest edition**, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

Electrical Distribution and Telecommunication Lines

The Standard Specifications for electrical distribution and telecommunication line

construction and protection shall be the **"COLORADO SPRINGS UTILITIES ELECTRICAL DISTRIBUTION CONSTRUCTION STANDARDS", latest edition**, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety. The contractor shall install all conduit and vaults shown on the drawings per the standards identified above. Colorado Springs Utilities shall install all wiring and above ground poles and wiring.

Copies are available from the Colorado Springs Utilities' Development Services, 111 S. Cascade, Suite 105, Colorado Springs, CO 80903, during regular business hours.

Colorado Springs Utilities Gas, Private fiber optic, Telephone, and Cable TV Fiber shall be relocated and installed by each respective private utility company. See Section VIII for contact information of each utility company within the project limits.

1.04 TRAFFIC SIGNAL SPECIFICATIONS

Traffic Signal Standard Specifications shall be the **"COLORADO SPRINGS CITY TRAFFIC SIGNAL INSTALLATION AND PARTS SPECIFICATIONS FOR CONTRACTORS", 1/10/2006 Edition**, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

Any revisions to the Colorado Springs City Traffic Signal Installation and Parts Specifications for Contractors can be found in the respective section of this document.

All Contractors are required to have on the job site and utilize the current updated copy of the Colorado Springs City Traffic Signal Installation and Part Specifications for Contractors.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours.

1.05 LIGHTING SPECIFICATIONS

Lighting Standard Specifications shall be Section 613 of the **"COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 2005**.

Lighting installation shall be according to Section 17 of the **"COLORADO SPRINGS UTILITIES ELECTRIC DISTRIBUTION CONSTRUCTION STANDARDS", current edition**.

Any revisions to the Colorado Springs Utilities Electric Distribution Construction Standards can be found in the respective section of this document.

All Contractors are required to have on the job site and utilize the current updated copy of the Colorado Springs Utilities Electric Distribution Construction Standards.

Copies are available from the Colorado Springs Utilities' Development Services, 111 S. Cascade, Suite 105, Colorado Springs, CO 80903, during regular business hours.

1.06 EROSION CONTROL SPECIFICATIONS

For specific items of work, the Erosion Control Specifications shall be the **"CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL VOLUME II", 2002**.

All Contractors are required to have on the job site and utilize the current updated copy of the City of Colorado Springs Drainage Criteria Manual Volume II.

Copies are available from the City of Colorado Springs, Office Services Division, Suite

REVISIONS TO CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS

The following Revisions supplement or modify the City of Colorado Springs Engineering Division Standard Specifications. Measurement and Payment for all bid items shall be in accordance with Section 1025, Measurement and Payment, and shall take precedence over the measurement and payment sections of the Standard Specifications.

Revision of Section 108 – Work Provisions and Rules - Shop Drawings and Submittals
Revision of Section 220 – Removal of Structures and Obstructions
Revision of Section 240 – Reset Structures
Revision of Section 600 – Structural Concrete
Revision of Section 630 – Storm Drains and Culverts
Revision of Section 800 – Work Zone Traffic Control
Addition of Section 920 – Property Restoration
Addition of Section 1000 – Synthetic Stone Veneer
Addition of Section 1100 – Railroad Specifications

REVISION OF SECTION 108 WORK PROVISIONS AND RULES

SHOP DRAWINGS AND SUBMITTALS

Section 108.19 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

The first sentence in paragraph A is deleted, and replaced with:

The Contractor shall submit to the Engineer all shop drawings, working drawings, and submittals in a timely manner, considering the 28-day review period for shop drawings.

The first sentence in paragraph B is deleted, and replaced with:

Six final copies of all shop drawings shall be submitted to the Engineer, who after checking will retain three copies and return three copies to the Contractor. Six final copies of all working drawings shall be submitted to the Engineer, who after acknowledging receipt of the working drawings, will retain three copies and return three copies to the Contractor. Four final copies of all schedules shall be submitted to the Engineer, who after acknowledging receipt of the working drawings, will retain three copies and return one copy to the Contractor.

Section 108.19 of the Standard Specifications is hereby revised for this project to include the following:

Shop Drawings, Working Drawings, Other submittals, and Construction Drawings.

- (a) Shop drawings, Working Drawings, and Other Submittals - General. *All work shall be performed in accordance with the plans, reviewed shop drawings, working drawings, or other submittals. Specific requirements for the required shop drawings, working drawings, and other submittals for this project are contained in the specifications.*

The Contractor shall be responsible for the accuracy of all dimensions and quantities shown on the shop drawings, working drawings, and other submittals. The Contractor shall correlate all information in the Contract, in the submittals, and in all revisions at the project site to insure that there are no conflicts and that the work can be constructed as shown. The Contractor shall be responsible for all information that pertains to the fabrication processes and methods of construction.

Shop drawings, working drawings, and other submittals shall be delivered to the Engineer. The Contractor shall notify the Engineer, in writing, at the time of submittal of shop drawings, working drawings, and other submittals, of any information submitted that deviates from the requirements of the plans and specifications. In addition, specific notation of the deviations

or changes from the plans and specifications shall be placed on the shop drawing, working drawing, or other submittal.

The first sheet or page of each set of shop drawings, working drawings, and other submittals shall be reviewed by the Contractor for conformance with the his other work on the project, and stamped with a stamp indicating his review of the submittal. Submittals shall be made in complete packages which will allow the Engineer to properly review them for general compliance with the Contract and to effectively evaluate the proposed methods of construction. The allowed time for review shall not begin until such submittals are complete.

The format of the shop drawings, working drawings, and other submittals shall be as follows:

1. All manually drafted shop drawings and working drawings shall be either 34 inches long by 22 inches wide overall, or 17 inches long by 11 inches wide overall. There shall be a 2-inch margin on the left side of the sheet and a ½ inch margin on the other three sides. A blank space, 4 inches long by 3 inches wide, shall be left available near the lower right-hand corner of shop drawings, for the Engineer's review stamp.
2. A title block shall be located in the lower right-hand corner of each sheet, and shall show the project number, structure name, contents of the sheet, designer/engineer, sheet number, and revision number.
3. Design notes, calculations, lists, reports, descriptions, catalog cuts, and other on-drawing submittals shall be submitted on 8½ inch by 11 inch sheets.
4. The shop drawings, working drawings, other submittals and all revisions shall be signed and sealed for the Contractor, by a professional engineer registered in the state of Colorado when required by the specifications. Submittals without the required signature and seal will not be accepted and will be returned to the Contractor without action.

Table 108-1 summarizes the minimum required submittals and is included at the end of this subsection. Table 108-1 lists submittals in one location for information. The table clarifies the type of submittal and whether the Contractor's Engineer must sign and seal the submittal. Table 108-1 may not be all inclusive. The Contractor shall provide all submittals required by the Contract, including those not listed in the table.

Table 108-2 summarizes the minimum required submittals for utilities and is included at the end of this subsection. Table 108-2 lists submittals in one location for information. The table clarifies the type of submittal and whether the Contractor's Engineer must sign and seal the submittal. Table 108-2 may not be all inclusive. The Contractor shall provide all submittals required by the Contract, including those not listed in the table.

- (b) Shop Drawings. The Contractor shall provide shop drawings to adequately control the work. The Contractor shall submit shop drawings to the Engineer for formal review.

The Engineer will review the shop drawings to evaluate that general conformance with the design concept and that general compliance with the information given in the plans and specifications has been achieved. The review does not extend to accuracy of dimensions, means, methods, techniques, sequences, schemes, procedures of construction, or to safety precautions. The review by the Engineer is not a complete check. Review of the shop drawings does not relieve the Contractor of the responsibility for the correctness of the shop drawings. All work done prior to the Engineer's review of shop drawings shall be at the Contractor's sole risk.

The Engineer may request additional details and require the Contractor to make changes in the shop drawings which are necessary to conform to the provisions and intent of the plans and specifications without additional cost to the project.

After review, the Engineer will return three sets of shop drawings, for use by the Contractor and the Fabricator or Supplier. Returned shop drawings will be stamped with the Engineer's review stamp to indicate one of the following:

Reviewed, no exception taken	Shop drawings have been reviewed and do not require resubmittal.
Reviewed, revise as noted	Shop drawings have been reviewed and the Contractor shall incorporate the comments noted in the shop drawings into the work. The shop drawings do not require resubmittal.
Resubmit, revise as noted	Shop drawings require correction or redrawing and shall be resubmitted for review. Corrections shall be made and the shop drawings shall be resubmitted by the Contractor in the same manner as the first submittal. Specific notation shall be made on the shop drawing to indicate the revisions.

The time required for the Engineer's review of each submittal will not exceed four weeks after a complete submittal of shop drawings is received by the Engineer. It is the intent of these specifications that no more than two submittals of shop drawings shall be required for any one particular item. If additional submittals are required by actions of the Contractor, resulting delays shall be the responsibility of the Contractor. If additional submittals are required by the Engineer's actions or if shop drawing review is delayed by the Engineer, the Contractor may request an extension of time equal to the number of days exceeding the four week review per submittal.

All revisions made to the shop drawings after the Engineer's initial review process require resubmittal.

- (c) *Working Drawings. The Contractor shall supplement the plans with working drawings to detail the construction or to provide the Engineer with information on the proposed methods of construction. Unless otherwise specified, the Contractor shall submit six sets of working drawings to the Engineer for information only, who after acknowledging receipt of the working drawings, will retain three copies and return three copies to the Contractor. These drawings will not be formally reviewed by the Engineer. The Contractor shall submit working drawings to the Engineer ten days before the start of work.*
- (d) *Other Submittals. Other submittals shall be prepared and submitted by the Contractor as defined for working drawings. Unless otherwise specified two copies shall be submitted to the Engineer for information only. The plans or specifications will indicate which submittals require formal review by the Engineer. One record set of all design work performed by the Contractor's Engineer shall be submitted to the Project Engineer.*
- (e) *Construction Drawings. The Contractor shall keep one set of plans, reviewed shop drawings, working drawings, and other submittals available on the project site at all times. This set shall be defined as the "construction drawings." The Contractor shall note on these construction drawings all changes and deviations from the work shown on the plans, shop drawings, working drawings, and other submittals. The construction drawings shall be kept current as the work progresses and notations shall be made within seven days of the change or deviation. Requests for Information (RFIs) and the answer/response shall be attached to the construction drawings.*

At the completion of the project, the first sheet or page of each set of construction drawings shall be stamped "As Constructed" and signed by the Contractor.

Upon completion of the work and prior to final payment, the construction drawings shall be submitted to the Engineer.
- (f) *Furnishing the shop drawings, working drawings, construction drawings, and other submittals will not be measured and paid for separately, but shall be included in the work.*
- (g) *Failure of the Contractor to comply with the requirements for shop drawings, working drawings, other submittals, and construction drawings may be considered unsatisfactory contract progress. Monthly progress payments maybe withheld until the requirements are met.*
- (h) *Except as specifically noted, all time required for review of shop drawings, working drawings, and other submittals shall be included in the work and shall not be the basis for any claim for a time extension or monetary adjustment except as provided for herein.*

Table 108-1**SUMMARY OF CONTRACTOR SUBMITTALS**

SPEC SECTION	DESCRIPTION	TYPE	CONTRACTOR P.E. SEAL REQUIRED?
514	Pedestrian / Bikeway Railing	Working Drawing	No
514	Safety Railing	Working Drawing	No
518	Expansion Devices (2") and (0-4")	Working Drawing	No
518	Expansion Devices (0-6") and (0-9")	Shop Drawing	Yes
601 & 618	Precast Panel Deck Forms	Shop Drawing	Yes*
601	Permanent Steel Bridge Deck Forms	Working Drawing	Yes
601	Falsework	Shop Drawing	Yes
602	Reinforcing Steel	Shop Drawing	No
606	Guardrail Type 7 (Special) (Modified)	Working Drawing	No
606	Bridge Rail, all types	Working Drawing	No
613	Light Standards	Working Drawing	Yes*
618	Steel Diaphragms between Prestressed Girders	Working Drawing	No
618	Prestressed Concrete (Pre-tensioned)	Shop Drawing	Yes*
618	Prestressed Concrete (Post-tensioned)	Shop Drawing	Yes*

* A 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.

Table 108-2**Summary of Contractor Submittals - Utilities**

BID ITEM NO.	DESCRIPTION	TYPE	CONTRACTOR P.E. SEAL REQUIRED?
	Polyvinyl Chloride Pipe 4" – 12"	Working Drawing	No
	Pre-Cast Inlets	Working Drawing	No
	Pipe Bedding Material	Report	No
	Trench Backfill Material	Report	No
	Casing Pipe	Working Drawing	No
	CCTV Inspection Reports	Report	No
	Compaction Test Results	Report	Yes*

* A 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.

REVISION OF SECTION 220**REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

Section 220.01 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised as follows:

Section 220.01 Description, first paragraph shall be revised to include the addition of the following removal items: Remove Inlet, Remove Storm Drain Pipe, Remove Manhole, Remove Sidewalk, Remove Concrete Curb and Gutter, Remove Ground Sign, Remove Overhead Sign Structure, Remove Light Standard, Remove Fence, Remove Guardrail Thrie Beam, Remove Temporary Guard Rail, Remove Concrete Footing, and Remove Tree.

Section 220.02 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised as follows:

Remove Light Standard, Remove Overhead Sign Structure, and Remove Temporary Guard Rail shall have the following requirements:

- (1) Light Standards, Overhead Sign Structure, and Temporary Guard Rail shall be salvaged and delivered to a location designated by the Engineer.

Remove Fence shall have the following requirements:

- (1) Remove of Fence shall not proceed until temporary fence is in place and secure. Contractor shall coordinate temporary fence material, locations with property owners prior to placement.
- (2) The Contractor shall coordinate removal of fence with all property owners affected two weeks prior to beginning any work in the area.
- (3) Temporary fencing shall be Chain Link Fence and shall conform to Section 607 of the CDOT Standard Specifications.

REVISION OF SECTION 240**RESET STRUCTURES**

Section 240.01 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised as follows:

Section 240.01 Description, first paragraph shall be revised to include the addition of the following reset items: Reset Ground Sign, Reset Sign Panel, Reset Fence, and Reset Temporary Type 7 Barrier.

Section 240.02 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised as follows:

Section 240.02 Construction, add the following paragraph: Ground Signs and Sign Panels to be reset shall be cleaned after removal and prior to resetting.

REVISION OF SECTION 600**STRUCTURAL CONCRETE**

Section 600 of the City of Colorado Springs Engineering Division Standard Specifications is hereby deleted for this project (except as provided below), and replaced with the following:

Section 601 of the CDOT Standard Specifications for Road and Bridge Construction, 2005.

REVISION OF SECTION 630**STORM DRAINS AND CULVERTS**

Section 630 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised as follows:

Section 635.01 of the City of Colorado Springs Engineering Division Standard Specification is hereby revised as follows:

A. AASHTO M-198 "Joints for Circular Concrete Sewer and Culvert Pipe using Flexible Watertight Gaskets" for bell and spigot or tongue and groove pipe. Also, ASTM C-433 "Joints for circular concrete sewer and culvert pipe, using rubber gaskets".

REVISION OF SECTION 800**WORK ZONE TRAFFIC CONTROL**

Section 800 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised as follows:

Section 805.01 shall be supplemented with the following:

Contractor shall provide a detailed Traffic Control Plan in conformance with the "Manual on Uniform Traffic Control Devices" and Section 805.03 of this specification prior to any work.

Detours shall be maintained throughout the period of construction in such a manner as to provide the least amount of disruption to normal traffic flow.

The Contractor shall strictly adhere to all time limits and other restrictions as specified in the contract documents.

The Contractor shall coordinate with the Engineer to determine site-specific staging and/or phasing requirements. The Contractor shall schedule the work in such a manner as to comply with the staging and/or phasing requirements contained in the contract documents.

Section 805.03 A. shall be supplemented with the following:

The Traffic Controls for Street Construction, Utility Work, and Maintenance Operations, Manual on Uniform Traffic Control Devices Supplement for City of Colorado Springs, 2005 contains requirements for permits and approvals required from the City of Colorado Springs and CDOT.

The Traffic Control Plan Submittal and Review process will be as follows:

1. Contractor submittal of the Traffic Control Plan to the City of Colorado Springs Traffic Engineering Division.
2. City of Colorado Springs Traffic Engineering Division review. If required, the Contractor shall revise and resubmit the Traffic Control Plan submittal to address the Traffic Engineering Division review comments at no additional cost.
3. City of Colorado Springs Traffic Engineering Division approval of the Contractor submitted Traffic Control Plan. The approved plan shall be returned to the Contractor.

The City of Colorado Springs will periodically field check the Traffic Control. If the City feels that the traffic control is not adequate, they will require a review and approval of the Contractor's Traffic Control Plans. If a new Submittal Review and

approval is required, all time delays and expenses incurred by the contractor related to the additional requirements shall be the responsibility of the contractor.

REVISION OF SECTION 920

PROPERTY RESTORATION

Section 900 of the City of Colorado Springs Engineering Division Standard Specifications is revised to include the addition of Property Restoration.

920.01 Description

This work includes restoration of adjacent property affected by construction activities. The work

includes all materials, labor, and equipment required to restore the property to a condition equal to, or better than it was at the beginning of construction. Included are (but not limited to): removals, resets, spreading of topsoil, seeding, sodding, mulching, fencing, edging, rocks, bushes, trees (and tree trimming), sprinkler system modification/repair, and any other work required to restore the property to a condition equal to or better than its original condition. All work completed shall be documented to the satisfaction of the Engineer. Specific requirements known prior to construction are listed in Subsection 920.03.

920.02 Coordination Requirements

The Contractor shall coordinate with the property owner prior to starting work. The property must be evaluated jointly by the Contractor and the owner prior to beginning work. A written agreement on the work activities to be performed shall be developed and agreed upon prior to beginning work. Two copies of the written agreement shall be provided to the Engineer.

The Contractor shall establish the state of the property by taking before and after photographs (or

video) of the work at each location, and making sketches if necessary. A complete set of pictures,

video, and sketches for each property shall be provided to the Engineer. The Contractor shall maintain a set of pictures, video and sketches for job site use.

920.03 Property Restoration Requirements

Specific property restoration requirements to be performed by the Contractor, in addition to the typical restoration described in Section 920.01 are shown on the plan sheets. These requirements are intended to outline the major items/issues identified as part of the right-of-way agreement and should not be considered the minimum requirements.

920.04 Construction Requirements

The Contractor shall coordinate with the property owner at least two weeks prior to beginning work on the property. Notification of the coordination will be provided to the Engineer.

The Contractor shall remove and reset or replace all existing items as necessary to perform the work. The Contractor shall be responsible for the costs or replacement, with equal or better items, for any items damaged by the Contractor during the work.

The Contractor shall salvage, and deliver to the property owner, any materials that the property owner has requested during or after the coordination efforts.

All landscaping work shall meet the requirements of Section 900 of the City of Colorado Springs, Engineering Division, Standard Specifications and any revision contained herein.

The Contractor may recover and store removed materials from the property for reuse as long as the condition of materials does not degrade.

PROPERTY RESTORATION

All trees shall be 1-1/4" caliper or larger. The species shall be the same as the existing trees. Species substitution will be acceptable if approved, in writing, by the property owner.

All bushes shall be 5 gallon or larger. The species shall be the same as the existing bushes. Species substitution will be acceptable if approved, in writing, by the property owner.

The Contractor shall be responsible for watering all trees, bushes and sod for a minimum of 21 days after installation.

The Contractor shall provide all materials, equipment and labor necessary to complete the work.

Resetting of an irrigation system shall include all work necessary to remove the items from their existing location and to relocate them to the new location, and shall include all irrigation system equipment, pipe, fittings, valve boxes and all other work necessary to complete the reset item.

Installation of new landscape rocks or resetting of existing rocks shall include all labor, materials, and equipment required for placing landscape rocks.

920.05 Construction Certification Requirements

The Contractor shall obtain, upon completion of the work, and prior to acceptance by the City, written approval of the Property Restoration work from the property owner. A copy of the written approval shall be provided to the Engineer.

ADDITION OF SECTION 1000

SYNTHETIC STONE VENEER

City of Colorado Springs Engineering Division Standard Specifications are revised to include the addition of Section 1000 Synthetic Stone Veneer.

This work consists of the construction of the synthetic stone veneer that is to be placed as indicated on the plans.

Materials

The synthetic stone veneer shall be Owens Corning Cultured Stone, Cobblefield, Texas Cream (CSV-2083), or approved equal.

Installation

The synthetic stone veneer shall be installed per manufactures recommendations and specifications.

Measurement

The quantity of synthetic stone veneer to be paid for will not be measured, but will be the quantity shown on the plans for each element, in SF, completed and accepted by the Engineer.

Payment

Payment shall be made at the applicable unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

ADDITION OF SECTION 1100

RAILROAD SPECIFICATIONS

City of Colorado Springs Engineering Division Standard Specifications are revised to include the addition of Section 1000 Synthetic Stone Veneer.

Shoring to meet the requirements outlined in the BNSF/UPRR Guidelines for Temporary Shoring.

Temporary Construction Clearance (and falsework clearance) envelope shall be in accordance with Railroad requirements, bound by 21 feet vertically above the plans of top-of-rail and 12 feet horizontal at a right angle from centerline of track.

A detailed girder erection plan must be reviewed and approved by UPRR for all girders installed on/over UPRR right-of-way.

No work may be performed within 25 feet of track centerline when a train is passing the site.

All work within the railroad right-of-way to be in accordance with railroad right of entry permit requirements.

Coordinate all operations within the Railroad right-of-way with the Manager of Track Maintenance (MTM), Joe Rodriguez at 719-549-6266 or 719-248-4803.

No drainage from overpass structure will be discharged onto UPRR right-of-way.

All drainage shall be connected to a positive drainage system.

The contractor is responsible to maintain erosion control for the limits of the construction project.

Any damage to Railroad property such as track, signal equipment or structure could result in a train derailment. All damages must be reported immediately to the Manager of Track Maintenance (MTM), Joe Rodriguez at 719-549-6266 or 719-248-4803.

Review of all construction submittal such as shoring, falsework, erection plans, and demolition plans will take a minimum of 4 weeks from the date received by the Railroad.

The project site shall be inspected by the Railroad at the contractor's expense during and toward the end of construction for final acceptance before the Contractor demobilizes.

1.01.1 DESCRIPTION

This project includes construction work within the right-of-way and/or properties of the Union Pacific Railroad Company ("UPRR") and adjacent to its tracks, wire lines and other facilities. This section describes the minimum special requirements for coordination with UPRR when work by the Contractor will be performed upon, over or under the UPRR

right-of-way or may impact current or future UPRR operations. The Contractor will coordinate with UPRR while performing the work outlined in this Contract, and shall afford the same cooperation with UPRR as it does with the Agency. All submittals and work shall be completed in accordance with UPRR Guidelines and AREMA recommendations as modified by these minimum special requirements or as directed in writing by the UPRR Designated Representative.

For purposes of this project, the UPRR Designated Representative shall be the person or persons designated by the UPRR Manager of Industry and Public Projects to handle specific tasks related to the project.

1.02 DEFINITION OF AGENCY AND CONTRACTOR

As used in these UPRR requirements, the term "Agency" shall mean the Political Body.

As used in these UPRR requirements, the term "Contractor" shall mean the contractor or contractor's hired by the Agency to perform any project work on any portion of UPRR's property and shall also include the contractor's subcontractor's and the contractor's and subcontractor's respective officer, agents and employees, and others acting under its or their authority.

1.03 UPRR CONTACTS

The primary UPRR point of contact for this project is:

Joe Rodriguez at 719-549-6266

For UPRR flagging services and track work, contact:

Joe Rodriguez at 719-549-6266

1.04 REQUEST FOR INFORMATION / CLARIFICATION

All Requests for Information ("RFI") involving work within any UPRR right-of-way shall be in accordance with the procedures listed elsewhere in these bid documents. All RFI's shall be submitted to the Engineer of Record. The Engineer of Record will submit the RFI to the UPRR Designated Representative for review and approval for RFI's corresponding to work within the UPRR right-of-way. The Contractor shall allow four (4) weeks for the review and approval process by UPRR.

1.05 PLANS / SPECIFICATIONS

The plans and specifications for this project, affecting the UPRR, are subject to the written approval by the UPRR and changes in the plans may be required after award of the Contract. Such changes are subject to the approval of the Agency and the UPRR.

1.06 UTILITIES AND FIBER OPTICS

All installations shall be constructed in accordance with current AREMA recommendations and UPRR specifications and requirements. UPRR general guidelines and the required application forms for utility installations can be found on the UPRR website at uprr.com.

1.07 GENERAL

A. Contractor shall perform all its work in compliance with all applicable UPRR and FRA rules and regulations. Contractor shall arrange and conduct its work in such manner and at such times as shall not endanger or interfere with the safe operation of the tracks and property of UPRR and the traffic moving on such tracks, or the wires, signals and other property of UPRR, its tenants or licensees, at or in the vicinity of the Work. UPRR shall be reimbursed by Contractor or Agency for train delay cost and lost revenue claims due to any delays or interruption of train operations resulting from Contractor's construction or other activities.

B. Construction activities will be permitted within 12 feet of the operational tracks only if absolutely necessary and UPRR's Designated Representative grants approval. Construction activities within 12 feet of the operational track(s) must allow the tracks to stay operational.

C. Track protection is required for all work equipment (including rubber tired equipment) operating within 25 feet from nearest rail.

D. The Contractor is also advised that new railroad facilities within the project may be built by UPRR and that certain Contractor's activities cannot proceed until that work is completed. The Contractor shall be aware of the limits of responsibilities and allow sufficient time in the schedule for that work to be accomplished and shall coordinate its efforts with the UPRR.

1.08 RAILROAD OPERATIONS

A. The Contractor shall be advised that trains and/or equipment are expected on any track, at any time, in either direction. Contractor shall be familiar with the train schedules in this location and structure its bid assuming intermittent track windows in this period, as defined in Paragraph B below.

B. All railroad tracks within and adjacent to the Contract Site are active, and rail traffic over these facilities shall be maintained throughout the Project. Activities may include both through moves and switching moves to local customers. Railroad traffic and operations will occur continuously throughout the day and night on these tracks and shall be maintained at all times as defined herein. The Contractor shall coordinate and schedule the work so that construction activities do not interfere with railroad operations.

C. Work windows for this Contract shall be coordinated with the Agency's and the UPRR's Designated Representatives. Types of work windows include Conditional Work Windows and Absolute Work Windows, as defined below:

1. Conditional Work Window: A Conditional Work Window is a period of time that railroad operations have priority over construction activities. When construction activities may occur on and adjacent to the railroad tracks within 25 feet of the nearest track, a UPRR flag person will be required. At the direction of the UPRR flag person, upon approach of a train, and when trains are present on the tracks, the tracks must be cleared (i.e., no construction equipment, materials or personnel within 25 feet, or as directed by the UPRR Designated Representative, from the tracks). Conditional Work Windows are available for the Project.

2. Absolute Work Window: An Absolute Work Window is a period of time that construction activities are given priority over railroad operations. During this time frame the designated railroad track(s) will be inactive for train movements and may be fouled by the Contractor. At the end of an Absolute Work Window the railroad tracks and/or signals must be completely operational for train operations and all UPRR, Public Utilities Commission (PUC) and Federal Railroad Administration (FRA) requirements, codes and regulations for operational tracks must be complied with. In the situation where the operating tracks and/or signals have been affected, the UPRR will perform inspections of the work prior to placing that track back into service. UPRR flag persons will be required for construction activities requiring an Absolute Work Window. **Absolute Work Windows will not generally be granted. Any request will require a detailed explanation for UPRR review.**

RIGHT OF ENTRY, ADVANCE NOTICE AND WORK STOPPAGES

A. *Prior to beginning any work on or over the property of, or affecting the facilities of, the UPRR, the Contractor shall enter into an agreement with the UPRR in the form of the "Contractor's Right of Entry Agreement", attached as 10.9, or latest version thereof provided by the UPRR. There is a fee for processing of the agreement. This cost shall be borne by the Contractor. Contractor shall submit a copy of the executed agreement and the insurance policies, binders, certificates and endorsements set forth therein to the Agency prior to commencing work on UPRR property.*

The right of entry agreement shall specify working time frames, flagging and inspection requirements, and any other items specified by the UPRR.

B. The Contractor shall give the advance notice to the UPRR as required in the "Contractor's Right of Entry Agreement" before commencing work in connection with construction upon or over UPRR's right-of-way and shall observe UPRR's rules and regulations with respect thereto.

C. All work upon UPRR's right-of-way shall be done at such times and in such manner as not to interfere with or endanger the operations of UPRR. Whenever work may affect the operations or safety of trains, the method of doing such work shall first be submitted to UPRR's Designated Representative for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor, which requires flagging service or inspection service, shall be deferred until the flagging protection required by UPRR is available at the job site. See Section 3.18 for railroad flagging requirements.

D. The Contractor shall make requests in writing for both Absolute and Conditional Work Windows, at least two weeks in advance of any work. The written request must include:

- 1. Exactly what the work entails.*
- 2. The days and hours that work will be performed.*
- 3. The exact location of work, and proximity to the tracks.*
- 4. The type of window requested and the amount of time requested.*
- 5. The designated contact person.*

*The Contractor shall provide a written confirmation notice to the UPRR at least 48 hours before commencing work in connection with approved work windows when work will be performed within **25 feet of any track center line**. All work shall be performed in accordance with previously approved work plans.*

E. Should a condition arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of UPRR, the Contractor shall make such provisions. If in the judgment of UPRR's Designated Representative such provisions are insufficient, the UPRR's Designated Representative may require or provide such provisions as deemed necessary. In any event, such provisions shall be at the Contractor's expense and without cost to the UPRR. UPRR or the Agency shall have the right to order Contractor to temporarily cease operations in the event of an emergency or, if in the opinion of the UPRR's Designated Representative, the Contractor's operations could endanger UPRR's operations. In the event such an order is given, Contractor shall immediately notify the Agency of the order.

1.09 INSURANCE

Contractor shall not begin work upon or over UPRR's right-of-way until UPRR has been furnished the insurance policies, binders, certificates and endorsements required by the "Contractor's Right-of-Entry Agreement" and UPRR's Designated Representative has advised the Agency that such insurance is in accordance with the Agreement. The required insurance shall be kept in full force and effect during the

performance of work and thereafter until Contractor removes all tools, equipment, and material from UPRR's property and cleans the premises in a manner reasonably satisfactory to UPRR.

1.10 RAILROAD SAFETY ORIENTATION

All personnel employed by the Contractor and all subcontractors must complete the UPRR course "Orientation for Contractor's Safety", and be registered prior to working on UPRR property. This orientation is available at www.contractororientation.com. This course is required to be completed annually.

1.11 COOPERATION

UPRR will cooperate with Contractor so that work may be conducted in an efficient manner, and will cooperate with Contractor in enabling use of UPRR's right-of-way in performing the work.

1.11.1 MINIMUM CONSTRUCTION CLEARANCES FOR FALSEWORK AND OTHER TEMPORARY STRUCTURES

The Contractor shall abide by the following minimum temporary clearances during the course of construction:

- A. 12' – 0" horizontal from centerline of track
- B. 21' – 0" vertically above top of rail.

For construction clearance less than listed above, local Operating Unit review and approval is required.

1.12 APPROVAL OF REDUCED CLEARANCES

A. The minimum track clearances to be maintained by the Contractor during construction are specified in Section 3.07 herein.

B. Any proposed infringement on the specified minimum clearances due to the Contractor's operations shall be submitted to UPRR's Designated Representative through the Agency at least 30 days in advance of the work and shall not be undertaken until approved in writing by the UPRR's Designated Representative.

C. No work shall commence until the Contractor receives in writing assurance from UPRR's Designated Representative that arrangements have been made for flagging service, as may be necessary and receives permission from UPRR's Designated Representative to proceed with the work.

1.13 CONSTRUCTION AND AS-BUILT SUBMITTALS

A. Submittals are required for construction materials and procedures as outlined below. The submittals shall include all review comments from the Agency and the Engineer of Record. All design submittals shall be stamped and signed by a Professional Engineer registered in the State of Colorado.

B. The tables below provide UPRR's minimum submittal requirements for the construction items noted. Submittal requirements are in addition to those specified elsewhere in these bid documents. The minimum review times indicated below represent UPRR's requirements only. The Contractor shall allow additional time for the Agency's review time as stated elsewhere in these bid documents.

C. Submittals shall be made by the Agency to the UPRR Manager of Industry and Public Projects unless otherwise directed by the Railroad. Items in Table 1 shall be submitted for both railroad overpass and underpass projects, as applicable. Items in Table 2 shall be submitted for railroad underpass projects only.

TABLE 1

ITEM	DESCRIPTION	SETS REQD.	UPRR's Minimum Review Time
1	Shoring design and details	4	4 weeks
2	<i>Falsework design and details</i>	4	4 weeks
3	Drainage design provisions	4	4 weeks
4	Erection diagrams and sequence	4	4 weeks
5	Demolition diagram and sequence	4	4 weeks

Prior to or during construction of railroad underpass structures, the UPRR requires the review of drawings, reports, test data and material data sheets to determine compliance with the specifications. Product information for items noted in Table 2 be submitted to UPRR's Designated Representative through the Agency for their own review and approval of the material. The signed submittal and the Agency's review comments will be reviewed by UPRR or their consultant. If a consultant performs the reviews, the consultant may reply directly to the Agency or its Designated Representative after consultation with UPRR. Review of the submittals will not be conducted until after review by the Agency or its Designated Representative. Review of the submittal items will require a minimum of four (4) weeks after receipt from the Agency.

TABLE 2

ITEM	DESCRIPTION	SETS REQD.	NOTES
1	Shop drawings	4	Steel and Concrete members
2	<i>Bearings</i>	4	For all structures
3	Concrete Mix Designs	4	For all structures
4	Rebar & Strand certifications	4	For superstructure only
5	28 day concrete strength	4	For superstructure only
6	Waterproofing material certifications and installation procedure	4	Waterproofing & protective boards
7	Structural steel certifications	4	All fracture critical members & other members requiring improved notch toughness
8	Fabrication and Test reports	4	All fracture critical members & other members requiring improved notch toughness
9	Welding Procedures and Welder Certification	4	AWS requirements
10	Foundation Construction Reports	4	Pile driving, drilled shaft construction, bearing pressure test reports for spread footings
11	Compaction testing reports for backfill at abutments	4	Must meet 95% maximum dry density, Modified Proctor ASTM D1557

D. As-Built Records shall be submitted to the UPRR within 60 days of completion of the structures. These records shall consist of the following items:

Overpass Projects

1. Electronic files of all structure design drawings with as-constructed modifications shown, in Microstation J or Acrobat .PDF format.
2. Hard copies of all structure design drawings with as-constructed modifications shown.

Underpass Projects

1. Electronic files of all structure design drawings with as-constructed modifications shown, in Microstation SE or Acrobat .PDF format.
2. Hard copies of all structure design drawings with as-constructed modifications shown.
3. Final approved copies of shop drawings for concrete and steel members.
4. Foundation Construction Reports
5. Compaction testing reports for backfill at abutments

1.14 APPROVAL OF DETAILS

The details of the construction affecting the UPRR tracks and property not already included in the Contract Plans shall be submitted to UPRR's Designated Representative through the Agency for UPRR's review and written approval before such work is undertaken. Review and approval of these submittals will require a minimum of four (4) weeks in addition to the Agency's review time as stated elsewhere in these bid documents.

1.15 MAINTENANCE OF RAILROAD FACILITIES

A. The Contractor shall be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from Contractor's operations; to promptly repair eroded areas within UPRR's right of way and to repair any other damage to the property of UPRR, or its tenants.

B. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

C. The Contractor must submit a proposed method of erosion control and have the method reviewed by the UPRR prior to beginning any grading on the Project Site. Erosion control methods must comply with all applicable local, state and federal regulations.

1.16 SITE INSPECTIONS BY UPRR's DESIGNATED REPRESENTATIVE

A. In addition to the office reviews of construction submittals, site inspections may be performed by UPRR's Designated Representative at significant points during construction, including the following if applicable:

1. *Pre-construction meetings.*
2. *Pile driving/drilling of caissons or drilled shafts.*
3. *Reinforcement and concrete placement for railroad bridge substructure and/or superstructure.*
4. *Erection of precast concrete or steel bridge superstructure.*
5. *Placement of waterproofing (prior to placing ballast on bridge deck).*
6. *Completion of the bridge structure.*

B. Site inspection is not limited to the milestone events listed above. Site visits to check progress of the work may be performed at any time throughout the construction as deemed necessary by UPRR.

C. A detailed construction schedule, including the proposed temporary horizontal and vertical clearances and construction sequence for all work to be performed, shall be provided to the Agency for submittal to UPRR's Designated Representative for review prior to commencement of work. This schedule shall also include the anticipated dates when the above listed events will occur. This schedule shall be updated for the above listed events as necessary, but at least monthly so that site visits may be scheduled.

1.17 UPRR REPRESENTATIVES

A. UPRR representatives, conductors, flag person or watch person will be provided by UPRR at expense of the Agency or Contractor (as stated elsewhere in these bid documents) to protect UPRR facilities, property and movements of its trains or engines. In general, UPRR will furnish such personnel or other protective services as follows:

B. When any part of any equipment is standing or being operated within 25 feet, measured horizontally, from

centerline of any track on which trains may operate, or when any object is off the ground and any dimension thereof could extend inside the 25 foot limit, or when any erection or construction activities are in progress within such limits, regardless of elevation above or below track.

C. For any excavation below elevation of track subgrade if, in the opinion of UPRR's Designated Representative, track or other UPRR facilities may be subject to settlement or movement.

D. During any clearing, grubbing, excavation or grading in proximity to UPRR facilities, which, in the opinion of UPRR's Designated Representative, may endanger UPRR facilities or operations.

E. During any contractor's operations when, in the opinion of UPRR's Designated Representative, UPRR facilities, including, but not limited to, tracks, buildings, signals, wire lines, or pipe lines, may be endangered.

F. The Contractor shall arrange with the UPRR Designated Representative to provide the adequate number of flag persons to accomplish the work.

1.18 WALKWAYS REQUIRED

Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than twelve feet (12') from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while UPRR's flagman service is provided shall be removed before the close of each work day. Walkways with railings shall be constructed by Contractor over open excavation areas when in close proximity of track, and railings shall not be closer than 8' – 6" horizontally from center line of tangent track or 9' – 6" horizontal from curved track.

1.19 COMMUNICATIONS AND SIGNAL LINES

If required, UPRR will rearrange its communications and signal lines, its grade crossing warning devices, train signals and tracks, and facilities that are in use and maintained by UPRR's forces in connection with its operation at expense of the Agency. This work by UPRR will be done by its own forces and it is not a part of the Work under this Contract.

1.20 TRAFFIC CONTROL

Contractor's operations that control traffic across or around UPRR facilities shall be coordinated with and approved by the UPRR's Designated Representative.

1.21 CONSTRUCTION EXCAVATIONS

A. The Contractor shall be required to take special precaution and care in connection with excavating and shoring. Excavations for construction of footings, piers, columns, walls or other facilities that require shoring shall comply with requirements of OSHA, AREMA and UPRR "Guidelines for Temporary Shoring".

B. The Contractor shall contact UPRR's "Call Before Your Dig" at least 48 hours prior to commencing work at 1-800-336-9193 during normal business hours (6:30 a.m. to 8:00 p.m. central time, Monday through Friday, except holidays - also a 24 hour, 7 day a week number for emergency calls) to determine location of fiber optics. If a telecommunications system is buried

anywhere on or near UPRR property, the Contractor will co-ordinate with UPRR and the Telecommunication Company(ies) to arrange for relocation or other protection of the system prior to beginning any work on or near UPRR property.

1.22 RAILROAD FLAGGING

Performance of any work by the Contractor in which person(s) or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach within twenty-five (25) feet of any track, may require railroad flagging services or other protective measures. Contractor shall give the advance notice to the UPRR as required in the "Contractor's Right of Entry Agreement" before commencing any such work, so that the UPRR may determine the need for flagging or other protective measures to ensure the safety of the railroad's operations. Contractor shall comply with all other requirements regarding flagging services covered by the "Contractor's Right of Entry Agreement". Any costs associated with failure to abide by these requirements will be borne by the Contractor.

The estimated pay rate for each flag person is \$700.00 per day for an 8 hour work day with time and one-half for overtime, Saturdays, Sundays; double time and one-half for holidays. Flagging rates are set by the UPRR and are subject to change.

1.23 CLEANING OF RIGHT-OF-WAY

Contractor shall, upon completion of the work to be performed by Contractor upon the premises, over or beneath the tracks of UPRR, promptly remove from the right-of-way of UPRR all of Contractor's tools, implements, and other materials whether brought upon the right-of-way by Contractor or any subcontractors, employee or agent of Contractor or of any subcontractor, and leave the right-of-way in a clean and presentable condition to satisfaction of UPRR.

REVISIONS TO COLORADO DEPARTMENT OF TRANSPORTATION

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

The definition of the Engineer in the Colorado Department of Transportation (CDOT) Standard Specifications is revised to mean the Engineer as defined in Section 100 of the City of Colorado Springs Engineering Division Standard Specifications.

References within the CDOT Standard Specifications that identify approval by CDOT are hereby revised to mean approval by the Engineer.

References within the CDOT Standard Specifications that identify requirements with CDOT Procedures are in effect to the extent the Engineer determines applicability to the City project. References within the CDOT Standard Specifications that identify pre-approved products that are on the CDOT Approved Products List are recognized by the City as acceptable material for this City project.

Measurement and Payment for all bid items shall be in accordance with Section 1025, Measurement and Payment, and shall take precedence over the measurement and payment sections of the CDOT Standard Specifications.

The following Revisions supplement or modify the CDOT Standard Specifications for Road and Bridge Construction, 2005 for this project:

Revision of Section 202 – Removal of Structures and Obstructions

Revision of Section 203 – Excavation and Embankment

Revision of Section 206 – Structure Excavation and Backfill for Structures

Revision of Section 502 – Piling

Revision of Section 503 – Drilled Caissons

Revision of Section 509 – Steel Structures

Revision of Section 512 – Bearing Device

Revision of Section 514 – Pedestrian and Bikeway Railing

Revision of Section 515 – Waterproofing Membrane

Revision of Section 518 – Waterstops and Expansion Joints

Revision of Section 601 – Structural Concrete

Revision of Sections 601 and 708 – Structural Concrete Stain

Revision of Section 602 – Reinforcing Steel

Revision of Section 606 – Guardrail and Bridge Rail

Revision of Section 607 – Fences

Revision of Section 613 – Lighting

Revision of Section 614 – Traffic Control Devices

Revision of Section 618 – Prestressed Concrete

Revision of Section 618 – Erection of Pre-cast Concrete Members

Revision of Section 625 – Construction Surveying

Revision of Section 626 – Mobilization

Revision of Section 627 – Pavement Marking

Revision of Section 701 – Hydraulic Cement for Structures

Revision of Section 703 – Aggregates for Structures

Revision of Section 705 – Joint, Waterproofing, and Bearing Materials

Revision of Section 708 – Paints

Revision of Section 711 – Concrete Curing Materials and Admixtures

Revision of Section 712 – Miscellaneous

REVISION OF SECTION 202

REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Section 202 of the Standard Specifications is hereby revised to include the following:

Subsection 202.01 the following paragraph shall be added:

Steel plates shall be salvaged and delivered to a location designated by the Engineer.

Subsection 202.08 the following paragraph shall be added:

Portions of the existing substructure, including the substructure of the recently demolished souther bridge, will require full depth removal to facilitate the placement of the new structure.

REVISION OF SECTION 203

EXCAVATION AND EMBANKMENT

Section 203 of the Standard Specifications is hereby revised to include the following:

Subsection 203.06 the fourth paragraph shall be revised as follows:

Broken concrete, broken asphalt, or other solid materials regardless of size, shall not be placed within embankment areas supporting the roadway shoulders and pavement structure.

Subsection 203.06 the seventh paragraph shall be revised as follows:

All sod and vegetable and other organic matter shall be removed from the surface upon which the embankment is to be placed, regardless of embankment height. No organic matter shall be allowed in actual embankments.

REVISION OF SECTION 206

STRUCTURE EXCAVATION AND BACKFILL FOR STRUCTURES

Section 206 of the Standard Specifications is hereby revised to include the following:

Subsection 206.03, first paragraph, second sentence is deleted, and replaced with the following:

Excavation and backfill for structures in excess of 3 feet below the designated elevation will be paid on a time and materials basis as described in Subsection 108.24 of the City of Colorado Springs Engineering Division Standard Specifications. Timecards for the work performed shall be submitted daily to the Engineer.

REVISION OF SECTION 502

PILING

Section 502 of the Standard Specifications is hereby revised to include the following:

Subsection 502.01 shall include the following:

This work shall also consist of dynamic pile monitoring as described in this special provision. The monitoring will be done by the Engineer. The first two production piles shall be dynamically monitored by the Engineer using the Pile Driving Analyzer.

Subsection 502.02, the first sentence shall be deleted and replaced with the following:

Structural steel shapes used as piling shall conform to the requirements of AASHTO M 270 Grade 50.

Subsection 502.02, the second and third paragraphs are deleted, and replaced with the following:

Sleeves for steel piling shall be either steel pipe conforming to the requirements of ASTM A 252, Grade 2, or steel shell piles conforming to the requirements of AISI C 1010 or C 1015 steel.

Subsection 502.02, the fifth paragraph, last sentence, is deleted, and replaced with the following:

Sleeves for steel piling shall not be filled with concrete, slurry or sand and shall be free of debris.

Subsection 502.05 shall include the following:

Where steel sleeves are identified in the plans, one of the following construction sequences shall be selected by the Contractor:

- 1. After foundation preparation, drive the steel piles, install the steel sleeves around the steel piles, construct the mechanically stabilized earth around the steel sleeves, construct the abutments, or*
- 2. After foundation preparation, install the steel sleeves around the driven pile, construct the mechanically stabilized earth around the steel sleeves, drive the steel piles through the steel sleeves, construct the abutments.*

In either case, the steel sleeves shall be in place prior to construction of the mechanically stabilized earth.

The steel sleeves shall terminate approximately ½" below the abutment beam and not be connected to the abutment beam. A steel form above each sleeve with a notch around the steel

H pile shall form the bottom of the abutment beam to prevent abutment concrete from filling the steel sleeve.

Driving piles shall be done only between the hours as designated by City ordinance.

Subsection 502.05, first paragraph, last sentence, is deleted, and replaced with the following:

After driving is complete on steel piles without sleeves, all loose and displaced material shall be removed from around the piling before pouring any concrete.

Subsection 502.05, fourth paragraph, third sentence, is deleted, and replaced with the following:

Any predrilling not required by the Contract and ordered by the Engineer will be paid for on a time and materials basis as described in Subsection 108.24 of the City of Colorado Springs Engineering Division Standard Specifications.

Subsection 502.05, seventh paragraph, shall include the following:

The Pile Driving Analyzer shall be used on the first two piles driven for the bridge. The Contractor will provide the Pile Driving Analyzer equipment for the Engineer's use. The Pile Driving Analyzer will not be used for driven piles for the Monument Foundations.

Subsection 502.05, seventh paragraph, last sentence, is deleted, and replaced with the following:

If the Engineer requests additional piles to be monitored, or requests the Contractor to monitor the pile or piles, all necessary time required and work performed by the Contractor will be paid on a time and materials basis as described in Subsection 108.24 of the City of Colorado Springs Engineering Division Standard Specifications.

Subsection 502.06, first paragraph, shall include the following:

Holes to facilitate installation of the Steel Sleeves shall be drilled at each steel sleeve, down to the tip elevation shown in the plans for each steel sleeve.

Subsection 502.06, seventh paragraph, shall include the following:

The minimum diameter of the drilled holes shall be 1 inch larger than the outside diameter of steel sleeves.

Subsection 502.07, is deleted, and replaced with the following

502.07 (unused)

Subsection 502.10, last sentence, is deleted, and replaced with the following:

In that event, the tips will be paid for on a time and materials basis as described in Subsection 108.24 of the City of Colorado Springs Engineering Division Standard Specifications.

Subsection 502.11, is deleted, and replaced with the following

Piles do not require painting on the project.

Subsection 502.12 shall include the following:

Steel sleeves shall be measured by the linear foot in place. Drilled holes to facilitate installation of steel sleeves will not be measured because drilled holes to facilitate installation of steel sleeves is incidental to the Steel Sleeve item.

Subsection 502.13 shall include the following:

Payment will be made under:

Pay Item

Pay Unit

Steel Sleeve (size)

Linear Foot

Subsection 502.13, second-to-last paragraph, is deleted, and replaced with the following:

Authorized jetting, blasting, or other work necessary to obtain the specified penetration of piles will be paid for on a time and materials basis as described in Subsection 108.24 of the City of Colorado Springs Engineering Division Standard Specifications.

Subsection 502.13 shall include the following:

Drilled holes to facilitate installation of steel sleeves is incidental to the Steel Sleeve item.

REVISION OF SECTION 503

DRILLED CAISSONS

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

Subsection 503.09 (b), the table is deleted, and replaced with the following:

Additional Length	Compensation
0 to 5 feet	Contract Unit Price
Over 5 feet to 15 feet	Contract Unit Price Plus 15%
Over 15 feet	Contract Unit Price Plus 25%

Subsection 503.04, first paragraph, shall include the following:

The Contractor shall inspect all drilled caisson operations with non-destructive testing on all drilled caissons. Cross Sonic Log (CSL) or Impact Echo are acceptable methods of non-destructive testing for drilled caissons. Additional methods for non-destructive testing, that are in accordance with the AASHTO/ASTM/FHWA guidelines may be considered for use on this Project, subject to the review and Acceptance of the Engineer. The cost of the non-destructive testing will not be paid for separately but shall be incidental to the work.

REVISION OF SECTION 509

STEEL STRUCTURES

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

Subsection 509.01, first paragraph, second sentence is deleted, and replaced with the following:

Structural steel shall include, where identified, galvanizing, bolting, welding, special and alloy steels, electrodes, and steel forgings.

Subsection 509.01 shall include the following:

When the term “main street carrying members” or “main members” is used, it shall include: truss top chord, truss bottom chord, truss vertical members, and truss diagonal members.

Subsection 509.04, second-to-last paragraph, shall include the following:

Truss bottom chords are main members in tension.

Subsection 509.10 is deleted, and replaced with the following:

Unless otherwise shown in the plans, all anchor bolts shall conform to ASTM A 449 and shall be galvanized.

Subsection 509.14(b) shall include the following:

This subsection applies to fabrication of highway bridge expansion devices. This subsection does not apply to bridge rail, diaphragms, structural steel grate, signs, or anchor bolts.

Subsection 509.14(c) shall include the following:

This subsection applies to fabrication of highway bridge expansion devices. This subsection does not apply to bridge rail, diaphragms, structural steel grate, signs, or anchor bolts.

Subsection 509.15, title and first sentence, are deleted, and replaced with the following:

Plans and Shop Drawings for structural steel components identified in Table 108-1. The Contractor shall furnish shop drawings or working drawings in conformity with subsection 108.19 for all structural steel components identified in Table 108-1.

Subsection 509.17 shall include the following:

This subsection applies to fabrication of highway bridge expansion devices. This subsection does not apply to bridge rail, diaphragms, structural steel grate, signs, or anchor bolts.

Subsection 509.17(f) shall include the following:

After each truss section has been inspected by quality control and has been accepted as conforming to the contract requirements, the QA inspector shall be notified. The QA inspector shall determine the acceptability of the truss section.

Subsection 509.18(b)2 shall include the following:

Table 509-1 shall include the following:

Element	Tension-Compression	Weld Orientation	Percent Inspection
Truss Bottom Chord	Tension	Transverse	100
Truss Diagonal	Tension	Transverse	50
Truss Top Chord	Compression	Transverse	25

Subsection 509.19 shall include the following:

(m) Structural Steel Grate. Structural Steel Grate shall be fabricated per plan details and galvanized per subsection 509.23.

REVISION OF SECTION 512

BEARING DEVICE

Section 512 of the Standard Specifications is hereby revised to include the following:

Subsection 512.01 shall include the following:

This work also consists of furnishing and placing leveling pads in accordance with these specifications and in conformity with the plan details.

Subsection 512.09 shall include the following:

The materials for elastomeric leveling pads shall be subjected to the tests described in this section.

Subsection 512.09(a), the first and second sentences are deleted, and replaced with the following:

One bearing per lot shall be tested, randomly selected from the production bearings.

Subsection 512.19, the first sentence is deleted, and replaced with the following:

The accepted quantities of Type I bearing devices will be paid for at the contract unit price each.

Leveling pads will not be paid for separately, but are incidental to the work.

REVISION OF SECTION 514

PEDESTRIAN AND BIKEWAY RAILING

Section 514 of the Standard Specifications is hereby revised to include the following:

Subsection 514.03 shall include the following:

Ornamental Steel Rail shall be painted federal color #34108.

REVISION OF SECTION 515

WATERPROOFING MEMBRANE

Section 515 of the Standard Specifications is hereby revised to include the following:

Subsection 515.01 is deleted and replaced with the following:

This work consists of furnishing and placing an approved chemical concrete sealer (sealer) on the surface of a concrete bridge deck, approach slabs, and all adjacent sidewalk, curb, median, and other applications designated on the plans.

REVISION OF SECTION 518

WATERSTOPS AND EXPANSION JOINTS

Section 518 of the Standard Specifications is hereby revised to include the following:

Subsection 518.08, first paragraph, first sentence, is deleted and replaced with the following:

The Contractor shall submit working drawings as specified in subsection 108.19 of the revised City of Colorado Springs Engineering Division Standard Specifications.

Subsection 518.09, eleventh paragraph, last sentence, is deleted and replaced with the following:

The watertight integrity test is not required for joints at the roadway end of approach slabs. The watertight integrity test is required for joints at the bridge end of approach slabs.

Subsection 518.10(a), first paragraph, first sentence, is deleted and replaced with the following:

The Contractor shall submit shop drawings as specified in subsection 108.19 of the revised City of Colorado Springs Engineering Division Standard Specifications.

Subsection 518.10(c), third paragraph, is deleted and replaced with the following:

In order to perform the work of installing the expansion joint device in a proper manner, some portions of the curb and bridge deck cannot be constructed until after the expansion device is installed. After the expansion joint device has been set to its final line and grade, recess openings in the deck and curb shall be filled with concrete Class D. Prior to concrete placement, all existing concrete surfaces shall be primed with a CDOT approved epoxy polysulfide grout. The grout shall be placed according to the manufacturer's instructions. The uppermost surface of the concrete placement shall have a broom finish. The cost of this work including grout placement shall be included in the unit price bid for concrete Class D.

REVISION OF SECTION 601

STRUCTURAL CONCRETE

Section 601 of the Standard Specifications is hereby revised to include the following:

Subsection 601.02, Table 601-1 is revised with the following:

Concrete Class BZ shall have 0.50 maximum Water Cement Ratio.

Subsection 601.04 shall include the following:

601.04 Sulfate Resistance. The Contractor shall provide protection against sulfate attack on concrete structures by providing concrete structures manufactured with requirements according to Table 601-4. The exposure Class will be stated on the plans. A higher level of requirements may be used for a lower level of exposure.

If the Contractor can provide a test report that shows another class of exposure exists at a structure location, then the Engineer may accept a concrete mix for that location that meets the corresponding sulfate protection requirements in addition to other requirements shown in this Section.

Table 601-4

REQUIREMENTS TO PROTECT AGAINST DAMAGE TO CONCRETE BY SULFATE ATTACK FROM EXTERNAL SOURCES OF SULFATE

Severity of potential exposure	Water-soluble sulfate (SO ₄), percent, dry soil	Sulfate (SO ₄) in water, ppm	Water cement ratio, maximum	Cementitious material requirements
Class 0	0.00 to 0.10	0 to 150	0.50	Class 0
Class 1	0.11 to 0.20	151 to 1500	0.50	Class 1
Class 2	0.21 to 2.00	1501 to 10,000	0.45	Class 2
Class 3	2.01 or greater	10,001 or greater	0.40	Class 3

Cementitious material requirements are as follows:

Class 0 requirements shall be one of the following:

- (1) ASTM C 150 Type I, II or V
- (2) ASTM C 595 Type IP
- (3) ASTM C 1157 Type GU
- (4) ASTM C 150 Type III cement if it is allowed, as in Class E concrete

Class 1 requirements for sulfate resistance shall be one of the following:

- (1) ASTM C 150 Type II or V; Class C fly ash shall not be allowed in the concrete mix
- (2) ASTM C 595 Type IP (MS)
- (3) ASTM C 1157 Type MS
- (4) When ASTM C 150 Type III cement is allowed, as in Class E concrete, it shall have no more than 8 percent C_3A . Class C fly ash shall not be allowed in the concrete mix

Class 2 requirements for sulfate resistance shall be one of the following:

- (1) ASTM C 150 Type V with a minimum of a 20 percent substitution of Class F fly ash by weight
- (2) ASTM C 150 Type II or III with no more than 0.040 percent expansion at 14 days when tested in accordance with ASTM C 452 with a minimum of a 20 percent substitution of Class F fly ash by weight
- (3) ASTM C 1157 Type HS
- (4) A blend of portland cement meeting ASTM C 150 Type II or III with a minimum of 20 percent Class F fly ash by weight, where the blend has less than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C 1012.

Class 3 requirements for sulfate resistance shall be one of the following:

- (1) A blend of portland cement meeting ASTM C 150 Type II, III, or V with a minimum of a 20 percent substitution of Class F fly ash by weight, where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.
- (2) ASTM C 1157 Type HS having less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

When fly ash is used to enhance sulfate resistance, it shall be used in a proportion greater than or equal to the proportion tested in accordance to ASTM C1012 and it shall have a calcium oxide content no more than 2.0 percent greater than the fly ash tested according to ASTM 1012.

Subsection 601.06, the last paragraph is deleted, and replaced with the following:

Scales shall be accurate within the allowable tolerances as prescribed by State law. The scales shall be sealed by the Measurement Standards Section of the Colorado Department of Agriculture at least once each year, each time the scales are relocated, and as often as the Engineer may deem necessary. Scales shall be furnished by the Contractor or the Contractor may utilize commercial scales. Scales shall be operated by weighers certified by the Measurement Standards Section of the Colorado Department of Agriculture. The certified weigher shall perform duties according to the Colorado Department of Agriculture's regulations. The cost of the certified weighers, scales, scale tickets, scale house, and verifying the scale's accuracy will not be paid for separately but shall be included in the contract price for the weighed material.

Subsection 601.09(k), the first paragraph is deleted, and replaced with the following:

Shop drawings for precast panel deck forms shall be submitted in accordance with subsection 108.19.

Subsection 601.10(c)8 is deleted, and replaced with the following:

8. *The Contractor shall submit six sets of the fabricator's shop and erection drawings to the Engineer. The drawings shall be designed and sealed by the Contractor's Engineer. The drawings will not be approved, but three sets will be returned to the Contractor. The drawings shall indicate the grade of steel, the physical and section properties of all permanent steel bridge deck form sheets, and attachment details.*

Subsection 601.11(a), the first paragraph, first sentence, is deleted, and replaced with the following:

- (a) *General.* Falsework is defined as any temporary construction used to support structural elements of concrete, steel, masonry or other materials during their construction or erection until they become self-supporting.

Subsection 601.11(e) is deleted, and replaced with the following:

- (e) *Falsework Removal.* Falsework supporting any span of a continuous span bridge shall not be released until after the last concrete, excluding concrete above the bridge deck, has attained the compressive strength of at least 80 percent of the required 28 day strength, 0.80 f'c, but in no instance prior to five days after the placement of the concrete.

Falsework for precast post-tensioned structures shall not be released until after the Post-tensioning (pre-stressing) steel has been tensioned and grouted.

Falsework supporting overhangs and deck slabs between girders shall not be released before five days after the deck concrete has been placed.

Bridge rail concrete shall not be placed until the deck concrete reaches 100 percent of f'c, unless the overhang-bracket forms are designed to support the bridge rail dead load.

Falsework for pier caps which will support precast concrete girders shall not be released before five days after the cap concrete has been placed unless the compressive strength of at least 80 percent of the required 28 day strength, 0.80 f'c, is obtained. Girders shall not be erected onto such pier caps until the concrete in the cap has attained the compressive strength of at least 80 percent of the required 28 day strength, 0.80 f'c, shown on the plans.

If authorized, test hammer results may be used in lieu of test cylinders for form removal determinations only. The test hammer must be calibrated against similar concrete of known strength from the same aggregate source prior to use.

Subsection 601.12(h), the second paragraph, after the first long sentence, shall include the following:

Construction joints at other locations must be requested for approval.

Subsection 601.15(f)2, is deleted, except Table 601-2 which remains, and replaced with the following:

2. All Bridge Deck Final Riding Surfaces. Bare deck, or any concrete overlayed final surface is subject to an incentive payment. The Contractor shall provide the Engineer with the following for incentive payment only: The longitudinal finished surface smoothness of structures and approach slabs including concrete deck and any overlaid surface shall be tested with the profilograph method in accordance with the following paragraphs. Bridge Deck shall be subject to an incentive payment in accordance with the following Table 601-2. Incentive Payments will be based on the Lane Profile Index (LPI) before diamond grinding of bumps or any corrective work has been done.

Profilograph method for Longitudinal Pavement Surface Smoothness.

1. *Testing Procedure (General). The longitudinal surface smoothness of the pavement shall be tested using the profilograph method described below.*

The Contractor shall determine a Profile Index (PI) in inches per mile for each section of finished pavement surface. A pavement section is defined as a continuous area of finished pavement 0.1 mile in length and one lane 12 feet in width. A partial section resulting from an interruption of the continuous pavement surface is subject to the same evaluation as a whole section.

Each profilograph shall be certified in accordance with CP 73 and have a certification sticker which includes the date of certification, the type of filter, and the filter setting used when the profilograph was certified.

The Project Engineer may require a profilograph to be recertified at anytime. If the profilograph being recertified meets the criteria for certification on the first try the costs of recertification will be paid as extra work. If not, the cost of the recertification shall be borne by the Contractor.

The Contractor shall provide, operate, and maintain on the project, an approved profilograph that meets the following requirements:

The profilograph shall be equipped with:

- (1) A microcomputer capable of automatically reducing the recorded profilograph data and downloading it to a disk. The data on the disk shall be formatted to permit evaluation of the data by the Engineer. If software is required for this evaluation, the Contractor shall provide copies of the software for the Engineer's use.*
- (2) A printer compatible with the microcomputer that prints a profilogram with the required data.*

The Contractor shall demonstrate to the Engineer the calibration, operation and maintenance of the profilograph that will be used on the project. The demonstration shall be conducted on the project prior to measurement.

The profilograph shall be operated at a speed recommended by the Manufacturer. To ensure that these speeds are maintained, the profilograph may be propelled by a motorized vehicle which is capable of maintaining the correct speed. The motorized vehicle shall propel the profilograph in accordance with the Manufacturer's recommendations without interfering with traffic or the operation of the profilograph.

The profilograph shall be calibrated after transportation and before each day's use in accordance with the manufacturer's instructions.

As directed by the Engineer, additional profiles shall be taken to retest paved surfaces that have received corrective work, to check previously submitted data or to identify the limits of irregularities.

The profile shall include transverse joints when pavement is placed on both sides of the joint. When pavement is placed on only one side of the joint the profile shall begin 25 feet from the joint. One sided joints shall be profiled to determine conformity to the bump specification.

The Contractor shall notify the Engineer prior to beginning each profilograph operation.

A Department employee or designated representative will:

- (1) Witness and document the calibration of the profilograph prior to each test.*
- (2) Accompany the Contractor's operator during the entire profilograph testing procedure.*
- (3) Immediately take possession of the profilogram and disk containing the results and document the inspection by signing the profilogram report.*
- (4) Document that the testing has been completed in accordance with the specification.*

Each profilogram shall include the following information:

- (1) Project subaccount number.*
- (2) Project number.*
- (3) Project location.*
- (4) Date.*
- (5) Lane and wheel path profiled.*
- (6) Operator's signature.*
- (7) Profile Index in inches per mile for each 0.1 mile section.*

Each profilogram trace shall be marked by the computer or the Contractor to indicate the following:

- (1) Beginning and ending stations.*
- (2) Intermittent reference stations every 0.1 mile.*
- (3) Beginning and ending reference points.*
- (4) Horizontal equations stations.*
- (5) Construction joints.*
- (6) Location of bridge abutments.*
- (7) Net total linear feet of each lane.*
- (8) Net square yards of each lane.*
- (9) Bumps: when the perpendicular distance from a 25 foot baseline to the profile exceeds 0.4 inch.*

The Contractor shall determine a Profile Index for each 0.1 mile section of completed pavement. The Profile Index shall consist of two profiles taken 3feet from and parallel to the edge of each lane. The two profiles for each section shall be averaged to determine the Profile Index.

The entire length of each through lane, climbing lane and passing lane including bridge approaches and bridge decks from the beginning to the end of the project shall be profiled. Shoulders, ramps, tapers, turn slots, acceleration lanes, deceleration lanes, and medians shall not be profiled and will not be subject to incentive/ disincentive adjustments. The profile of the entire length of a lane may be taken at one time or the lane may be profiled in increments. Profiles may be taken with or against stationing.

All other longitudinal pavement surfaces will be measured using a 10 foot straightedge. The Contractor shall furnish an approved 10 foot straightedge and depth gauge and provide an

operator to aid the Engineer in testing the finished pavement surface. Areas to be measured shall be as directed by the Engineer. Areas showing high spots of more than 3/16 inch in ten feet shall be marked and diamond ground until the high spot does not exceed 3/16 inch in ten feet. Additional diamond grinding shall be performed as necessary to extend the area ground in each lateral direction so that the lateral limits of grinding are at a constant offset from and parallel to the nearest lane line or pavement edge, and in each longitudinal direction so that the grinding begins and ends at lines normal to the pavement centerline within the ground area. All ground areas shall be neat rectangular areas of uniform surface.

When both new pavement and a new bridge are being constructed on a project, the profile of the area 25 feet each side of every bridge expansion device (joint) shall be deleted from the profile before the Profile Index (PI) is determined. Incentive and disincentive payments will not be made for this area. All bumps that exceed 0.4 inch in 25 feet shall be diamond ground until the bump does not exceed 0.4 inch in 25 feet. Diamond grinding will not be measured and paid for separately, but shall be included in the work.

For all other projects, the profile of the area 25 feet each side of every bridge expansion device (joint) shall be deleted from the profile before the Profile Index (PI) is determined. Incentive and disincentive payments will not be made for this area. If the Engineer determines that corrective work is required in this area, payment will be made in accordance with subsection 109.04.

2. *Smoothness testing procedures. The Contractor shall profile the surface of the pavement placed on the second day of paving as soon as possible after completion of this paving. Production shall be suspended if:*

- (1) *The Profile Index for any 0.1 mile section exceeds the Profile Index which requires corrective work on pavements subject to Inches/Mile requirements*

Production shall remain suspended until the problem is identified and corrected. Each time production is suspended, corrective actions shall be proposed in writing by the Contractor and approved in writing by the Engineer before production may resume.

When production is resumed, the Contractor shall profile the pavement placed on the first day of paving after paving resumes and the conditions above for suspension of work shall apply.

The Contractor shall take sufficient profiles during construction to control the paving process.

The Contractor shall profile the finished pavement surface and determine a Profile Index using a 0.1 inch blanking band.

When incentive and disincentive payments are based on percent improvement, the Contractor shall also profile the original pavement surface and determine a Profile Index for each 0.1 mile section, before commencing work, using a 0.1 inch blanking band.

3. *Bumps. All bumps that exceed 0.4 inch in 25 feet shall be diamond ground until the bump does not exceed 0.4 inch in 25 feet. Additional diamond grinding shall be performed as necessary to extend the area ground in each lateral direction so that the lateral limits of grinding are at a constant offset from and parallel to the nearest lane line or pavement edge, and in each longitudinal direction so that the grinding begins and ends at lines normal to the pavement centerline within the ground area. All ground areas shall be neat rectangular areas of uniform surface.*

The exact location of each bump shall be determined with a profilograph and the location marked on the pavement before diamond grinding commences. The area that is diamond ground shall also be checked with a profilograph after grinding is complete to ensure that the area now meets specifications.

Diamond grinding of bumps, including all necessary traffic control, shall be completed at the Contractor's expense.

When longitudinal tining is required on concrete pavement, the pavement shall be grooved to restore the longitudinal texture, whenever the length of the ground area exceeds 45 feet. It will not be necessary to groove ground areas that are less than 45 feet in length.

When bump grinding on concrete pavement occurs where a core for determining pavement thickness has been previously taken, another core shall be taken after the bump grinding has been completed. Joint sealant that has been damaged by bump grinding on concrete pavement shall be repaired or replaced at the Contractor's expense in accordance with CDOT Standard Plan M-412-1 and subsection 412.18

4. *Corrective Work. When the Contract specifies pavement smoothness based on inches per mile, the criteria for determining if corrective work is required is specified in Table 105-6.*

If the first Profile Index for a 0.1 mile section taken on the finished pavement surface exceeds the specified limit for corrective work, the lane shall be reprofiled and another Profile Index determined after all bumps exceeding 0.4 inch in 25 feet have been diamond ground. Corrective work will be required if the Profile Index still exceeds the specified limit.

If corrective work is required, the Contractor shall submit a written corrective work proposal to the Engineer, which shall include the methods, and procedures that will be used. The Contractor shall not commence corrective work until the methods and procedures have been approved in writing by the Engineer.

The Engineer's approval shall not relieve the Contractor of the responsibility of producing work in conformity with the specifications. When longitudinal tining is required on concrete pavement, the pavement shall be grooved to restore the longitudinal texture, whenever the length of the ground area exceeds 45 feet. It will not be necessary to groove ground areas that are less than 45 feet in length.

Use of a rotomill, diamond grinder, feathering, scab patching, or any combination thereof will not be permitted for corrective work on asphalt pavements.

When the corrective work is complete, the Contractor shall profile the corrective work area and determine a Profile Index for each 0.1 mile section. Bumps which exceed 0.4 inch in 25 feet shall be diamond ground in the corrective work area.

If the first Profile Index for a 0.1 mile section taken on the finished pavement surface in the corrective work area exceeds the specified limit for corrective work, the lane shall be reprofiled and another Profile Index for each 0.1 mile section determined after all bumps exceeding 0.4 inch in 25 feet have been diamond ground. Additional corrective work in accordance with this specification will be required if the Profile Index for a 0.1 mile section exceeds the specified limit. Regardless of the corrective method used, the final product shall provide a pavement surface equal to adjacent sections not requiring corrective work. All corrective work, including all necessary traffic control, shall be at the Contractor's expense.

When any corrective work on concrete pavement occurs where a core for determining pavement thickness has been previously taken, another core shall be taken after the corrective work has been completed. Joint sealant that has been damaged by bump grinding on concrete pavement shall be repaired or replaced at the Contractor's expense in accordance with Standard Plan M-412-1 and subsection 412.18.

5. *Final acceptance and incentive and disincentive payments for pavement smoothness will be made on a square yard basis in accordance with the following:*

- A. *When the pavement is subject to an incentive/disincentive payment for pavement smoothness based on inches per mile the following applies:*

Incentive payments will be based on the Profile Index (PI) for each 0.1 mile section using a 0.1 inch blanking band before diamond grinding of bumps or any corrective work has been done.

Disincentive payments will be based on the Profile Index (PI) for each 0.1 mile section using a 0.1 inch blanking band after the bumps that exceed 0.4 inch in 25 feet have been diamond ground and before any other corrective work has been completed.

Subsection 601.17(a)1, the first sentence is deleted, and replaced with the following:

1. A batch that deviates from the specified air content by more than one percent will be rejected.

Subsection 601.19, eighth paragraph, first sentence is deleted, and replaced with the following:

Bridge Deck Finish (Sawed Grooves) plan quantities represent the area in square yards, determined by the length of the bridge deck and approach slabs, with deductions for areas occupied by expansion devices as specified, multiplied by the width of the bridge between the faces of curb or bridge rail on each side, less 3.0 feet.

Subsection 601.19 shall include the following:

Strong backs are required for the erection of the Cimarron Bridge precast post-tensioned concrete superstructure. The cost of the design, labor, equipment, tools, and materials necessary

to complete the girder erection with said strong backs will not be paid for separately but will be included in Item Prestressed Concrete I (BT 54). Falsework will not be measured. Any falsework required on the project is incidental to the concrete items.

Subsection 601.20, the paragraph after the pay items, is deleted, and replaced with the following:
Payment will be full compensation for all work necessary to complete the designated Pay Item.

REVISION OF SECTIONS 601 and 708 STRUCTURAL CONCRETE STAIN

Section 601 and 708 of the Standard Specifications are hereby revised to include the following:

Subsection 601.01 is revised to include the following:

This work consists of: (1) Class 2 surface finish of concrete to receive Concrete Stain; (2) providing and applying an opaque structural concrete stain to all concrete surfaces previously designated in the Contract to receive a structure concrete stain; and (3) provide up to 5-gallons of pre-mixed touch-up paint in aerosol spray cans.

The color of the structural concrete stain shall be as noted on the plans, and shall be Approved from test panels provided by the Contractor.

The structural concrete stain shall be one of the following products or Approved equals:

1. RAINSTOPPER RS400 – Semi Transparent Stain
Textured Coatings of America
Pro-Coat Systems, Inc.
5775 Stapleton Drive North
Denver, Colorado 80216
303-322-9009
2. “Acrylic” Structural Concrete Stain
Anchor Paint Co. of Denver, Inc.
641 South Jason
Denver, Colorado 80223-2305
303-744-2361
3. Bridge and Highway Concrete Sealer, B97-Series
The Sherwin-Williams Company
543A Santa Fe Drive
Denver, Colorado 80204
303-893-1303

Subsection 601.03 is revised to include the following:

Structural Concrete Stain 708.08.

Subsection 601.09(f) is revised to include the following:

All concrete forms shall be treated with a water based concrete form release agent prior to placing reinforcement for surfaces to which structural concrete stain is to be applied.

Subsection 601.14 (a), third paragraph, is deleted and replaced with the following:

Structural concrete stain shall be the final finish for all concrete surfaces designated on the plans and in these specifications.

Subsection 601.14(b)4 is deleted and replaced with the following:

Unless otherwise shown in the Contract, the structural concrete stain shall be applied to all exposed concrete elements of the structure above the ground line, and shall extend 1-foot below the finished ground line. Bridge bearing devices, curb and barrier cover plates, fence, and

ornamental steel rail components shall be masked or otherwise protected to prevent structural concrete stain from coming into contact with them.

The color of the Structural Concrete Stain shall have the written approval of the Engineer prior to final batching and application on the project. The final color of the approved structural concrete stain shall be determined as follows:

1. 2 foot by 2 foot samples of the colors required by the Contract, shall be submitted to the Engineer for Approval. The Stain samples shall be applied to a surface similar in texture to the concrete surface on which the stain will be applied on the project. The Stain samples shall be applied by the same methods to be used in field application.
2. At least three weeks prior to beginning of the application of the structural concrete stain, 100 sf test panels shall be prepared for final color Approval. The test panels shall be produced on the actual concrete surface on which the final product will be placed, at a location recommended by the Contractor and approved by the Engineer. The stain shall be applied to the test panels by the same methods to be used in the final field application. The Engineer will be allowed three business days for the stain to dry after stain application to the test panels and to issue Approval.

Concrete finishing and curing shall be completed in accordance with the specification prior to the application of the Stain. The concrete finish to which the structural concrete stain is to be applied shall be a Class 2 Finish, except as modified below:

1. Following curing of the concrete in accordance with Subsection 601.13, all projections and bulges shall be removed and the surface sandblasted. Sandblasting shall profile the concrete surface, remove all form release agents, and all other deleterious materials that would inhibit the bond of the Structural Concrete Stain. The profile of the sandblasted concrete surface shall be equivalent to Concrete Surface Profile Three (CSP 3) as defined in Technical Guideline No. 03732, "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays" by the International Concrete Repair Institute. The Contractor shall provide a CSP 3 chip for use on the project.
2. A mortar mix, proportioned by volume, consisting of one part portland cement, two to three parts sand (conforming to the requirements of ASTM C 144), and an approved bonding agent shall be used to patch all holes produced by form ties, honeycombing, voids 1/2 inch or larger in any dimension, broken corners and edges, and other defects. The mortar mix shall include an approved bonding agent. The quantity and application procedure of the bonding agent shall be in accordance with the recommendations of the manufacturer of the bonding agent. Areas to be patched shall be moistened with water before the mortar is applied, and the patched area, shall be float finished and left flush with the concrete surface without checking or cracking of patches. Patching shall be done when the ambient temperature is at least 40°F. Holes deeper than 3/4 inch shall be filled in layers that does not exceed 1/2 inch in thickness.
3. Within 24 hours prior to applying structural concrete stain, the concrete surface to be coated shall be cleaned by water blasting at a minimum pressure of 3,000 psi and at a rate of 4 to 14 gallons/minute, to remove dust, dirt, and other materials that would inhibit bonding of the coating. If the surface is contaminated before application of the coating, it shall be re-cleaned as required prior to application of the coating.

New concrete shall be at least 28 Days old or as approved in writing by the coating manufacturer before the stain is applied.

Two coats of stain shall be applied. Each coat shall be applied at a rate of 200 to 250 square feet per gallon. (Approximately 3 mils dry film thickness.) The second coat shall not be applied until at least 12 hours after the application of the first coat.

If the surface is contaminated between coats it shall be re-cleaned as stated above prior to application of the next coat.

The stain shall be mixed mechanically and applied by spraying. Workmanship shall be such that the final stained surface is colored uniformly and presents a pleasing appearance. Any areas determined by the Engineer to be insufficiently stained shall be re-stained.

The stain shall be applied only when the ambient temperature is between 40°F and 90°F, and is anticipated to remain above 40°F for a minimum of twenty-four hours. The surface to be stained shall be dry and free of frost.

Subsection 601.19 is revised to include the following:

Structural Concrete Stain will not be measured, but shall be the surface area quantity shown on the plans; except that measurements will be made when field changes are ordered, or for an error of plus or minus 5 percent of the plan quantity for each structure to be stained.

Subsection 601.20 is revised to include the following:

Pay Item	Pay Unit
Structural Concrete Stain	Square Yard

Subsection 708.08 is revised to include the following:

708.08 Structural Concrete Stain: The Stain shall be a one-component, non-vapor barrier, solvent based acrylic resin. No sand or other texturing agents will be permitted.

PHYSICAL PROPERTIES

Solid by Weight: 51%, plus or minus 2%

Solids by Volume: 34%, plus or minus 2%

A material safety data sheet (MSDS) prepared in accordance with Federal Standard 313 and a complete set of manufacturers mixing and application instructions shall be submitted to the Engineer before the Contractor begins applying the Stain.

REVISION OF SECTION 602

REINFORCING STEEL

Section 602 of the Standard Specifications is hereby revised to include the following:

Subsection 602.03 is deleted, and replaced with the following:

602.03 Bar List. Six copies of a list of all reinforcing steel and bending diagrams shall be furnished to the Engineer, as described under Section 108, Shop Drawings and Submittals. The Contractor shall be responsible for the accuracy of the lists and for furnishing and placing all reinforcing steel in accordance with the details shown on the plans.

REVISION OF SECTION 606

GUARDRAIL AND BRIDGE RAIL

Section 606 of the Standard Specifications is hereby deleted, and replaced with the following:

DESCRIPTION

606.01 This work consists of the construction of guardrail and bridge rail in accordance with these specifications and in conformity with the lines and grades shown on the plans or established. The construction of the various types of guardrail and bridge rail shall include the assembly and erection of all component parts and materials complete at the locations shown on the plans or as directed.

The types of guardrail are designated as follows:

Type 7 Guardrail F-Shape Concrete Barrier

Use of Type 4 Precast Concrete Barrier is not permitted.

The types of bridge rail are designated as follows:

Bridge Rail Type 7 (Special)(Modified)(45") (Concrete barrier with ornamental steel rail)

MATERIALS

606.02 Materials shall meet the requirements specified in the following subsections:

Guardrail Hardware 710.09

Guardrail Posts 710.08

Paint for shop or field painting of guardrail and bridge rail shall conform to subsection 708.03, Structural Steel Bridge Paint.

All Bridge Rail Type 7 (Special)(Modified)(45") shall be stained. Color shall be Federal Standard Color #30313 or as approved by the Engineer.

Concrete for precast or cast-in-place barrier shall conform to the requirements of Section 601.

Reinforcing steel, unless otherwise noted, shall conform to the requirements of Section 602.

During production of slipformed barrier, and subsequent to mix design approval, the Contractor may adjust the mix proportion requirements as follows:

The range for air content may be adjusted to be 5 percent to 9 percent

The weights of coarse and fine aggregates may each be adjusted up to 10 percent.

These adjustments may be made at the Contractor's discretion and do not require approval of a revised mix design before use. The Contractor shall inform the Engineer in writing of each adjustment of aggregate proportions before concrete with the adjusted mix design is placed.

Components on which the spelter coating has been burned by welding or otherwise damaged shall be either regalvanized, recoated in accordance with AASHTO M 36, or painted with one full brush coat of zinc rich paint meeting Military Specification DOD-P-21035A.

CONSTRUCTION REQUIREMENTS

606.03 Post and Rail Elements.

- (a) *Posts.* Posts shall be set firm and aligned with a tolerance of plus or minus $\frac{1}{4}$ inch from plumb, grades and lines as staked. All fittings and metal plates shall be placed securely in position to conform to designated dimensions and requirements.

Dissimilar metal-to-metal or aluminum-to-concrete post or rail installations shall have contact surfaces separated by an approved protective coating.

Posts for bridge rail shall be plumb and as shown on the plans.

- (b) *Rail.* Rail elements shall be erected in a manner resulting in a smooth, continuous installation. All bolts in the finished rail shall be drawn tight. Bolts shall be of sufficient length to extend beyond the nuts. Rail shall be shop bent for installations on horizontal curves having a radius of 150 feet or less.

- (c) *Temporary End Treatment.* In construction zones not closed to traffic, installation of rail element shall closely follow the setting of posts to keep the number of posts without rail at a minimum. When necessary to minimize potential hazards, the Engineer will specify the direction in which the rail installation is to advance and the number of posts installed ahead of rail installation. At the end of the Contractor's work day, the Contractor shall treat the ends of installed guardrail as follows:

- (1) If the end is at the location of a planned end section, install the end section.
- (2) If the end is not at the location of a planned end section, the last rail section shall be installed with one end attached to the rail already in place and the free end resting on the ground. The free end on the ground shall be restrained by tying the rail to the posts by ropes or cables. Guardrail shall not be left in this configuration more than 24 hours unless protected by an approved attenuating device.

606.04 Concrete. Where paving is removed or damaged due to the Contractor's operations, the Contractor shall furnish an acceptable mix and shall repair the paving as required, at the Contractor's expense.

In construction zones not closed to traffic, the Contractor shall treat the ends of installed concrete guardrail at the end of the work day as follows:

- (1) If the end is at the location of a planned end section, install the end section.
 - (2) If the end is not at the location of a planned end section, install a temporary impact attenuator or provide treatment as shown in the Contract.
- (a) *Permanent Concrete Barrier.* Permanent concrete barrier may be constructed by precast Type 7 guardrail, cast-in-place or slipform methods. The trench for the base of the cast-in-place reinforced barrier end anchorages shall be excavated to the lines and grades shown on the plans or established. The bottom of the trench shall be compacted to the density specified in subsection 203.07 when tested according to AASHTO T 99. The compacted trench bottom shall be watered and approved before placing concrete. The 1 inch minimum deep keyway cut or formed in the pavement surface for the barrier base shall be cleaned and approved before placing concrete.

Concrete finish for all precast Type 7 guardrail barriers used as permanent installations, and all cast-in-place barriers shall be Class 1 in accordance with subsection 601.14. Slipform barriers shall not receive additional finishing unless permitted by the Engineer. Exposed vertical surfaces of slipformed barrier shall receive a vertical broom finish.

The Engineer may determine that exposed surfaces of guardrail shall be tested with a 10 foot straightedge laid along exposed surface in a longitudinal direction. The Contractor shall furnish an approved 10 foot straightedge and provide an operator to aid the Engineer in testing exposed surfaces. All surface tolerances shall be measured in a longitudinal direction. Any exposed surface in excess of the tolerance specified shall be corrected at the Contractor's expense.

Longitudinal surface tolerances for the top of the barrier and the sides of the barrier from the top to a line 7 inches below the top of the barrier are:

- (1) On tangent roadway alignments and curves with radius greater than 1000 feet: 0.25 inch from the edge of the straightedge.
- (2) On sharp vertical curves and horizontal curves with radius of 1000 feet or less: 0.25 inch from the edge of the straightedge with allowance made for curve deflection.

Longitudinal surface tolerances for the remaining surfaces of the barrier are:

- (1) On tangent roadway alignments and curves with radius greater than 1000 feet: 0.75 inch from the edge of the straightedge.
- (2) On sharp vertical curves and horizontal curves with radius of 1000 feet or less: 0.75 inch from the edge of the straightedge with allowance made for curve deflection.

The Contractor will be allowed a maximum of three days of slipform production if barrier being placed does not meet the specified tolerances. After the third day of placement of out of tolerance slipform barrier the Contractor shall stop production. The Contractor shall submit a corrective action plan to the Engineer for review. The plan shall address corrective actions to the equipment and materials and a time frame for completion of the corrective actions. The plan shall address methods and materials to be used to correct out of tolerance barrier. Patching will not be allowed to correct out of tolerance barrier. Further placement of barrier will not be allowed until all previously placed barrier which failed to meet tolerances is corrected or removed. Each occurrence of out of tolerance slipform barrier shall be subject to the same corrective cycle.

- (b) *Precast Type 7 Concrete Barrier.* Precast Type 7 Concrete Barrier (conforming to Standard Plan M-606-14) may be formed upside down to minimize air pockets and improve surface finish. Concrete finish for precast barriers shall be Class 1 in accordance with subsection 601.14. Each segment of the precast barrier shall not have spalls, corner breaks, and bottom spalls totaling more than 5 square feet of surface area which includes the base.

Connecting loops shall not be frayed, stretched, or deformed. Gaps between units shall not exceed the dimensions shown in the plans. Precast barrier units shall not be lifted or stressed in any way before they have developed the strength of the concrete specified. Units

shall be supported at designated pickup points. Connecting loops shall not be used as pickup points. Care shall be taken during fabrication, storage, handling and transporting to prevent cracking, twisting, or other damage. Minor chips on edges may be patched with the approval of the Engineer. Breakage and chipping may be cause for rejection. Units damaged in such a way as to impair their appearance or suitability, in the opinion of the Engineer, shall be replaced at the Contractor's expense. Units rejected by the Engineer shall be marked on both sides with an orange painted "R" approximately 12 inches high and 6 inches wide.

The base for placing precast barrier shall be prepared to the lines and grades shown on the plans or established. When connecting cast-in-place barrier sections to precast barrier installations during construction, the cast-in-place sections shall be constructed complete with connecting hardware in accordance with Standard Plan M-606-14 to join the cast-in-place sections to the abutting precast sections. A ten foot transition section shall be provided when attaching barriers of differing shapes.

METHOD OF MEASUREMENT

606.05 Guardrail and bridge rail will be measured by the linear foot along the centerline of the rail from end to end of completed and accepted rail as shown on the plans, excluding end anchorages, median terminals, and transitions.

End anchorages, median terminals and transitions will be measured by the actual number placed and accepted. Each end anchorage, median terminal, or transition shall include all concrete, reinforcing steel, anchor bolts, cable, rods, turnbuckles, backing rail, plates, bolts, nuts, washers and all other work and material necessary to complete the item.

Posts will be included in the quantities of guardrail of the specified type and not measured separately. Additional posts required for guardrail adjacent to bridges and obstructions, as shown on the plans, will not be measured and paid for separately but shall be included in the work.

BASIS OF PAYMENT

606.06 The accepted quantities of guardrail and bridge rail will be paid for at the contract unit price for the type specified.

Payment will be made under:

Pay Item	Pay Unit
Guardrail, Type 7 (Style CA)	Linear Foot
Bridge Rail Type 7 (Special) (Modified) (45 inch)	Linear Foot

All work and materials necessary and incidental to the temporary treatment of guardrail ends will not be measured and paid for separately but shall be included in the work.

The concrete pilasters shall not be paid for separately but shall be included in item Bridge Rail Type 7 (Special) (Modified) (45 inch). All labor, equipment, tools, and materials necessary to complete the pilasters will be incidental to the cost of the Bridge Rail Type 7 (Special) (Modified) (45 inch).

Ornamental Stone tiles provided by the City will be installed by the Contractor. The preparation and installation of the tiles will not be paid for separately but shall be included in Item Bridge Rail Type 7 (Special) (Modified) (45 inch). All labor, equipment, tools, and materials necessary to install the ornamental tiles will be incidental to the cost of the Bridge Rail Type 7 (Special) (Modified) (45 inch).

Partial payments will not be made for partially completed guardrail runs that do not conform to the end treatments specified in subsections 606.03(c) or 606.04.

REVISION OF SECTION 607

FENCES

Section 607 of the Standard Specifications is hereby revised to include the following:

DESCRIPTION

Subsection 607.01 is revised to include the following:

Fence Steel Chain Link (42 Inch) and Fence Steel Chain Link (120 Inch) shall be vinyl coated and green.

REVISION OF SECTION 613

LIGHTING

Section 613 of the Standard Specifications is hereby revised to include the following:

Subsection 613.02 paragraph 1 shall be replaced with the following:

Roadway lighting materials shall conform to the requirements of Section 17 of the Colorado Springs Utilities Electrical Distribution Construction Standards Approved 1-1-2005.

Subsection 613.03 shall include the following:

The installation shall be in accordance with all governing local ordinances and regulations, the plans, these special provisions, those sections of the Standard Specifications that apply and the Colorado Springs Utilities Electrical Distribution Constructions Standards, specifically section 17. All workmanship shall be first class and finished work shall present a neat, uncluttered appearance. The Contractor shall coordinate work with other construction phases so as to provide a minimum of interference to the combined operations. Contractor shall also coordinate work with the work on adjacent projects where required. Where electric service installation is required, Contractor shall coordinate all work with Colorado Springs Utilities.

The Contractor shall replace and restore all surface materials in kind, equal to, or exceeding those disturbed by trenching, replacement of subbase, pavement, trees, shrubs, etc. All excess materials shall be disposed of as directed by the Engineer. This work shall be incidental to lighting and not be paid for separately.

Subsection 613.04 shall include the following:

The Contractor shall construct the foundation at each location according to the details shown in section 17 of the Colorado Springs Utilities Electrical Distribution Constructions Standards.

All foundations shall be constructed to not less than minimum dimensions shown on the plans. The size and number of conduit bends shall be installed in each foundation as indicated in the plans. The caged anchor bolt assembly shall be placed in the foundation so that it remains plumb and with the projection set as specified by the pole manufacturer. Anchor bolts shall be "caged" in a manner specified by the manufacturer and approved by the Engineer. The top elevation of the foundation shall be set accurately and leveled.

All soil removed from the foundations and not required for backfill shall be disposed of as directed by the Engineer.

Welding shall be in accordance with the latest edition of AWS Specification D1.1 and the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Subsection 613.07 shall include the following:

When pull boxes are required to be embedded in concrete on grade with the traveled way, a water resistant pull box approved for recession in concrete shall be provided. Pull box cover shall be rated heavy duty, suitable for exposure to occasional non-deliberate heavy vehicle loading. Pull box shall not be located within traveled way and all cover corners shall be level with finished grade.

These pull boxes will be incidental to "Conduit" and will not be paid for separately.

REVISION OF SECTION 614

TRAFFIC CONTROL DEVICES

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

Delete Subsection 614.08, Traffic Signal Materials, in its entirety.

Delete Subsection 614.10, Traffic Signal Construction, in its entirety.

Subsection 614.04, "Sign Panels," shall be modified by deleting the sentence, "Retroreflective sheeting for all signs requiring a yellow background shall be fluorescent" and replaced with the following:

"Signs requiring fluorescent retroreflective sheeting for yellow backgrounds will be designated in the sign tabulation with the letters FYG in the BACKGROUND COLOR column."

Subsection 614.01 shall include the following:

This work includes the installation of concrete footings at locations as shown on the plans.

Subsection 614.02 shall include the following:

Tubular steel sign posts shall be cold formed steel with minimum yield strength of 85 ksi. Unless otherwise specified in the Contract, the steel color shall be unpainted galvanized steel.

Tubular sockets shall be round 12 gauge galvanized steel that meet the requirements of ASTM 787.

Concrete footing shall be made of Class B Concrete. The Contractor may use an alternate material that meets the requirements for Class B concrete in Section 601, as approved by the Engineer.

Subsection 614.09, last paragraph, shall include the following:

(4) Tubular Steel Sign Supports. Tubular steel sign post, slipbase or socket and wedge, footing, and mounting clamps shall be installed in accordance with Project Detail 614-8 and manufacturer's recommendations.

The Contractor shall make all arrangements to have a manufacturer-trained installer of the manufacturer's products on-site during the construction of the entire assembly and associated signs to ensure proper installation. Prior to the placement of the posts, the Contractor shall submit to the Engineer, written documentation of the installer's qualifications and training in the construction of tubular steel sign supports. Upon completion of installation, the Contractor shall obtain and submit documentation from the trained installer that the installation of the sign posts was in accordance with manufacturer's recommendations.

Subsection 614.13 shall include the following:

Steel Sign Support (Post) will be measured by the actual number of linear feet of posts (not to include length of T-brackets or U-brackets) that are installed and accepted. T-brackets, U-

brackets, wedges and mounting clamps that are required to complete the assembly as shown on the plans will not be measured and paid for separately, but shall be included in the work.

Sockets for steel sign supports will be measured by the actual number of sockets that are installed and accepted. Concrete footing will not be measured and paid for separately, but shall be included in the work.

When called for on the plans, sign posts, sockets and footings, wedges and mounting clamps will be regarded as a single assembly, and will be measured by the actual number of posts that are installed and accepted.

Slipbases for Steel Sign Support (Post) will be measured by the actual number that are installed and accepted. Concrete footing will not be measured and paid for separately, but shall be included in the work. When called for in the plans, sign posts, slipbases and footing will be regarded as a single assembly, and will be measured by the actual number of Steel Sign Supports (Post and Slipbase) that are installed and accepted.

Subsection 614.14 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Steel Sign Support (2-Inch Round) (Post)	Linear Foot
Steel Sign Support (2-Inch Round) (Socket)	Each
Steel Sign Support (2-1/2 Inch Round NP-40) (Post)	Linear Foot
Steel Sign Support (2-1/2 Inch Round NP-40) (Slipbase)	Each

All costs associated with having a manufacturer's representative on-site and obtaining the required documentation will not be measured and paid for separately, but shall be included in the work.

REVISION OF SECTION 618

PRESTRESSED CONCRETE

Section 618 of the Standard Specifications is hereby revised to include the following:

Subsection 618.01 is deleted, and replaced with the following:

This work consists of fabricating, furnishing and installing prestressed and/or post-tensioned concrete members in accordance with the requirements of the Contract.

This work includes the furnishing and installation of all appurtenant items necessary for the particular prestressing and post-tensioning systems to be used, including but not limited to ducts, anchorage assemblies and grout used for pressure grouting ducts.

For cast-in-place prestressed concrete, the term "member" as used herein shall be considered to mean the concrete which is to be prestressed or post-tensioned.

The term "tendon" as referenced herein shall be considered to mean the prestressing or post-tensioning steel within a duct.

References to prestressing steel are understood to apply to the high-strength steel used in post-tensioned concrete members.

Subsection 618.02(b), first sentence, is deleted.

Subsection 618.02(c), first paragraph, is deleted and replaced with the following:

- (c) *Concrete for Pretensioned, Post-tensioned, and Combination Tensioned Products.* Materials for concrete classes identified in section 601 shall comply with section 601. Materials for concrete class PS shall meet the requirements specified in the following subsections:

Subsection 618.03, subsection title, is deleted and replaced with the following:

Prestressed, Post-tensioned, and Combination Tensioned Members.

Subsection 618.04(a), is deleted and replaced with the following:

- (a) *General. The Contractor shall furnish shop drawings in conformity with subsection 108.19 for all prestressed and post-tensioned components. When the Contractor's Engineer completes or revises design details or engineering drawings, then those engineering drawings and details that are submitted to the Engineer shall contain the endorsement seal of a Professional Engineer registered in the State of Colorado. Review of the shop drawings does not relieve the Contractor of the responsibility for the adequacy of the prestressed and post-tensioned members. Minor changes to design details or engineering drawings that do not represent a significant change to the original design will not require a Professional Engineer seal. The Contractor shall submit supporting calculations for these changes along with the shop drawings.*

Subsection 618.05(a), second paragraph, second sentence, is deleted and replaced with the following:

Fabrication shall not be started until the shop drawings have been returned with the Engineer's review stamp, indicating Reviewed, no exception taken; or Reviewed, revise as noted; or Resubmit, revise as noted in accordance with subsection 108.19, and delivered to the Contractor's site of fabrication.

Subsection 618.10, first sentence, is deleted and replaced with the following:

Equipment used for fabrication of pretensioned, post-tensioned, and combination tensioned members shall conform to the following requirements:

Subsection 618.11, subsection title, is deleted and replaced with the following:

Concrete for Pretensioned, Post-tensioned, and Combination Tensioned Products.

Subsection 618.11(a), first paragraph, is deleted and replaced with the following:

- (a) *Classification.* Concrete shall be as designated in the plans. If concrete is designated as class PS, the Contractor shall be responsible for the actual mix proportions and adjustments necessary to produce the specified strength. The specified strengths and air content shall be as stated on the plans. Fly ash material may be substituted for portland cement, up to a maximum of 25 percent by weight. If fly ash material is used in the mix, the total cementitious content shall be the sum of the weight of the portland cement and the weight of the fly ash material.

Subsection 618.15(3), third sentence, is deleted and replaced with the following:

The average compressive strength of the three tests shall meet or exceed the project $f'c$.

Subsection 618.17, second paragraph after the pay items, is deleted and replaced with the following:

Prestressing steel bar quantities and prestressing steel strand quantities include the prestressing steel; anchorage devices, ducts, vents, grout, post-tensioning equipment, and miscellaneous

hardware are incidental. Concrete and reinforcing steel not shown on the plans but required by the Contractor's alternative will not be paid for separately but are incidental to the work.

REVISION OF SECTION 618

ERECTION OF PRE-CAST CONCRETE MEMBERS

Section 618 of the Standard Specifications is hereby revised to include the following:

Subsection 618.14(c) the last seven paragraphs are deleted, and replaced with the following:

Pre-cast concrete members shall be erected to prevent damage to all elements of the structure and in a safe manner. Pre-cast concrete members to which the erection specification applies are those members that bear on the substructure of a bridge. The primary members such as beams and girders shall be temporarily anchored and braced as they are erected to preclude detrimental movement in any direction, and to prevent overturning and buckling. Struts, bracing, tie cables, and other devices used for temporary restraint shall be considered falsework and shall be designed to resist all loads imposed during each stage of construction until the deck concrete has attained the Field Compressive Strength shown in Table 601-1.

At least one week prior to the Pre-Erection Conference, the Contractor shall approve, sign and submit an Erection Plan to the Engineer for record purposes only. The Erection Plan shall be stamped "Approved for Construction" and signed by the Contractor. The Erection Plan will not be approved by the Engineer. If falsework drawings are required, they shall conform to and be submitted in accordance with subsection 601.11.

The Erection Plan and procedure shall provide complete details of the erection process with dimension tolerances including:

- (1) Temporary falsework support, struts, bracing, tie cables and other devices, material properties and specifications for temporary works, bolt torque requirements prior to releasing girders from the cranes (if required), connection details and attachments to other structure components or objects;
- (2) Procedure and sequence of operations, including a detailed schedule with completion times for work items that complies with the working hour limitations;
- (3) Minimum load chart lift capacity, outrigger size and reactions for each crane;
- (4) Assumed loads and girder weights, lift points, lifting devices, spreaders, and angle of lifting cables;
- (5) Girder stresses at critical points along the girder length during progressive stages of erection shall be investigated to assure that the structural integrity and stability of the girders is maintained. Stresses at lift points induced as a result of lifting shall be investigated and adequate bracing provided as indicated by the analysis;
- (6) *Locations of cranes, trucks delivering girders, and the location of cranes and outriggers relative to other structures, including retaining walls, wing walls and utilities;*
- (7) *Drawings, notes, catalog data showing the manufacturer's recommendations or performance tests, and calculations clearly showing the above listed details, assumptions, and dimensions;*
- (8) *Contingency plans detailing what measures the Contractor will take in case of inclement weather (forecast or actual), equipment failure, delivery interruption, and slower than planned production.*

A Pre-Erection Conference will be held at least one week prior to the beginning of erection. The Engineer, Contractor, erection subcontractor, and the Contractor's Engineer shall attend the meeting. The erection subcontractor shall demonstrate his knowledge and familiarity of where

the piece marks are located on the components to be erected, their orientation in the erected structure, and the shop drawing piece mark convention used by the girder fabricator at the Pre-Erection Conference. The girder fabricator shall participate in the conference, in person or by way of speaker telephone, during that portion of the conference in which the piece marks are discussed. The girder fabricator shall state whether the erection subcontractor has demonstrated a correct understanding of the piece marks, and if not, correct any misunderstanding.

Additional Pre-Erection conferences may be required for subsequent phases of construction, or for phases that differ from the original construction plan, as directed by the Engineer. Additional conferences may also be requested by the Contractor, and approved by the Engineer.

The Contractor shall submit a final Erection Plan to the Engineer prior to girder erection for record purposes only. The Contractor's Engineer shall sign and seal (1), (5), and (7) listed above in the final Erection Plan. The final Erection Plan shall be stamped "Approved for Construction" and signed by the Contractor.

When a bridge spans traffic of any kind, except for construction traffic and the Contractor's employees, the Contractor's Engineer shall inspect and provide written approval of the erected girders prior to opening the area beneath the girders to traffic. For this specification, traffic is defined as the vehicles, railroad, pedestrians and watercraft moving along a route. The Contractor shall perform daily inspections of the erected girders and other permanent and temporary bridge elements until the deck concrete has attained the Field Compressive Strength. The Contractor's Engineer shall provide an inspection form to the Engineer and the Contractor that lists the items the Contractor will document during the daily inspection of the erected girders. The inspection form shall include inspection items specific to each bridge being constructed. The Contractor shall provide the Engineer and the Contractor's Engineer with written documentation of these inspections within 24 hours of each inspection.

All temporary struts, bracing, tie cables, other devices and extra material required shall be removed upon completion of the structure.

Falsework shall conform to subsection 601.11.

Subsection 618.17 shall include the following:

All costs associated with the preparation and implementation of the Erection Plan will not be paid for separately, but shall be incidental to the cost of the Prestressed Concrete girders.

REVISION OF SECTION 625

CONSTRUCTION SURVEYING

Section 625 of the Standard Specifications is hereby revised to include the following:

Subsection 625.02, Materials and Equipment, shall be modified by deleting the last sentence in the section, "Traffic Control shall be in accordance with the requirements of Section 630" and replaced with the following:

Traffic Control shall be in accordance with the requirements of City of Colorado Springs Engineering Division Standards Specifications Section 800.

Section 625 shall be modified to include the following:

Construction Surveying shall complete a check of the survey control and shall provide data confirming the check and/or identifying issues and/or discrepancies between the two.

REVISION OF SECTION 626**MOBILIZATION**

This item shall consist of the mobilization of equipment and facilities to the project site and construction traffic control items in preparation for work to be done under this Contract. Equipment shall consist of machinery needed to accomplish the activities required to construct items described under the various bid items. Facilities shall consist of mobile shelters used to perform administrative functions, and trailers used to perform equipment maintenance functions, portable toilets, and fuel storage tanks. Expenditures required to connect facilities to various public utility services can be included. Not included are expendable supplies such as fuel, lubricants, and spare parts. Also not included are the materials which become a part of permanent physical features constructed under the Contract. Mobilization shall also include the Contractor Staging Area(s). Seeding of the Staging Area will be paid for under the Seeding item.

Utility potholing shall consist of hydro/air-vacuum excavation within the project limits as shown on the Drawings. The Contractor shall conduct the potholing within 10 days of the Notice to Proceed.

Permitting coordination will include all necessary coordination to secure permits for construction activities affecting temporary air and water pollution, soil erosion, and siltation control. Permits include, but are not limited to, Stormwater Discharge Permit (which includes developing a Stormwater Management Plan and Erosion Control Plan), Construction Dewatering Permit (which includes monitoring of outfalls), and a Construction Air Permit Application (which includes a Fugitive Dust Control Plan).

METHOD OF MEASUREMENT

Partial payments for mobilization will be made once each month as the work progresses. These partial payments will be made as follows:

- a. During the period between the Notice of Award and the Notice to Proceed, 5 percent of the amount bid for this item will be paid.
- b. When 5 percent of the original contract amount is earned, 20 percent of the amount bid for this item, less all previous payments, will be paid.
- c. When 20 percent of the original contract amount is earned, 50 percent of the amount bid for this item, less all previous payments, will be paid.
- d. When 35 percent of the original contract amount is earned, 60 percent of the amount bid for this item, less all previous payments, will be paid.
- e. When 75 percent of the original contract amount is earned, the amount bid for this item, less all previous payments, will be paid.

For the purpose of the specification the term "original contract amount" as used above shall mean the amount of the award for the construction items on this contract not including the amount bid for mobilization. Payments for materials on hand will not be included as a percent of original contract amount earned until said materials on hand have been incorporated into the work and accepted and paid for as contract items.

This price shall extend to the general contractor and to any and all subcontractors. No additional payment will be made to any bid item to compensate the Contractor or subcontractor for loss of profits attributed to mobilization or remobilization costs.

BASIS OF PAYMENT

Payment shall be at the contract unit price for the measurement as specified herein before, that price shall be full compensation for all labor, equipment, and supplies needed to complete the item. Mobilization and haul road maintenance payment will be made in accordance with the mobilization schedule indicated above. In no case will the City pay mobilization in excess of 5 percent of the base bid amount.

REVISION OF SECTION 627**PAVEMENT MARKING**

Section 627 of the Standard Specifications is hereby revised to include the following:

Subsection 627.03, "General," shall be modified to include the following:

"All permanent, longitudinal striping shall be Epoxy Pavement Marking Material with a dry thickness of 15 mils. All permanent stop bars, crosswalks, and symbols shall be Thermoplastic Pavement Marking Material with a dry thickness of 90 mils."

REVISION OF SECTION 701**HYDRAULIC CEMENT FOR STRUCTURES**

Section 701 of the Standard Specifications is hereby revised to include the following:

Subsection 701.01 is deleted, and replaced with the following:

701.01 Hydraulic Cement. Hydraulic cement shall conform to the requirements of the following specifications for the type specified or permitted:

Portland Cement	ASTM C 150
Blended Hydraulic Cement	ASTM C 595
Hydraulic Cement	ASTM C 1157

In addition to the standard chemical requirements for portland cement in ASTM C 150, the maximum percent of equivalent alkalis ($\text{Na}_2\text{O} + 0.658 \text{ K}_2\text{O}$) shall not exceed 0.90 percent.

All concrete, including precast, prestressed and pipe shall be constructed with one of the following hydraulic cements unless permitted otherwise.

- ASTM C 150 Type I
- ASTM C 150 Type II
- ASTM C 150 Type V
- ASTM C 595 Type IP consisting of no less than 70 percent portland cement,
- ASTM C 595 Type IP(MS) consisting of no less than 70 percent portland cement,
- ASTM C 1157 Type GU,
- ASTM C 1157 Type MS
- ASTM C 1157 Type HS consisting of no less than 20 percent Class F fly ash by weight

Cement shall be from a preapproved source listed on the CDOT Approved Products List or as approved by the City. The cement intended for use on the project shall have been tested and accepted prior to its use. Certified Test Reports showing that the cement meets the specification requirements and supporting this statement with actual test results shall be submitted to the Engineer prior to the tested material being incorporated into the project.

The cement shall be subject to sampling and testing by the Engineer. Test results that do not meet the physical and chemical requirements may result in the suspension of the use of the cement until the corrections necessary have been taken to insure that the material meets the specifications.

The Contractor shall provide suitable means for storing and protecting the cement against dampness. Cement which, for any reason, has become partially set or which contains lumps of caked cement shall not be used.

Cement salvaged from discarded or used bags shall not be used.

REVISION OF SECTION 703

AGGREGATES FOR STRUCTURES

Section 703 of the Standard Specifications is hereby revised to include the following:

The introduction with Table 703-1 and 703-2, and Subsections 703.01, 703.02, 703.08, and 703.09 apply to the structures on the project.

Subsection 703.08(b), last sentence, is deleted.

Subsections 703.03, 703.04, 703.05, 703.06, 703.07, and 703.10 are deleted. City of Colorado Springs Engineering Division Standard Specifications apply instead.

REVISION OF SECTION 705

JOINT, WATERPROOFING, AND BEARING MATERIALS

Section 705 of the Standard Specifications is hereby revised to include the following:

Subsection 705.01(a) is revised to include the following:

The City will recognize joint sealant material on the pre-approved CDOT list.

Subsections 705.03, 705.04, and 705.05 are deleted. City of Colorado Springs Engineering Division Standard Specifications apply instead.

Subsection 705.06(g) is revised to include the following:

(7) *Size of Holes, Slots or Inserts*

$\pm \frac{1}{8}$ inch

REVISION OF SECTION 708

PAINTS

Section 708 of the Standard Specifications is hereby revised to include the following:

Subsection 708.03 is revised to include the following:

Structural Steel bridge paint color shall conform to the color identified in the plans and these specifications.

Subsections 708.04, 708.05, 708.06, 708.07, 708.08 and 708.09 are deleted. City of Colorado Springs Engineering Division Standard Specifications apply instead.

REVISION OF SECTION 711

CONCRETE CURING MATERIALS AND ADMIXTURES

Section 711 of the Standard Specifications is hereby revised to include the following:

Subsection 711.02, second paragraph, is deleted, and replaced with the following:

Admixtures which have been frozen will be rejected.

REVISION OF SECTION 712**MISCELLANEOUS**

Section 712 of the Standard Specifications is hereby revised to include the following:

Subsections 712.05, 712.06, 712.09, and 712.13 are deleted. City of Colorado Springs Engineering Division Standard Specifications apply instead.

Subsections 712.01, 712.02, 712.03, 712.08, 712.10, 712.11, 712.12, 712.13 shall apply to the project.

REVISIONS TO COLORADO SPRINGS UTILITIES**STANDARD SPECIFICATIONS**

The following Revisions supplement or modify the Colorado Springs Utilities Standard Specifications. Measurement and Payment for all bid items shall be in accordance with Section 1025, Measurement and Payment, and shall take precedence over the measurement and payment sections of the Standard Specifications.

Addition of Section 02952 – Closed-Circuit Television (CCTV) Inspection

ADDITION OF SECTION 02952**CLOSED-CIRCUIT TELEVISION (CCTV) INSPECTION****GENERAL****REFERENCES**

The following is a list of standards which may be referenced in this section:

U.S. Department of Transportation, Federal Highway Administration: Manual on Uniform Traffic Control Devices (MUTCD), Part 6, Temporary Traffic Control.

SUBMITTALS

Action Submittals: Catalog and manufacturer's data sheets for television equipment.

Informational Submittals:

1. References: Contact names and telephone numbers.
2. List of staff and equipment to be used on Project.
3. Crew chief qualifications.
4. Traffic control plan.
5. Look-ahead inspection schedules, minimum of 7 days in advance of the Work.
6. Initial first days' CCTV inspection tapes and inspection logs within 24 hours of start of CCTV inspection.
7. Certification that staff to be used for the Work is properly trained in confined space entry and hazardous atmospheres.
8. Training and inspection plan, 7 days prior to manual inspection.
9. Listing of actual measured flow depth and times.
10. Final report.

QUALITY ASSURANCE

A. Qualifications:

1. Contractor: Performed work successfully for at least three other projects, within last 5 years, with pipe lengths and pipe diameters similar to this Project.
2. Crew Chief: Minimum of 5 years experience on projects similar to this Project and experienced using proposed equipment for this Project.

B. Prestartup Meeting: At least 5 days prior to beginning CCTV inspection work, schedule with Owner to review proposed sewer flow bypassing plan and inspection methods.

C. Submit videos and logs for quality review and comment to Owner within 24 hours after the first days' work is completed. Submit tapes and logs on a routine basis within 7 days after completing each tape. Picture quality and definition shall be to the satisfaction of Owner. Inspection equipment

THAT FAILS TO PRODUCE SATISFACTORY INSPECTION QUALITY SHALL BE REMOVED. VIDEO PROGRAM SHALL BE COMPATIBLE WITH COLORADO SPRINGS UTILITIES.

NOTIFICATIONS

NOTIFY OWNER:

1. A minimum of 5 days prior to the anticipated commencement of inspections in any one area and 24 hours in advance of actual start.
2. When obstruction, restricting flow in pipeline, is discovered.
3. If depth of flow in pipeline exceeds 25 percent of pipe diameter.
4. If conditions for CCTV inspection are found to be unsafe or impractical.
5. Pipe configuration in field is different than shown on maps. Notification shall include diagram clearly indicating location of structure in relation to immediately adjacent structures.

EQUIPMENT

A. Inspection Equipment:

1. Monitoring Studio:

- a) Temperature controlled.
- b) Size: Sufficient to allow seating for two people in addition to operating technician.
- c) Secure cable, chains, and other devices used with camera so as not to obstruct camera view or otherwise interfere with proper documentation of sewer conditions.

2. Television Monitor:

- a) Locate in monitoring studio.
- b) Color video picture.
- c) Resolution capability of no less than 350 lines.
- d) Continuous display during survey:
 - Date of survey.
 - Number designation of manhole section being surveyed.
 - Continuous forward and reverse readout of cameral distance from the manhole reference.

3. Cables: 600 feet long, minimum.

4. Power source.

5. Lights.

6. Television Camera:

- a) Explosion proof.
- b) Resolution capability: Minimum of 460 lines of horizontal resolution and 400 lines of vertical resolution.
- c) 360-degree pan and tilt unit, with adjustable supports specifically designed and constructed for operation in connection with pipe inspection. Lights shall be mounted on and turn in the direction of the camera head.
- d) 65-degree viewing angle, minimum, and either automatic or remote focus and iris controls. Remote control adjustment for focus and iris shall be located in the monitoring studio.
- e) Operative in 100 percent humidity conditions.
- f) Mount on skid, sized for each pipe diameter, or self-propelled.
- g) Equip with tag line suitable for pulling camera backwards.

- h) Ability to achieve proper balance of tint and brightness.
- i) Equip with winch, power winch, TV cable, powered rewind, or other devices used to move camera through pipe.
- j) Focal Distance: Adjustable through range from 6 inches to infinity.
- k) Camera Lighting:
 - Minimize reflective glare.
 - Remote variable intensity control.
 - Lighting quality to provide clear, in-focus picture of entire inside periphery of pipe.
- l) Sufficient for 6–inch through 24–inch diameters.
- m) Remote Reading Footage Counter:
 - Accuracy: two-tenths of a foot over length of section being inspected.
 - Mounted over television monitor.
 - Marking on cable will not be allowed.
 - Calibration: Each day prior to setup.

7. Digital Camera: Minimum 3.2 megapixels.

RECORDING OF DOCUMENTATION

A. Video:

- 1. Color on compact disc (CD).**
- 2. Opening Screen:**
 - a) Date of inspection.
 - b) Pipe structure identification number.
 - c) Upstream and downstream manhole identification numbers.
 - d) Street address.
 - e) Pipe size.
 - f) Normal (upstream to downstream) or reverse (downstream to upstream) pull.
- 3. Continuous View:**
 - a) Current distance along reach (tape counter footage).
 - b) Do not include pipe structure identification number along active tape (only on opening screen).
- 4. Audio:**
 - a) Description of inspection setup, including related information from log form.
 - b) Unusual conditions.
 - c) Operation changes (e.g., remove roots and restart inspection at footage prior to root removal).
 - d) Verbal description and location of each defect.
 - e) Verbal description and location of each service connection.
- 5. CD Labeling:**
 - a) -Name of Owner.
 - b) Project Title.
 - c) Date of Inspection.
 - d) Inspection Company.
 - e) CD Number.

Provide typed label on inside face of tape that indicates pipe structure identification numbers covered by tape.

B. Still Photographs:

- 1. Provide digital photographs showing defect whenever defect is encountered that interrupts completion of inspection (i.e., collapsed pipe, deformed pipe, severe offset joints, heavy debris or roots).**
- 2. Provide typed label on front of photograph with structure identification**

number, footage (if not visible on photograph), and defect type.

3. Provide for each structure entered for CCTV inspection. Photograph looking down from top of structure. Label with structure number and describe general condition and observed defects.

EXECUTION

GENERAL

Contractor shall inspect prior to and on the completion of the project by CCTV, all existing mains located within the project limits.

Contractor shall inspect on the completion of the project log CCTV, all relocated public mains for deficiencies prior to any services being connected.

Use Owner's CCTV Inspection requirements for completion of CCTV inspection form and defect coding.

Videotapes and necessary playback equipment shall be readily accessible in the monitoring studio for onsite review by Owner during execution of Work.

Look-Ahead Schedule: Prepare and submit at least 7 days in advance, identifying areas to be investigated during coming week. Schedules shall include structure numbers, street locations, and dates.

Traffic Control:

Conform to requirements of Section 80, Work Zone Traffic Control.

Notify Owner at least 7 days in advance of Work starting, of areas where Work will be conducted, and submit traffic control plan.

Structures will be identified as shown on Colorado Springs Utilities book sheets. If pipe or structure is not shown or listed, identify by upstream structure with a letter designation added starting with "A" for each unidentified structure on each pipe segment. When nonremote powered and controlled winches are used to pull television camera through line, telephones, radios, or other suitable means of communication shall be provided between the two manholes to ensure that adequate communications exist between crewmembers.

INSPECTION

A. Video Recording:

1. Set camera so axis is at centerline of pipe.

2. Show continuous footage reading on tape image. Place on screen where it is clearly visible (e.g., if black font, do not place on dark background, if white font, do not place on light background). Place high enough on screen to be visible on image when using a VHS player.

3. Viewing shall be in direction of flow, except while camera is being used in a reverse setup. Inspection shall proceed from upstream to downstream, unless prohibited by an obstruction.

4. If upstream (or reverse) setup is required, establish new inspection run separate from downstream (or normal) setup. Inspection video for both downstream and upstream runs shall be shown consecutively on same tape.

5. Keep camera lens clean, and clear. If material or debris obscures image or causes reduced visibility, clean or replace lens prior to proceeding with recording operation.

6. Camera lens shall remain above visible water level and may submerge only while passing through clearly identifiable line sags (or vertical misalignments). If flow exceeds 25 percent of diameter, such that camera lens becomes obscured, inspection shall be stopped until flow

subsidies. If necessary, reschedule CCTV operation. Surcharging (and flooding of camera lens) is not an excusable condition if it has been artificially created upstream, i.e., placement of flow plugs or freshwater flushing in pipe.

7. Record inside of each lateral, and connection of lateral to pipeline.

8. Recordings shall clearly show cracks and fractures, and their severity, in addition to obvious features, i.e., laterals and joints.

9. Immediately report obstructions that restrict flow and cause inspection to be interrupted to Owner. Document condition with still photograph, and begin inspections of other pipelines.

10. Lens, lighting, and focus shall be readjusted in order to ensure clear, distinct, and properly lighted image of defect.

11. Camera Operation:

Speed: 30 feet per minute, maximum, during inspection.

Stop, for a minimum of 5 seconds, at every lateral, broken pipe, root intrusion, or other defect or adversity.

Pan entire diameter or area of pipe at each defect.

12. Insert 5-second blank space between line segments to clearly mark end of one televised line and beginning of another.

13. Loss of color or severe red or green color will be cause for rejection of inspection. Recordings shall be without distortion or outside interference.

14. Line segments shall be televised complete from structure-to-structure on same tape in continuous run. Video must clearly show camera starting and ending at structure, unless defect does not allow it. Do not perform partial televising on one tape and then complete run on another tape. If line is partially televised, due to excusable condition, i.e., collapsed line, televised length shall be viewed by Owner for acceptability.

15. View of entire line segment, structure-to-structure (typically manholes) needs to exist on videotape in order to be acceptable. If a portion of line is unacceptable, entire segment shall be deemed unacceptable and shall be retelevised.

16. Instant developing from video image, digital, standard-size photographs illustrating significant defects shall be taken and submitted to Owner. Photographs or images shall clearly indicate pipe structure identification number, footage (if not shown on photograph), and defect code.

17. Owner may accept physical inspection that does not adhere to minimum standards if adverse conditions are encountered and reinspection is not advised. In such a case, enough data shall be provided to permit accurate assessment.

B. Measurement:

1. Record in English units.
2. Obtain pipe diameter by physical measurement in upstream (or downstream) access structure.
3. Verify pipe material (e.g., RCP, VCP, CMP) and surface lengths between manholes.
4. Use calipers or measuring rod to determine diameter of inlet and outlet pipe.
5. Footage measurements shall begin at centerline of upstream manhole, unless Owner approves otherwise.

6. Continuous Footage Readings:

- a) Use to identify location of defects.
- b) Accurate to within plus or minus 2 percent tolerance.
- c) Defect identifications are to be called out and recorded to the nearest 1 foot.
- d) Line segment recording will be unacceptable if continuous footage meter is inaccurate, or identified defects or features leave doubt as to accuracy of locations or total length.

7. For measurement of distance to defects, attach marker flag to top of camera yoke. Measurements recorded in log shall be zeroed in alignment with marker rather than camera itself. Measurement shall be zeroed after each segment inspected.

8. Check accuracy of measurement meters daily by use of walking meter, roll-a-tape, or other suitable device.

9. Loss of vertical hold, which has an impact on ability to read and interpret tape, will constitute a cause for rejection.

DOCUMENTATION

A. Work Product:

Video, completed inspection log sheets, photographs, corrected inventories , corrected maps , inspection summaries, and final report.

Inspection Log Sheet:

In format consistent with Information Inventory Management System, an example format is attached at end of this section.

Complete one log for each manhole-to-manhole section of pipe.

Provide separate logs for normal and reverse setups of same segment.

Other data of significance, including those defects listed on table at end of this section shall be recorded on videotape.

Subject to audits against tapes.

Inventories and maps shall be corrected to reflect actual field conditions.

Neatly strike out wrong data using green pencil and clearly mark in correct data, using red pencil.

Show notes that clarify changes in blue pencil.

Originals shall be maintained onsite throughout Project, and copy shall be submitted to Owner at end of each week.

B. Weekly Inspection Summary:

Prepare one page summary for each completed videotape. List tape numbers and segments on tape, including pipe structure identification number, date of inspection, upstream and downstream node identification number, and reverse setup.

- 1. Attach summary to original corresponding videotape, inspection log, and still photograph.
- 2. Still photographs shall correctly identify grid number, structure identification number, and associated defect code. If not shown on photograph, indicate footage location where photo was taken.
- 3. Incorrect written structure identifications will be rejected by Owner.

C. Final Report:

1. Tabular Summary:

- a) Segments inspected in numerical order by structure identification number, including information for each structure.

- b) Submit in electronic format (Microsoft Excel, Corel Quattro Pro, Microsoft ACCESS, or ASCII format) and hard copy.
2. **Still photographs taken shall be properly displayed and labeled on 8-1/2-inch x 11-inch paper for inclusion in final report.**
3. **Electronic files consisting of digital photos (JPEG files) shall be provided on CD-ROM and each file shall be named according to pipe structure identification number.**

SUPPLEMENTS

The supplements listed below, following "End of Section," are a part of this Specification.

- Map Showing Area/Basins.
- Inspection Log Sheet.
- Defects Table.

Inspection Log Sheet

Date: _____ **Time:** _____ **Operator/Crew:** _____
Street: _____ **Cross Street 1:** _____
MH No. _____ **to** _____ **Cross Street 2:** _____
Length Between MH: _____ **Direction of Pull:** _____
Pipe Material: _____ **Diameter:** _____ **Approximate Depth Sewer:** _____
Tape No.: _____ **Counter: Start** _____ **End** _____
Condition of Pipe: Immediate Attention _____ Bad _____ Poor _____ Satisfactory _____
Comments: _____

[illegible]

Date

Fill in the month, day, and year of the inspection in MM/DD/YY format.

Time

Write in the actual time of the inspection work. Use military form (HH:MM) to show the time.

Operator

Fill in the initials of the TV operator. If the work is by a subcontractor, identify the subcontractor by initials (i.e., RK/PPS, where RK is for the operator, PPS identifies Pacific Pipeline Survey).

Street

Write in the name of the street where the inspected pipeline is located.

Cross Street 1 and 2

Write in the name of the first cross street of the segment, if applicable.

Area

Fill in the building number for the building associated with the pipeline being inspected, if applicable.

Basin

The identified basin number. All tape recordings within a singular basin shall be on separate tapes from other basins.

MH No.

Identify the upstream and downstream manhole or access structure.

Direction of Pull

Indicate the initial TV travel and viewing direction by entering "DS" (for downstream) if television is with the flow, or "US" (for upstream) if televising is against the flow. If a reverse setup becomes necessary, the TV direction recorded in this field still refers to the initial direction of travel. If the initial direction of travel and view direction are different, record the initial viewing direction here, and note that the direction of travel and viewing are not the same using the comments section.

Pipe Material

Fill in the pipe material, using one of the following codes:

ABS	Acrylonitrile butadiene styrene
ACP	Asbestos cement pipe
BRI	Brick
CI	Cast iron
CP	Concrete pipe
DIP	Ductile iron pipe
FBG	Fiberglass reinforced pipe
PE	Polyethylene
RCP	Reinforced concrete pipe
RPM	Reinforced plastic mortar
VCP	Vitrified clay pipe
CIP	Cured in-place liner
O	Other (specify the type under, "COMMENTS")

The "O" code includes any material not covered by the above codes. If the material is PE slipliner, enter "O" and state the pipe is sliplined under "COMMENTS."

Pipe Diameter

Write in the size (inches) of the pipe being inspected. Pipe size must be measured by hand for each line segment.

Joint Length

Fill in the distance between pipe joints, in feet. The length should be written to the nearest 0.5 feet (e.g., 2.5, 3.0, 3.5, etc.).

Length Between MH

Write in the length as measured from structure-to-structure centerlines for pipeline segments to be televised.

Televised Length

Write in the final televised length, centerline of structure to centerline of structure, to the nearest foot.

Counter Start/End

Note the tape counter reading on the videotape machine at the start and at the end of inspection. This reading will be used to find the location of the video image on the tape. The initial reading will not necessarily correspond to "000" footage.

Tape No.

Fill in the number of the videotape used to record the TV inspection work. Do not start with one tape and end with a second tape. The recording for each line segment must be on one tape. Enter the full tape number.

Comments

Fill in any other comments about the inspection not described by the previous coding. Comments should describe items such as addresses or other location information, newly constructed pipe, rehabilitated pipe, pipe material coded as "O" (other), etc. Comments should be limited to the available space.

Condition of Pipe

Upon completion of the survey, give the line segment a general rating as Immediate Attention, Bad, Poor, Satisfactory.

Entering Inspection Details

The Inspection Log Sheet shows the inspection details portion of the Television Inspection Form. This portion has columns for recording the location and nature of each defect found during inspection.

To record a defect, define its location by completing a line under the "FOOTAGE" column, then put the condition codes on the same line under the appropriate columns. If more than one notable item defect is observed at the same location, use separate lines to describe each defect, repeating the footage.

DEFECTS TABLE

DIRECTION OF PULL: Note as upstream or downstream.

FEET: Enter distance from insertion manhole to the nearest foot for each entry.

POSITION: Enter location for structural defect, joint offset, lateral, etc. Use clock position facing in the

upstream direction for location callout.

STRUCTURAL DEFECTS: Enter code for structural defect, enter additional information in comment section if appropriate, note as “beginning” and “end” for extensive defect in comment column.

10. ode	11. Defect
S-1	Radial Crack–Closed
S-2	Longitudinal Crack–Closed
S-3	Radial Crack–Open
S-4	Longitudinal Crack–Open
S-5	Minor Defect or Partially Deteriorated Pipe
S-6	Major Defect or Badly Deteriorated Pipe

JOINT: Enter code for offset joint or open joint, if appropriate.

13. ode	14. Defect
J-1	Offset Joint–Minor
J-2	Offset Joint–Major
J-3	Open Joint

LATERAL TYPE: Enter code for appropriate lateral type.

16. ode	17. Defect
STD	Standard Top Connection
WYE	Wye Connection
TAP	Tap Inlet
TEE	Tee Inlet

LATERAL CONDITION: Enter code for defect at lateral, if appropriate.

19. ode	20. Defect
L-1	Dead Lateral
L-2	Protruding Lateral–Minor
L-3	Protruding Lateral–Major
L-4	Defect at Lateral Connection

ALIGNMENT: Enter code for defect in alignment, note "beginning" and "end" of defect in comments column.

22. ode	23. ode	24. ode	Defect
A-1			Misalignment–Horizontal
A-2			Sag In Pipe–Minor
A-3			Sag In Pipe–Major

ROOTS: Enter code for roots in line.

25. ode	26. ode	27. ode	Defect
R-1			Roots from Lateral
R-2			Roots in Mainline

SECTION 1025

MEASUREMENT AND PAYMENT

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

A. Bid Form.

1.2 MEASUREMENT OF PAY QUANTITIES

A. The Contractor shall make all measurements and determine all quantities and amounts of work done under the Contract subject to approval by the Engineer. At the time measurements are made for quantity determinations, the Contractor or his authorized assistant shall be present to verify such measurements. From quantity figures so ascertained, it will be the Contractor's responsibility to prepare a monthly periodical estimate of the work accomplished to date. This estimate shall be submitted to the Engineer each month for his review and check not later than the date established at the pre-construction conference. The form of such monthly estimates is to be subject to the approval of the Engineer.

B. No measurement will be made for:

1. Work performed or materials placed outside of lines indicated in the plans or established by the Engineer.
2. Materials wasted, used, or disposed of in a manner not called for under the contract.
3. Rejected materials (including material rejected after it has been placed, if the rejection is due to the Contractor's failure to comply with the provisions of the contract).
4. Hauling and disposing of rejected materials.
5. Materials on hand after completion of the work.
6. Any other work or material when payment is contrary to any provision of the contract.
7. All incidental costs necessary for proper performance of the work.

1.3 ESTIMATED QUANTITIES

- A. The estimated quantities shown in the bid form are estimates only, being given only as the basis for comparison of the bids, and the City does not warrant, expressly or by implication, that the actual amount of work will correspond therewith. The right to increase or decrease the amount of any class or portion of the work, or to make changes in the work required as may be deemed necessary is reserved by the City as provided elsewhere in these specifications. The basis of payment will be the actual unit bid items of work performed and measured in accordance with the contract. All prospective bidders should note that certain bid items may be included in the Bid Form to establish a unit price should the use of those items become necessary during construction. Allowance will not be made for loss of anticipated profits of additional compensation should the use of these items be deemed unnecessary.

1.4 PAYMENT FOR LUMP SUM ITEMS

- A. Measurement shall be for work actually complete.

1.5 PAYMENT FOR MATERIAL ON HAND

- A. Partial payments may be made on monthly estimates to the extent of 90 percent of the cost of materials not yet incorporated in the completed work, if the materials conform to the following requirements:
1. Meet the requirements of the Contract based upon inspections or testing by the Engineer, and
 2. Are delivered to or stockpiled in the vicinity of the project or other storage site(s) specifically approved by the Engineer, and
 3. Are properly stored, protected, and insured as to loss, damage, and title.
- B. Material delivered to an off-site storage facility will be considered for partial payment only if:
1. The storage site has been approved by the Engineer.
 2. The off-site storage of materials is required for more than thirty calendar days.
 3. The material is tagged, labeled, or otherwise identified as belonging to the project.
 4. The cost of transportation to the site is provided for in advance.
- C. The cost of the material on hand will be determined by written evidence supplied by the Contractor in sufficient detail as will permit the Engineer to determine the Contractor's actual cost of the materials. The Contractor shall furnish the Engineer with an invoice prior to the progress payment.

I. GENERAL**A. DESCRIPTION AND PAYMENT**

Payment will be made only for those items listed in the bid form. All other items required for the work shall be considered incidental to the construction.

B. ADDITIONAL BID ITEMS DESCRIPTIONS:**Bid Item No. 1: Clearing and Grubbing****(SF)****a. Measurement**

The quantity of Clearing and Grubbing to be paid for will be determined by measurement of the number of square feet of material actually cleared and grubbed and accepted by the Engineer as complying with the plans and specifications. Clearing and Grubbing

shall be in accordance with Section 201 of the CDOT Standard Specifications for Road and Bridge Construction.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for clearing and grubbing shall include scalping, removal and off-site disposal of vegetation and trees with trunks less than 3" diameter and debris within the limits of the project. All holes left behind shall be filled with suitable material to existing grade as directed by the engineer.

Bid Item No. 2: Remove Bridge

(LS)

- a. **Measurement**
The quantity of Remove Bridge to be paid for shall be lump sum. Remove Bridge shall be in accordance with Section 202 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 202 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment of removal of bridge shall include removal and off-site disposal of all components including foundations, reinforcing steel, caissons, bridge rail, pavement, slope paving, all concrete, and any other features of the bridge. Steel plates shall be delivered to a location as directed by the Engineer. All holes left behind shall be filled with suitable material to existing grade as directed by the engineer. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 3: Remove Inlet

(EACH)

- a. **Measurement**
The quantity of Remove Inlet to be paid for will be determined by measurement of the number of inlets actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Inlet shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment of removal of inlet shall include removal and off-site disposal of any foundations, reinforcing steel and all other features of the inlet. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 4: Remove Sidewalk

(SF)

- a. **Measurement**
The quantity of Remove Sidewalk to be paid for will be determined by measurement of the number of square feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Sidewalk shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of sidewalk shall include removal and off-site disposal of all concrete, reinforcing steel and all other features of the sidewalk. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 5: Remove Concrete Curb and Gutter**(LF)**

- a. Measurement
The quantity of Remove Concrete Curb and Gutter to be paid for will be determined by measurement of the number of linear feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Concrete Curb and Gutter shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of concrete curb and gutter shall include removal and off-site disposal of all concrete, reinforcing steel and all other features of the concrete curb and gutter. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 6: Remove Asphalt Curb**(LF)**

- a. Measurement
The quantity of Remove Asphalt Curb to be paid for will be determined by measurement of the number of lineal feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Asphalt Curb shall be in accordance with Section 202 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of asphalt curb shall include removal and off-site disposal to the full existing depth of all features of the asphalt curb and required sawcutting. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 7: Remove Asphalt Material**(SY)**

- a. Measurement
The quantity of Remove Asphalt Material to be paid for will be determined by measurement of the number of square yards of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Asphalt Material shall be in accordance with Section 202 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of asphalt material shall include removal and off-site disposal to the full existing depth of all features of the asphalt material. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 8: Remove Asphalt Material (Milling)**(SY)**

- a. Measurement
The quantity of Remove Asphalt Material (Milling) to be paid for will be determined by measurement of the number of square yards of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Asphalt Material shall be in accordance with Section 202 of the CDOT Standard Specifications for Road and Bridge Construction.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of asphalt material (milling) shall include removal and off-site disposal to the depth shown on the plans.

Bid Item No. 9: Remove Storm Drain Pipe (LF)

- a. **Measurement**
The quantity of Remove Storm Drain Pipe to be paid for will be determined by measurement of the number of lineal feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Pipe shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment of removal of pipe shall include removal and off-site disposal of any reinforcing steel, bedding and all other features of the pipe. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 10: Remove Manhole (EACH)

- a. **Measurement**
The quantity of Remove Manhole to be paid for will be determined by measurement of the number of manholes actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Manhole shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment of removal of manhole shall include removal and off-site disposal of any foundations, reinforcing steel and all other features of the manhole. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 11: Remove Overhead Sign Structure (EACH)

- a. **Measurement**
The quantity of Remove Overhead Sign Structure to be paid for will be determined by measurement of the number of overhead sign structures actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Overhead Sign Structure shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment of remove overhead sign structure shall include removal of all footings, reinforcing steel, steel structure, hardware, sign panel(s), filling of the resulting cavity with suitable material to existing ground, and all other features of the overhead sign structure. This item shall also include delivery of the overhead structure as directed by the engineer.

Bid Item No. 12: Remove Ground Sign**(EACH)**

- a. Measurement
The quantity of Remove Ground Sign to be paid for will be determined by measurement of the number of ground signs actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Ground Sign shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment of remove ground sign shall include removal of all footings, reinforcing steel, hardware, sign panel(s), filling of the resulting cavity with suitable material to existing ground, and all other features of the ground sign.

Bid Item No. 13: Remove Concrete Footing**(EACH)**

- a. Measurement
The quantity of Remove Concrete Footing to be paid for will be determined by measurement of the number of concrete footings actually removed and accepted by the Engineer as complying with the plans and specifications. Remove concrete footing shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of concrete footing shall include removal and off-site disposal of concrete, reinforcing steel, and all other features of the concrete footing. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 14: Remove Light Standard**(EACH)**

- a. Measurement
The quantity of Remove Light Standard to be paid for will be determined by measurement of the number of light standards actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Light Standard shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of light standard shall include removal and delivery of light standards as directed by the Engineer, light standard foundations and all features of the light standard and shall include filling of holes with suitable material to existing grade.

Bid Item No. 15: Remove Tree**(EACH)**

- a. Measurement
The quantity of Remove Tree to be paid for will be determined by measurement of the number of trees with trunks greater than or equal to 3" in diameter actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Tree shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of tree shall include removal and off-site disposal of trees, stumps, roots, and all features of the tree with trunks greater than or equal to 3" in diameter. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 16: Remove Fence**(LF)**

- a. **Measurement**
The quantity of Remove Fence to be paid for will be determined by measurement of the number of lineal feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Fence shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of fence shall include removal and off-site disposal of fence posts, fence post foundations, fencing, any required temporary fencing, and all features of the fence. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 17: Remove Guardrail Thrie Beam**(LF)**

- a. **Measurement**
The quantity of Remove Guardrail Thrie Beam to be paid for will be determined by measurement of the number of lineal feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Guardrail Thrie Beam shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of guardrail thrie beam shall include removal and off-site disposal of metal rail, guardrail post, foundations and all features of the guardrail. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed.

Bid Item No. 18: Remove Temporary Guard Rail**(LF)**

- a. **Measurement**
The quantity of Remove Temporary Guard Rail to be paid for will be determined by measurement of the number of lineal feet of material actually removed and accepted by the Engineer as complying with the plans and specifications. Remove Temporary Guard Rail shall be in accordance with Section 220 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 220 – Removal of Structures and Obstructions.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of temporary guard rail shall include removal and off-site delivery as directed by the Engineer.

Bid Item No. 19: Muck Excavation (CY)

- a. Measurement
The quantity of Muck Excavation to be paid for will be determined by measurement of the number of cubic yards of material actually excavated as directed and accepted by the Engineer. Muck Excavation shall be in accordance with Section 203 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. Payment
Payment for Bid Item shall include all material excavated including hauling and disposal of all excavated material not reused at the project site. Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 20: Embankment Material (Complete In Place) (CY)

- a. Measurement
Embankment Material (Complete In Place) will not be remeasured but will be the quantities designated in the Contract per cubic yard. Exceptions will be made when field changes are ordered or when it is determined that there are discrepancies on the plans in an amount of at least plus or minus two percent of the plan cubic yardage quantity.

Embankment Material (Complete In Place) will be measured in its final compacted position in the roadway. Measurement will be made upward from the original ground line without any allowance for subsidence due to compaction of the base under the embankment. The original cross-sections will be used for determination of volumes of embankment material placed, unless changes have been directed.
The measured volume of embankment material will be increased by the volume of topsoil or wetland topsoil removed from the area below the original ground line and under the embankment, only when the topsoil or wetland topsoil is designated to be removed within the roadway prism. When the topsoil source is not designated in the Contract, embankment will be measured from the original ground line. Embankment Material (Complete In Place) shall be in accordance with Section 203 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 203 – Excavation and Embankment.
- b. Payment
Payment for Bid Item shall include all material required to construct the embankment (complete in place), transportation, placement, mixing, drying, disking, wetting, windrowing, any other moisture control means, and compaction of embankment and imported material, including hauling and disposal of all excavated material not reused at the project site and the import of all borrow material incorporated into the work. Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 21: Topsoil (4") (SY)

- a. Measurement
The quantity of Topsoil (4") to be paid for will be determined by measurement of the number of square yards of material actually constructed and accepted by the Engineer as complying with the plans and specifications. Topsoil shall be in accordance with Section 207 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for topsoil shall include placement and all other features of the topsoil.

Bid Item No. 22: Structure Excavation**(CY)**

a. Measurement

The quantity of Structure Excavation to be paid for will not be measured, but will be the quantities shown on the plans for each structure in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 8 percent of the plan quantity for the structure.

Structure Excavation shall be in accordance with Section 206 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 206 – Structure Excavation and Backfill for Structures.

Structure Excavation plan quantities were determined by calculating the cubic yards in accordance with the dimensions shown on the plans, using the average end area method at 20' intervals (closer interval where tabulated data is shown in the plans).

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 23: Structure Backfill (Class 1)**(CY)**

a. Measurement

The quantity of Structure Backfill (Class 1) to be paid for will not be measured, but will be the quantities shown on the plans for each structure in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 8 percent of the plan quantity for the structure.

Structure Backfill (Class 1) shall be in accordance with Section 206 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 206 – Structure Excavation and Backfill for Structures.

Structure Backfill (Class 1) plan quantities were determined by calculating the cubic yards in accordance with the dimensions shown on the plans, using the average end area method at 20' intervals (closer interval where tabulated data is shown in the plans). Plan quantities do not reflect deductions for voids designed into the structure backfill (drainage inlets, underdrains).

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 24: Structure Backfill (Class 2)**(CY)**

a. Measurement

The quantity of Structure Backfill (Class 2) to be paid for will not be measured, but will be the quantities shown on the plans for each structure in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 8 percent of the plan quantity for the structure.

Structure Backfill (Class 2) shall be in accordance with Section 206 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 206 – Structure Excavation and Backfill for Structures.

Structure Backfill (Class 2) plan quantities were determined by calculating the cubic yards in accordance with the dimensions shown on the plans, using the average end area method at 20' intervals (closer interval where tabulated data is shown in the plans). Plan quantities do not reflect deductions for voids designed into the structure backfill.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 25: Mechanical Reinforcement of Soil (CY)

- a. **Measurement**
The quantity of Mechanical Reinforcement of Soil to be paid for will not be measured, but will be the quantities shown on the plans for each structure in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 8 percent of the plan quantity for the structure.

Mechanical Reinforcement of Soil shall be in accordance with Section 206 of the CDOT Standard Specifications for Road and Bridge Construction.

Mechanical Reinforcement of Soil plan quantities were determined by calculating the volume of soil reinforced, in cubic yards, in accordance with the dimensions shown on the plans, using the average end area method at 20' intervals (closer interval where tabulated data is shown in the plans). Plan quantities do not reflect deductions for voids designed into the structure backfill (drainage inlets, underdrains).

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 26: Silt Fence (LF)

- a. **Measurement**
The quantity of Silt Fence to be paid for will be determined by measurement of the number of lineal feet of material actually constructed and accepted by the Engineer as complying with the plans and specifications. Silt Fence shall be in accordance with Section 208 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for silt fence shall include furnishing, installing, removing after completion of work, trenching and all other items of work involved in construction of silt fence.

Bid Item No. 27: Storm Drain Inlet Protection (EACH)

- a. **Measurement**

The quantity of Storm Drain Inlet Protection to be paid for will be determined by measurement of the number of storm drain inlet protections actually constructed and accepted by the Engineer as complying with the plans and specifications. Storm Drain Inlet Protection shall be in accordance with the City of Colorado Springs Drainage Criteria Manual Volume II.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for storm drain inlet protection shall include both erosion sock and concrete block and gravel methods and furnishing, installing, removing after completion of work, and all other items of work involved in construction of storm drain inlet protection.

Bid Item No. 28: Stabilized Construction Entrance (EACH)

- a. **Measurement**
The quantity of Stabilized Construction Entrance to be paid for will be determined by measurement of the number of stabilized construction entrances actually constructed and accepted by the Engineer as complying with the plans and specifications. Stabilized Construction Entrance shall be in accordance with Section 208 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for stabilized construction entrance shall include furnishing, installing, removing after completion of work, and all other items of work involved in construction of stabilized construction entrance.

Bid Item No. 29: Erosion Bales (Weed Free) (EACH)

- a. **Measurement**
The quantity of Erosion Bales (Weed Free) to be paid for will be determined by measurement of the number of erosion bales actually constructed and accepted by the Engineer as complying with the plans and specifications. Erosion Bales shall be in accordance with Section 208 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for erosion bales (weed free) shall include furnishing, installing, removing after completion of work, and all other items of work involved in construction of erosion bales (weed free).

Bid Item No. 30: Erosion Control Supervisor (LS)

- a. **Measurement**

The quantity of Erosion Control Supervisor to be paid for shall be lump sum. Erosion Control Supervisor shall be in accordance with Section 208 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 31: Concrete Washout Structure (LS)

- a. **Measurement**

The quantity of Concrete Washout Structure to be paid for shall be lump sum. Concrete Washout Structure shall be in accordance with Section 208 of the CDOT Standard Specifications for Road and Bridge Construction.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 32: Reset Fence**(LF)**

- a. **Measurement**

The quantity of Reset Fence to be paid for will be determined by measurement of the number of lineal feet actually removed and reset and accepted by the Engineer as complying with the plans and specifications. Reset Fence shall be in accordance with Section 240 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 240 – Reset Structures.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for reset fence shall include removal and salvage of existing fence and related items, filling the resultant cavity in the existing location with suitable material to the level of existing ground, replacing damaged fence posts and fencing, footings, and all other items of work involved in construction of reset fence.

Bid Item No. 33: Reset Temporary Type 7 Barrier**(LF)**

- a. **Measurement**

The quantity of Reset Temporary Type 7 Barrier to be paid for will be determined by measurement of the number of lineal feet actually removed and reset and accepted by the Engineer as complying with the plans and specifications. Reset Temporary Type 7 Barrier shall be in accordance with Section 240 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 240 – Reset Structures.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for reset temporary type 7 barrier shall include removal and salvage of existing barrier and related items, replacing damaged barrier, footings, and all other items of work involved in construction of reset temporary type 7 barrier.

Bid Item No. 34: Reset Ground Sign**(EACH)**

- a. **Measurement**

The quantity of Reset Ground Sign to be paid for will be determined by measurement of the number of ground signs actually cleaned and reset and accepted by the Engineer as complying with the plans and specifications. Reset Ground Sign shall be in accordance with Section 240 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 240 – Reset Structures.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for reset ground sign shall include filling the resultant cavity in the existing location with suitable material to the level of the surrounding ground and providing the existing posts with breakaway devices where required, and all other items of work involved in construction of reset ground sign.

Bid Item No. 35: Reset Sign Panel**(EACH)**

- a. **Measurement**

The quantity of Reset Sign Panel to be paid for will be determined by measurement of the number of sign panels actually reset and accepted by the Engineer as complying with the plans and specifications. Reset Sign Panel shall be in accordance with Section 240 of

the City of Colorado Springs Standard Specifications, and with the Revision to Section 240 – Reset Structures.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 36: Modify/Adjust Sanitary Manhole (EACH)

- a. **Measurement**
The quantity of Modify/Adjust Sanitary Manhole to be paid for shall be determined by measurement of the number of manholes actually requiring modifications/adjustment and accepted by the Engineer as complying with the plans and specifications. Modifications/Adjustments of Sanitary Manholes shall be in accordance with Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition. CCTV inspections shall be in accordance with Supplemental Section 02952 – Closed-Circuit Television (CCTV) Inspection.
- b. **Payment**
Payment shall be made at the applicable contract lump sum price for Bid Item and shall include all costs for adjusting existing manholes to proposed grade elevations (where required), CCTV inspections of all existing sanitary lines located within the project limits (before and after construction).

Payment shall be made at the applicable contract lump sum bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 37: Dryland Seeding (Native) (ACRE)

- a. **Measurement**
The quantity of Dryland Seeding (Native) to be paid for will be determined by measurement of the number of acres of material actually seeded and accepted by the Owner's Representative as complying with the plans and specifications. Dryland Seeding (Native) shall be in accordance with Section 212 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. **Payment**
Payment for Bid Item shall include installation of seed, mulch, weed and foreign matter removal, shipping, labor, equipment, tools and materials of installation to be completed and accepted. Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all shipping, labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 38: Asphalt Concrete Pavement (Patching) (TON)

- a. **Measurement**
The quantity of Asphalt Concrete Pavement (Patching) to be paid for will be determined by measurement of the number of tons of material actually constructed and accepted by the Engineer as complying with the plans and specifications. Asphalt Concrete Pavement (Patching) construction shall be in accordance with the Pikes Peak Region Asphalt Paving Specifications.

Asphalt Concrete Pavement (Patching) is intended to be used for parking lot and Conejos Street asphalt restoration construction.

Asphalt Concrete Pavement (Patching) shall be completed using approved Grading S mix.

- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for asphalt concrete (patching) shall be in accordance with the Pikes Peak Region Asphalt Paving Specifications and shall include all tack coat (between lifts and along curb and gutter), hauling, wetting, compaction, and all other items of work involved in construction of asphalt concrete pavement (patching).

Bid Item No. 39: Asphalt Concrete Pavement (Grading S) (TON)

- a. **Measurement**
 The quantity of Asphalt Concrete Pavement (Grading S) to be paid for will be determined by measurement of the number of tons of material actually constructed and accepted by the Engineer as complying with the plans and specifications. Asphalt Concrete Pavement (Grading S) construction shall be in accordance with the Pikes Peak Region Asphalt Paving Specifications.
- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for asphalt concrete shall be in accordance with the Pikes Peak Region Asphalt Paving Specifications and shall include all tack coat (between lifts and along curb and gutter), hauling, wetting, compaction, and all other items of work involved in construction of asphalt concrete pavement.

Bid Item No. 40: Asphalt Concrete Pavement (Grading SX) (TON)

- a. **Measurement**
 The quantity of Asphalt Concrete Pavement (Grading SX) to be paid for will be determined by measurement of the number of tons of material actually constructed and accepted by the Engineer as complying with the plans and specifications. Asphalt Concrete Pavement (Grading SX) construction shall be in accordance with the Pikes Peak Region Asphalt Paving Specifications.
- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for asphalt concrete shall be in accordance with the Pikes Peak Region Asphalt Paving Specifications and shall include all tack coat (between lifts and along curb and gutter), hauling, wetting, compaction, and all other items of work involved in construction of asphalt concrete pavement.

Bid Item No. 41: Sawcut Existing Pavement (LF)

- a. **Measurement**
 The quantity of Sawcut Existing Pavement to be paid for will be determined by measurement of the number of lineal feet actually cut and accepted by the Engineer as complying with the plans and specifications. Sawcut existing pavement shall be in accordance with Section 202 of the CDOT Standard Specifications for Road and Bridge Construction.
- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for sawcut existing pavement shall include wetting, cutting to the required depth, cleaning, and all other items of work involved in sawcut existing pavement.

Bid Item No. 42: Steel Piling (HP 14x89) (LF)

- a. **Measurement**
The quantity of Steel Piling (HP 14x89) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as

complying with the plans and specifications. Measurement shall be from the tip (bottom) to the cut-off elevation (top).

The length of pile cut-off to be measured will be those random lengths of piling which result from cutting off the tops of driven piles and which are not used in the work, up to a maximum cut-off length of 10 feet. Cut-off pieces longer than 10 feet will not be paid as cut-off, because pieces longer than 8 feet can be spiced and incorporated in the work.

Where piling is driven to within 1 foot of the elevation of cut-off, butt ends will be included in the length measured for piling actually driven.

Measurement of splices will be limited to two per steel pile, except when extra splices are ordered.

Splices for piles will be measured as 3 linear feet additional length of pile.

Pile tips will be measured by the actual number used.

Steel Piling (HP 14x89) shall be in accordance with Section 502 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 502 – Piling.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Steel cut-offs 10 feet or less in length will be paid for at the contract unit price less 20 percent. These cut-offs shall become the property of the Contractor.

Pile cut-offs greater than the above specified lengths will not be paid for.

Authorized jetting, blasting, or other work necessary to obtain the specified penetration of piles will be paid for on a time and materials basis as described in Subsection 108.24 of the City of Colorado Springs Engineering Division Standard Specifications.

Bid Item No. 43: Steel Sleeve (30 inch)

(LF)

a. Measurement

The quantity of Steel Sleeve (30 inch) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Measurement shall be from the tip (bottom) to the cut-off elevation (top).

The length of steel sleeve cut-off to be measured will be those random lengths of sleeve pipe which result from cutting off the tops of steel sleeve pipe and which are not used in the work, up to a maximum cut-off length of 10 feet. Cut-off pieces longer than 8 feet will not be paid as cut-off, because pieces longer than 10 feet can be spiced and incorporated in the work.

Measurement of splices will be limited to two per steel sleeve, except when extra splices are ordered.

Splices for sleeve will be measured as 3 linear feet additional length of sleeve.

Steel Sleeve (30 inch) shall be in accordance with Section 502 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 502 – Piling.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Drilled holes to facilitate installation of steel sleeves is incidental to the Steel Sleeve item.

Steel cut-offs 10 feet or less in length will be paid for at the contract unit price less 20 percent. These cut-offs shall become the property of the Contractor.

Sleeve cut-offs greater than the above specified lengths will not be paid for.

Bid Item No. 44: Drilled Caisson (36 inch)(Signal Poles)

(LF)

a. Measurement

The quantity of Drilled Caisson (36 inch)(Signal Poles) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Each approved splice of the reinforcing cage for additional length of caisson will be measured as $\frac{1}{2}$ linear foot of additional length of drilled caisson.

Drilled Caisson (36 inch)(Signal Poles) shall be in accordance with Section 503 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 503 – Drilled Caissons.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item. The unit price of drilled caissons shall be full compensation for making all excavations; hauling and disposal of excavated material; performing all necessary pumping; temporary casings; furnishing and placing required concrete and reinforcement steel, including the reinforcement projecting above the tops of the caissons necessary for splicing; all backfilling; removing casings; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work. No extra payment will be made for casing left in place.

When the Engineer orders holes to be drilled to a lower elevation than shown on the plans, compensation for additional depth will be as follows:

Additional Length	Compensation
0 to 5 feet	Contract Unit Price
Over 5 feet to 15 feet	Contract Unit Price Plus 15%
Over 15 feet	Contract Unit Price Plus 25%

Additional compensation will not be paid for the portions of a caisson that are extended due to the Contractor's method of operation, as determined by the Engineer.

Bid Item No. 45: Drilled Caisson (42 inch)**(LF)**

a. Measurement

The quantity of Drilled Caisson (42 inch) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Each approved splice of the reinforcing cage for additional length of caisson will be measured as ½ linear foot of additional length of drilled caisson.

Drilled Caisson (42 inch) shall be in accordance with Section 503 of the CDOT Standard Specifications for Road and Bridge Construction, and the Revision to Section 503 – Drilled Caissons.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item. The unit price of drilled caissons shall be full compensation for making all excavations; hauling and disposal of excavated material; performing all necessary pumping; temporary casings; furnishing and placing required concrete and reinforcement steel, including the reinforcement projecting above the tops of the caissons necessary for splicing; all backfilling; removing casings; and for furnishing all tools, labor, equipment, non-destructive testing, and incidentals necessary to complete the work. No extra payment will be made for casing left in place.

When the Engineer orders holes to be drilled to a lower elevation than shown on the plans, compensation for additional depth will be as follows:

Additional Length	Compensation
0 to 5 feet	Contract Unit Price
Over 5 feet to 15 feet	Contract Unit Price Plus 15%
Over 15 feet	Contract Unit Price Plus 25%

Additional compensation will not be paid for the portions of a caisson that are extended due to the Contractor's method of operation, as determined by the Engineer.

Bid Item No. 46: Concrete Slope Paving (Reinforced)**(CY)**

a. Measurement

The quantity of Concrete Slope Paving (Reinforced) to be paid for will be determined by measurement of the number of cubic yards actually constructed and accepted by the Engineer as complying with the plans and specifications.

Concrete Slope Paving (Reinforced) shall be in accordance with Section 507 of the CDOT Standard Specifications for Road and Bridge Construction.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 47: Concrete Sealer**(SY)**

a. Measurement

The quantity of Concrete Sealer to be paid for will be determined by measurement of the number of square yards actually sealed, within the limits identified in the plans, and accepted by the Engineer as complying with the plans and specifications.

Concrete Sealer shall be in accordance with Section 515 of the CDOT Standard Specifications for Road and Bridge Construction.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for surface preparation, and all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 48: Bridge Expansion Device (0-6 inch)

(LF)

a. Measurement

The quantity of Bridge Expansion Device (0-6 inch) to be paid for will be determined by measurement of the number of linear feet between traffic-face of bridge rails, parallel to the expansion device, completely installed and accepted by the Engineer as complying with the plans and specifications. The portion of the expansion device extending into the bridge rails or curbs is not measured, and is incidental to the work. Cover plates and hardware for curbs or bridge rails are not measured and are incidental to the work.

The words "completely installed" shall be interpreted to mean the expansion joint device is in place with the following operations completed:

- (1) Concrete placed and finished.
- (2) Watertight integrity test performed.

Bridge Expansion Device (0-6 inch) shall be in accordance with Section 518 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 518 – Waterstops and Expansion Joints.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include all work necessary to complete the items, including furnishing and installing modular expansion device, steel angles, concrete anchorages, cover plates and hardware, bolts, inserts, lubricant adhesive and all miscellaneous hardware required; and is full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 49: Concrete Class B

(CY)

a. Measurement

The quantity of Concrete Class B to be paid for will not be measured, but will be the quantities shown on the plans in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each class for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 2 percent of the plan quantity for the structure.

Acceptance and pay factors described in Specifications section 601.17 apply.

Concrete plan quantities were determined by calculating the cubic yard in accordance with the dimensions shown on the plans. Plan quantities reflect deductions for all voids designed into the structure, except deductions were not made for the volume occupied by pipes or conduits less than 3 inches in diameter, ducts for pre-stressing steel, reinforcing steel, anchors, weep holes, piling, and form liner textures and nominal chamfers.

Concrete Class B shall be in accordance with Section 601 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 601 – Structural Concrete.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item, subject to the pay factors described in Specifications section 601.17, and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 50: Concrete Class D (Bridge)**(CY)**

- a. **Measurement**
The quantity of Concrete Class D (Bridge) to be paid for will not be measured, but will be the quantities shown on the plans in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each class for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 2 percent of the plan quantity for the structure.

Acceptance and pay factors described in Specifications section 601.17 apply.

Concrete plan quantities were determined by calculating the cubic yard in accordance with the dimensions shown on the plans. Plan quantities reflect deductions for all voids designed into the structure, except deductions were not made for the volume occupied by pipes or conduits less than 3 inches in diameter, ducts for pre-stressing steel, reinforcing steel, anchors, weep holes, piling, and form liner textures and nominal chamfers.

Concrete Class D (Bridge) shall be in accordance with Section 601 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 601 – Structural Concrete.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item, subject to the pay factors described in Specifications section 601.17, and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 51: Concrete Class D (Wall)**(CY)**

- a. **Measurement**
The quantity of Concrete Class D (Wall) to be paid for will not be measured, but will be the quantities shown on the plans in cubic yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions for each class for each structure will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 2 percent of the plan quantity for the structure.

Acceptance and pay factors described in Specifications section 601.17 apply.

Concrete plan quantities were determined by calculating the cubic yard in accordance with the dimensions shown on the plans. Plan quantities reflect deductions for all voids designed into the structure, except deductions were not made for the volume occupied by pipes or conduits less than 3 inches in diameter, reinforcing steel, anchors, weep holes, piling, and form liner textures and nominal chamfers.

Concrete Class D (Wall) shall be in accordance with Section 601 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 601 – Structural Concrete.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item, subject to the pay factors described in Specifications section 601.17, and shall include full

compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 52: Synthetic Stone Veneer

(SF)

a. Measurement

The quantity of Synthetic Stone Veneer to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Synthetic stone veneer shall be in accordance with the Addition of Section 1000 – Synthetic Stone Veneer.

b. Payment

Payment shall be made at the applicable contract unit bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for synthetic stone veneer shall be made at the unit price to include furnishing, prepping, installation, acceptance, and all other items of work involved in construction of synthetic stone veneer according to these specifications.

Bid Item No. 53: Structural Concrete Stain

(SY)

a. Measurement

The quantity of Structural Concrete Stain to be paid for will not be measured, but will be the quantities shown on the plans in square yards, completed and accepted by the Engineer as complying with the plans and specifications. Plan quantity exceptions will be: (1) when field changes are ordered, or (2) when it is determined that there are discrepancies on the plans in an amount plus or minus 5 percent of the plan quantity for the structure.

Structural Concrete Stain shall be in accordance with Section 601 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 601 and 708 – Structural Concrete Stain.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all water-based form release agent, sample preparation, abrasive blasting, patching materials and application, structural concrete stain and application, labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 54: Reinforcing Steel

(LB)

a. Measurement

The quantity of Reinforcing Steel to be paid will not be measured but shall be the quantities designated in the Contract; except, measurements will be made for revisions requested by the Engineer, or for an error of plus or minus 2 percent of the total weight shown on the plans for each structure. Nominal weights for various reinforcing steel bar sizes are per Concrete Reinforcing Steel Institute tables.

Prospective bidders shall verify the weight of reinforcing steel before submitting a proposal. Adjustment will not be made in the weight shown on the plans, other than for approved design changes or for an error as stipulated above, even though the actual weight may deviate from the plan weight.

Reinforcing Steel shall be in accordance with Section 602 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 602 – Reinforcing Steel.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. No allowance will be made for supports, clips, wire or other material used for fastening reinforcement in place.

Bid Item No. 55: Reinforcing Steel (Epoxy Coated)**(LB)**

a. Measurement

The quantity of Reinforcing Steel (Epoxy Coated) to be paid will not be measured but shall be the quantities designated in the Contract; except, measurements will be made for revisions requested by the Engineer, or for an error of plus or minus 2 percent of the total weight shown on the plans for each structure. Nominal weights for various reinforcing steel bar sizes are per Concrete Reinforcing Steel Institute tables.

Prospective bidders shall verify the weight of reinforcing steel before submitting a proposal. Adjustment will not be made in the weight shown on the plans, other than for approved design changes or for an error as stipulated above, even though the actual weight may deviate from the plan weight.

The computed weight of epoxy coated reinforcing bars will be based on the nominal weight before application of the epoxy coating. shown below.

Reinforcing Steel (Epoxy Coated) shall be in accordance with Section 602 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 602 – Reinforcing Steel.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. No allowance will be made for supports, clips, wire or other material used for fastening reinforcement in place.

Bid Item No. 56: 18 inch RCP CIP**(LF)**

a. Measurement

The quantity of 18 inch RCP CIP to be paid for will be determined by measurement of the number of lineal feet actually constructed to face of structure and accepted by the Engineer as complying with the plans and specifications. 18 inch RCP CIP shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications, and with the Revision of Section 630 – Storm Drains and Culverts.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 18 inch RCP CIP shall include all trenching, bedding, placement, bolting, backfill, compaction, and all other items of work involved in construction of 18 inch RCP CIP.

Bid Item No. 57: 24 inch RCP CIP**(LF)**

a. Measurement

The quantity of 24 inch RCP CIP to be paid for will be determined by measurement of the number of lineal feet actually constructed to face of structure and accepted by the Engineer as complying with the plans and specifications. 24 inch RCP CIP shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications, and with the Revision of Section 630 – Storm Drains and Culverts.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 24 inch RCP CIP shall include all trenching, bedding, placement, bolting, backfill, compaction, and all other items of work involved in construction of 24 inch RCP CIP.

Bid Item No. 58: 30 inch RCP CIP**(LF)**

- a. Measurement
The quantity of 30 inch RCP CIP to be paid for will be determined by measurement of the number of lineal feet actually constructed to face of structure and accepted by the Engineer as complying with the plans and specifications. 30 inch RCP CIP shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications, and with the Revision of Section 630 – Storm Drains and Culverts.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 30 inch RCP CIP shall include all trenching, bedding, placement, bolting, backfill, compaction, and all other items of work involved in construction of 30 inch RCP CIP.

Bid Item No. 59: Curb Inlet L8 (5-10 Feet)**(EACH)**

- a. Measurement
The quantity of Curb Inlet L8 (5-10 Feet) to be paid for will be determined by measurement of the number of Curb Inlets L8 (5-10 Feet) actually constructed and accepted by the Engineer as complying with the plans and specifications. Curb Inlet L8 (5-10 Feet) shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Curb Inlet L8 (5-10 Feet) shall include all excavation, bedding, placement, backfill, compaction, frames and grates, and all other items of work involved in construction of Curb Inlet L8 (5-10 Feet).

Bid Item No. 60: Curb Inlet L10 (5-10 Feet)**(EACH)**

- a. Measurement
The quantity of Curb Inlet L10 (5-10 Feet) to be paid for will be determined by measurement of the number of Curb Inlets L10 (5-10 Feet) actually constructed and accepted by the Engineer as complying with the plans and specifications. Curb Inlet L10 (5-10 feet) shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Curb Inlet L10 (5-10 Feet) shall include all excavation, bedding, placement, backfill, compaction, frames and grates, and all other items of work involved in construction of Curb Inlet L10 (5-10 Feet).

Bid Item No. 61: Type 1 Manhole (5' x 4')(10 feet)**(EACH)**

- a. Measurement
The quantity of Type 1 Manhole (5' x 4')(10 feet) to be paid for will be determined by measurement of the number of Type 1 Manholes (5' x 4')(10 feet) actually constructed and accepted by the Engineer as complying with the plans and specifications. Type I Manhole (10 feet) shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Type 1 Manhole (5' x 4')(10 feet) shall include all excavation, bedding, placement, backfill, compaction, steel covers, and all other items of work involved in construction of Type 1 Manhole (5' x 4')(10 feet).

Bid Item No. 62: Pipe Collar (Special)**(EACH)**

- a. Measurement
The quantity of Pipe Collar (Special) to be paid for will be determined by measurement of the number of Pipe Collar (Special) actually constructed and accepted by the Engineer as complying with the plans and specifications. Pipe Collar (Special) shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Pipe Collar (Special) shall include all concrete, reinforcement, excavation, backfill and all other items of work involved in construction of Pipe Collar (Special).

Bid Item No. 63: Pipe Repair**(EACH)**

- a. Measurement
The quantity of Pipe Repair to be paid for will be determined by measurement of the number of Pipe Repairs actually constructed and accepted by the Engineer as complying with the plans and specifications. Pipe Repair shall be in accordance with Section 630 of the City of Colorado Springs Standard Specifications.
- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Pipe Repair shall include all concrete, reinforcement, excavation, backfill and all other items of work involved in construction of Pipe Repair.

Bid Item No. 64: Guardrail Type 7 (Style CA)**(LF)**

- a. Measurement
The quantity of Guardrail Type 7 (Style CA) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Guardrail will be measured by the linear foot along the centerline of the rail from end to end of completed and accepted rail as shown on the plans, excluding end anchorages, median terminals, and transitions.

Posts will be included in the quantities of guardrail of the specified type and not measured separately. Additional posts required for guardrail adjacent to bridges and obstructions, as shown on the plans, will not be measured and paid for separately but shall be included in the work.

Guardrail Type 7 (Style CA) shall be in accordance with Section 606 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 606 – Guardrail and Bridge Rail.

- b. Payment
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for guardrail type 7 shall include all hauling, placing, dowels, staining, and all other items of work involved in construction of guardrail type 7.

All work and materials necessary and incidental to the temporary treatment of guardrail ends will not be measured and paid for separately but shall be included in the work.

Partial payments will not be made for partially completed guardrail runs that do not conform to the end treatments specified in CDOT subsections 606.03(c) or 606.04.

Bid Item No. 65: Bridge Rail Type 7 (Special) (Modified) (45 inch) (LF)

a. Measurement

The quantity of Bridge Rail Type 7 (Special) (Modified) (45 inch) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Bridge Rail Type 7 (Special) (Modified) (45 inch) shall be in accordance with Section 606 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 606 – Guardrail and Bridge Rail.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 66: Ornamental Steel Rail (LF)

a. Measurement

The quantity of Ornamental Steel Rail to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Ornamental Steel Rail shall be in accordance with Section 514 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 514 – Pedestrian and Bikeway Railing.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Ornamental Steel Rail shall include all hardware and all other items of work involved in construction of Ornamental Steel Rail.

Bid Item No. 67: Fence Steel Chain Link (42 inch) (LF)

a. Measurement

The quantity of Fence Steel Chain Link (42 inch) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Fence Steel Chain Link (42 inch) shall be in accordance with Section 607 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 607 - Fences.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Fence Steel Chain Link (42 inch) shall include all excavation, footings, hardware, and all other items of work involved in construction of Fence Steel Chain Link (42 inch).

Bid Item No. 68: Fence Steel Chain Link (120 inch) (LF)

a. Measurement

The quantity of Fence Steel Chain Link (120 inch) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Fence Steel Chain Link (120 inch) shall be in accordance with Section 607 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 607 - Fences.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the

work. Payment for Fence Steel Chain Link (120 inch) shall include all hardware and all other items of work involved in construction of Fence Steel Chain Link (120 inch).

Bid Item No. 69: Concrete Sidewalk**(SF)**

a. Measurement

The quantity of Concrete Sidewalk to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Concrete Sidewalk shall be in accordance with Section 500 of the City of Colorado Springs Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for concrete sidewalk shall include all prepping and all other items of work involved in construction of concrete sidewalk.

Bid Item No. 70: Concrete Curb Ramp (Ped Ramp)**(SF)**

a. Measurement

The quantity of Concrete Curb Ramp (Ped Ramp) to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Concrete Curb Ramp (Ped Ramp) shall be in accordance with Section 500 of the City of Colorado Springs Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for concrete curb ramp (ped ramp) shall include all prepping and all other items of work involved in construction of concrete curb ramp (ped ramp).

Bid Item No. 71: Concrete Curb and Gutter Type 1**(LF)**

a. Measurement

The quantity of Concrete Curb and Gutter Type 1 to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Concrete Curb and gutter will be measured along the face of the curb. Deduction in length will be made for drainage structures, such as catch basins, drop inlets, etc., installed in the curb and gutter.

Concrete Curb and Gutter Type 1 shall be in accordance with Section 500 of the City of Colorado Springs Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Concrete Curb and Gutter Type 1 shall include all excavation, prepping, forming and all other items of work involved in construction of curb and gutter.

Bid Item No. 72: Median Cover Material (Patterned Concrete)**(SF)**

a. Measurement

The quantity of Median Cover Material (Patterned Concrete) to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Median Cover Material (Patterned Concrete) shall be in accordance with Section 610 of the CDOT Standard Specifications for Road and Bridge Construction.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for median cover material shall include all prepping, staining, and all other items of work involved in construction of median cover material.

Bid Item No. 73: CDOT Type 6 Bituminous Curb (LF)

- a. **Measurement**
The quantity of CDOT Type 6 Bituminous Curb to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Bituminous curb will be measured along the face of the curb. Deduction in length will be made for drainage structures, such as catch basins, drop inlets, etc., installed in the curb.

CDOT Type 6 Bituminous Curb shall be in accordance with Section 609 of the CDOT Standard Specifications for Road and Bridge Construction.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for CDOT Type 6 Bituminous Curb shall include all excavation, prepping, forming and all other items of work involved in construction of curb.

Bid Item No. 74: 4 inch Electrical Conduit (LF)

- a. **Measurement**
The quantity of 4 inch Electrical Conduit to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. 4 inch Electrical Conduit shall be in accordance with Section 613 of the CDOT Standard Specifications for Road and Bridge Construction.

Installation of electrical and telecommunication conduit shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 4 inch electrical conduit shall include junction boxes, pull boxes, 90 degree sweep ells, pull wire, weatherheads, adaptors, and condulets. Conduit will be measured by the linear foot in place and shall include all saw cutting, excavation, backfill, jacking and drilling pits. It shall also include removal of pavement, sidewalks, gutters, and curbs and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 75: 6 inch Electrical Conduit (LF)

- a. **Measurement**
The quantity of 6 inch Electrical Conduit to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. 6 inch Electrical Conduit shall be in accordance with Section 613 of the CDOT Standard Specifications for Road and Bridge Construction.

Installation of electrical conduit shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition

- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 6 inch electrical conduit shall include junction boxes, pull boxes, 90 degree sweep ells, pull wire, weatherheads, adaptors, and condulets. Conduit will be measured by the linear foot in place and shall include all saw cutting, excavation, backfill, jacking and drilling pits. It shall also include removal of pavement, sidewalks, gutters, and curbs and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 76: 1.25 inch Electrical Conduit (Plastic) (LF)

- a. **Measurement**
 The quantity of 1.25 inch Electrical Conduit (plastic) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. 1.25 inch Electrical Conduit (plastic) shall be in accordance with Section 613 of the CDOT Standard Specifications for Road and Bridge Construction.

Installation of electrical conduit shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition.

- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 1.25 inch electrical conduit (plastic) shall include junction boxes, pull boxes, 90 degree sweep ells, pull wire, weatherheads, adaptors, and condulets. Conduit will be measured by the linear foot in place and shall include all saw cutting, excavation, backfill, jacking and drilling pits. It shall also include removal of pavement, sidewalks, gutters, and curbs and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 77: 2 inch Electrical Conduit (Plastic) (LF)

- a. **Measurement**
 The quantity of 2 inch Electrical Conduit (plastic) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. 2 inch Electrical Conduit (plastic) shall be in accordance with Section 613 of the CDOT Standard Specifications for Road and Bridge Construction.

Installation of electrical and telecommunication conduit shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition.

- b. **Payment**
 Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 2 inch electrical conduit (plastic) shall include junction boxes, pull boxes, 90 degree sweep ells, pull wire, weatherheads, adaptors, and condulets. Conduit will be measured by the linear foot in place and shall include all saw cutting, excavation, backfill, jacking and drilling pits. It shall also include removal of pavement, sidewalks, gutters, and curbs and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 78: 3 inch Electrical Conduit (Plastic) (LF)

- a. **Measurement**
 The quantity of 3 inch Electrical Conduit (plastic) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. 3 inch Electrical Conduit

(plastic) shall be in accordance with Section 613 of the CDOT Standard Specifications for Road and Bridge Construction.

Installation of electrical conduit shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for 3 inch electrical conduit (plastic) shall include junction boxes, pull boxes, 90 degree sweep ells, pull wire, weatherheads, adaptors, and condulets. Conduit will be measured by the linear foot in place and shall include all saw cutting, excavation, backfill, jacking and drilling pits. It shall also include removal of pavement, sidewalks, gutters, and curbs and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 79: Electrical Vault (6' x 12') (EACH)

- a. **Measurement**
The quantity of electrical vault (6' x 12') to be paid for will be determined by measurement of the number of vaults actually installed and accepted by the Engineer as complying with the plans and specifications. Electrical vaults shall be provided by Colorado Springs Utilities and installed by the selected contractor.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Installation of electrical vaults shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition. It shall also include removal of pavement, sidewalks, gutters, and curbs, excavation, backfill and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 80: Electrical Vault (4'x 4') (EACH)

- a. **Measurement**
The quantity of electrical vault (4' x 4') to be paid for will be determined by measurement of the number of vaults actually installed and accepted by the Engineer as complying with the plans and specifications. Electrical vaults shall be provided by Colorado Springs Utilities and installed by the selected contractor.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Installation of electrical vaults shall be in accordance with Colorado Springs Utilities Electrical Distribution Construction Standards, latest edition. It shall also include removal of pavement, sidewalks, gutters, and curbs, excavation, backfill and their replacement in kind to match existing grade and all other work necessary to complete the item.

Bid Item No. 81: Luminaire High Pressure Sodium (250 Watt)(Wall Pack) (EACH)

- a. **Measurement**
The quantity of Luminaire High Pressure Sodium (250 Watt)(Wall Pack) to be paid for will be determined by measurement of the number of luminaire high pressure sodium (250 watt)(wall pack) actually constructed and accepted by the Engineer as complying with the plans and specifications.

Luminaires including lamp, ballast and photoelectric cell will be measured by the number of installed luminaries of the specified wattage.

Luminaire High Pressure Sodium (250 Watt)(Wall Pack) installation shall be according to Section 17 of the Colorado Springs Utilities Electric Distribution Construction Standards, and with the Revision to Section 613 – Lighting.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for luminaire high pressure sodium shall include furnishing, installing, certifying, site preparation, all necessary hardware and all other items of work involved in construction of luminaire high pressure sodium (250 watt)(wall pack).

Luminaire High Pressure Sodium (250 Watt)(Wall Pack) payment shall be according to Section 613 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 613 – Lighting.

Bid Item No. 82: Light Standard Foundation

(EACH)

a. Measurement

The quantity of Light Standard Foundation to be paid for will be determined by measurement of the number of light standard foundations actually constructed and accepted by the Engineer as complying with the plans and specifications.

Light standard foundations including anchor bolts, whether concrete or screw-in type, will be measured by the actual number installed and accepted.

Light Standard Foundation installation shall be according to Section 17 of the Colorado Springs Utilities Electric Distribution Construction Standards, and with the Revision to Section 613 – Lighting.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for light standard foundation shall include excavation, reinforcing steel, concrete and all other items of work involved in construction of light standard foundation.

Light Standard Foundation payment shall be according to Section 613 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 613 – Lighting.

Bid Item No. 83: Sign Panel (Class I)

(SF)

a. Measurement

The quantity of Sign Panel (Class I) to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Each sign panel shall include the date of manufacture and all necessary hardware.

Sign Panel (Class I) shall be in accordance with Section 614 of the CDOT Standard Specifications for Road and Bridge Construction.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 84: Sign Panel (Class II)**(SF)**

a. Measurement

The quantity of Sign Panel (Class II) to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Each sign panel shall include the backing zees, date of manufacture and all necessary hardware.

Sign Panel (Class II) shall be in accordance with Section 614 of the CDOT Standard Specifications for Road and Bridge Construction.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 85: Steel Sign Support (2 Inch Round) (Post)**(LF)**

a. Measurement

The quantity of Steel Sign Support (2 Inch Round) (Post) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Steel Sign Support (2 Inch Round)(Post) shall be in accordance with Section 614 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 614 – Traffic Control Devices.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 86: Steel Sign Support (2 Inch Round) (Socket)**(EACH)**

a. Measurement

The quantity of Steel Sign Support (2 Inch Round) (Socket) to be paid for will be determined by measurement of the number of steel sign post supports (2 inch round) (socket) actually constructed and accepted by the Engineer as complying with the plans and specifications.

Steel Sign Support (2 Inch Round)(Socket) shall be in accordance with Section 614 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 614 – Traffic Control Devices.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 87: Steel Sign Support (2.5 Inch Round NP-40) (Post)**(LF)**

a. Measurement

The quantity of Steel Sign Support (2.5 Inch Round NP-40) (Post) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications. Steel Sign Support (2.5 Inch Round NP-40)(Post) shall be in accordance with Section 614 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 614 – Traffic Control Devices.

- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 88: Steel Sign Support (2.5 Inch Round NP-40) (Slipbase) (EACH)

- a. **Measurement**
The quantity of Steel Sign Support (2.5 Inch Round NP-40) (Slipbase) to be paid for will be determined by measurement of the number of steel sign supports (2.5 inch round NP-40) (Slipbase) actually constructed and accepted by the Engineer as complying with the plans and specifications. Steel Sign Support (2.5 Inch Round NP-40)(Slipbase) shall be in accordance with Section 614 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 614 – Traffic Control Devices.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 89: Signal Controller Foundation (EACH)

- a. **Measurement**
The quantity of Signal Controller Foundation to be paid for will be determined by measurement of the number of signal controller foundations actually constructed and accepted by the Engineer as complying with the plans and specifications. Signal Controller Foundations shall be in accordance with the Colorado Springs City Traffic Signal Installation & Parts Specifications for Contractors, 1/10/2006.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for signal controller foundation shall include all materials necessary for complete in place installation including excavation, anchor bolts, PVC conduit, reinforcement, and concrete.

Bid Item No. 90: Post Tensioning (MKFT)

- a. **Measurement**
The quantity of Post Tensioning to be paid for will be the quantity shown on the plans, completed and accepted by the Engineer as complying with the plans and specifications. MKFT equals the jacking force, in thousands of KIPS, times the length of the tendons in feet.

Post Tensioning shall be in accordance with Section 618 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 618 – Prestressed Concrete.
- b. **Payment**
Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 91: Prestressed Concrete I (BT54) (LF)

- a. **Measurement**
The quantity of Prestressed Concrete I (BT 54) to be paid for will be determined by measurement of the number of lineal feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Prestressing Concrete I (BT 54) shall be in accordance with Section 618 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 618 – Prestressed Concrete.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Prestressed Concrete I (BT 54) shall include the design, construction, and erection of the strong backs required to complete the work. Counter weights or tie downs required in the erection shall not be paid for separately but shall be incidental to the work.

Bid Item No. 92: Bridge Bearing Pads

(EACH)

a. Measurement

Bearing devices will be measured by the unit

Bearing Pads shall be in accordance with section 512 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 512 – Bearing Device.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Leveling pads will not be paid for separately, but shall be included in the work.

Bid Item No. 93: Construction Surveying

(LS)

a. Measurement

The quantity of Construction Surveying to be paid for shall be lump sum. Construction surveying shall include all items of work involved in conducting construction surveying.

Construction Surveying shall be in accordance with Section 625 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 625 – Construction Surveying.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Payment for construction surveying will be the contract lump sum bid and will be full compensation for all surveying work necessary to complete the project as shown on the plans, to include all resetting of stakes, marks, monuments Secondary and Primary Control points, and preparing supplemental or amended Project Control Diagrams.

Construction surveying required by plan force account or by additional work beyond the scope of the original Contract will be paid for at a negotiated rate not to exceed the rate established in CDOT Section 105. That rate shall also apply to reductions in construction surveying as impacted by reductions or deletions to the original contract work. Any survey work not performed to the contract requirements shall be subject to price reduction or rejection.

Partial payment for construction surveying, as determined by the Engineer, will be made as the work progresses. The Contractor shall submit a schedule of estimated contractor construction surveying time as required on the Survey Tabulation Sheet before the first partial payment is made. Copies of the Survey Records for all completed survey work shall be submitted to the Engineer prior to payment of the monthly estimate.

Before final payment is made, the following two items shall be completed, bear the seal and signature of the responsible PLS or PE identified in subsection 625.01, and have copies submitted to the Engineer for review:

(1) All survey records

(2) Supplemental or amended Project Control Diagram (a copy of which shall be submitted to the Region Survey Coordinator)

Bid Item No. 94: Mobilization

(LS)

a. Measurement

Payment will be according to the following schedule:

1. When 5% of the original contract amount is earned, 20% of the amount bid for mobilization will be paid.
2. When 20% of the original contract amount is earned, 50% of the amount bid for mobilization will be paid.
3. When 35% of the original contract amount is earned, 60% of the amount bid for mobilization will be paid.
4. When 75% of the original contract amount is earned, 100% of the amount bid for mobilization will be paid.

The total sum of all payments shall not exceed the original contract amount bid for the item, regardless of the fact that the Contractor may have, for any reason, shut down the work on the project or moved equipment away from the project and then back again.

Mobilization shall be in accordance with Section 626 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 626 – Mobilization.

b. Payment

Payment for Bid Item shall include but is not limited to full compensation for all labor, equipment, tools and materials necessary to mobilize, prepare the project staging area, including stabilized construction access, temporary gravel access path and parking area, removal of facilities and gravel, potholing, cleaning up of site, establishment of sanitary facilities, installation of project construction signs, permitting, and all other costs incurred or labor and operations which must be performed prior to beginning the other items under the contract. Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 95: Epoxy Pavement Marking

(SF)

a. Measurement

The quantity of Epoxy Pavement Marking to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Epoxy Pavement Marking shall be in accordance with Section 627 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 627 – Pavement Marking.

b. Payment

Payment shall be made at the applicable contract unit bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 96: Thermoplastic Pavement Marking (Word-Symbol) (SF)

- a. Measurement
The quantity of Thermoplastic Pavement Marking (Word-Symbol) to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Thermoplastic Pavement Marking (Word-Symbol) shall be in accordance with Section 627 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 627 – Pavement Marking.

- b. Payment
Payment shall be made at the applicable contract unit bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 97: Thermoplastic Pavement Marking (Xwalk-Stopline) (SF)

- a. Measurement
The quantity of Thermoplastic Pavement Marking (Xwalk-Stopline) to be paid for will be determined by measurement of the number of square feet actually constructed and accepted by the Engineer as complying with the plans and specifications.

Thermoplastic Pavement Marking (Xwalk-Stopline) shall be in accordance with Section 627 of the CDOT Standard Specifications for Road and Bridge Construction, and with the Revision to Section 627 – Pavement Marking.

- b. Payment
Payment shall be made at the applicable contract unit bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Bid Item No. 98: Work Zone Traffic Control (LS)

- a. Measurement
The quantity of work zone traffic control to be paid for shall be lump sum. Work Zone Traffic Control shall be in accordance with Section 800 of the City of Colorado Springs Standard Specifications, and with the Revision to Section 800 – Work Zone Traffic Control.

- b. Payment
Payment shall be made at the applicable contract unit bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for work zone traffic control shall be made at the unit price to include detour pavement placement and removal, advanced signs, VMS, construction area signs, contractor preparation, submittal, revision, and execution of traffic control plans and all other items of work involved in work zone traffic control.

Bid Item No. 99: Public Involvement Plan (LS)

- a. Measurement
The quantity of public involvement plan to be paid for shall be lump sum.

- b. Payment
Payment shall be made at the applicable contract unit bid price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for public involvement plan shall be made at the unit price to include neighborhood meetings, informative handouts, and all other items of work involved in public involvement plan per Section III of this document.

SECTION X

10.0 EXHIBITS

- 10.1 SAMPLE CONTRACT
- 10.2 EXCEPTIONS DOCUMENT
- 10.3 REFERENCES SHEET
- 10.4 MINIMUM INSURANCE REQUIREMENTS
- 10.5 COST PROPOSAL FORM
- 10.6 BOND FORMS
- 10.7 SUBMISSION CHECKLIST
- 10.8 LIST OF DRAWINGS
- 10.9 SAMPLE – UNION PACIFIC RAILROAD CONTRACTORS RIGHT OF ENTRY AGREEMENT

10.1 SAMPLE CONTRACT**CONSTRUCTION CONTRACT**

Contract Number	Project Name/Title	CIMARRON BRIDGE REPLACEMENT
Vendor/Contractor		
Address		
Federal Tax ID #	Please check one: ☐ Corporation ☐ Individual ☐ Partnership	
Amount & Account #	Not to Exceed \$ -----PPRTA ACCT# 03-20-5131900	

THIS CONTRACT, in the amount of **Not to Exceed** made and entered into this
\$
 day of **2007** By and between the Pikes Peak Rural Transportation Authority (PPRTA,
 the City of Colorado Springs, Colorado, a municipal corporation, in the
 County of El Paso, State of Colorado, party to the first part hereinafter in the Contract Documents referred to
 as the "City", and
 and trading as an individual or acting as partners consisting of or a corporation organized and existing under
 the laws of the State of Colorado, hereinafter in the Contract Documents called the "Contractor"; party of the
 second part.

WITNESSETH:

Whereas the City has heretofore prepared the necessary Contract Documents for:

CIMARRON BRIDGE REPLACEMENT, IN ACCORDANCE WITH R07-T108 LJ, PLANS AND SPECIFICATIONS

in the City of Colorado Springs; and whereas the party of the second part did on the day of
 2007 submit to the City their written offer and proposal to do the work therein described
 under the terms and conditions therein set forth and furnish all labor, materials, tools, equipment,
 transportation and services for said work in strict conformity with the accompanying Contract Documents
 which include: Cost Proposal, Notice of Award, Contract, Performance, Labor and Material Payment and
 Maintenance Bonds, Notice to Proceed, General Conditions and Special Provisions, Specifications, and
 Addendums and and Drawings.

NOW, THEREFORE, it is hereby agreed that for the considerations and amounts specified in the
 Proposal and the total contract amount designated above and in the Notice of Award, to be paid by
 the PPRTA (RTA) and/or the City to the Contractor, Contractor agrees to furnish all materials and to
 perform all work as set forth in his proposal and as required by the aforesaid Contract Documents.

It is further agreed that the Contractor will start work promptly and continue to work diligently until
 completed. The contractor shall complete all work within **TO BE DETERMINED** calendar days
 after the Notice to Proceed as per the specifications and drawings. The Contractor shall provide a
 two-year guarantee on all works performed under this contract after the job has been completed and
 accepted.

Appropriation and availability of funds: In accord with the Colorado Constitution, Article X, Section 20,
 and the City Charter, performance of the City's obligations under this Contract is expressly subject to
 appropriation of funds by the City Council. Further, in the event that funds are not appropriated in whole
 or in part sufficient for performance of the City's obligations under this Contract, or appropriated funds
 may not be expended due to Constitutional or City Charter spending limitations, then the City may
 terminate this Contract without compensation to the Contractor.

Page Two (2) Contract

The Contractor and the City agree and acknowledge as a part of this contract, that no Change Order or other form or order or directive may be issued by the City which requires additional compensable work to be performed, which work causes the aggregate amount payable under the contract to exceed the amount appropriated for this contract as listed above, unless the Contractor has been given a written assurance by the City that lawful appropriations to cover the costs of the additional work have been made

The Contractor and the City further agree and acknowledge as a part of this contract that no Change Order or other form or order or directive which requires additional compensable work to be performed under this contract shall be issued by the City unless funds are available to pay such additional compensable work performed under this contract, and expressly waives any rights to additional compensation, whether by law or equity, unless, prior to commencing the additional work, the contractor was given a written Change Order describing the additional compensable work to be performed, and setting forth the amount of compensation to be paid, which Change Order was signed by the authorized City Representative. It is the Contractor's sole responsibility to know, determine, and ascertain the authority of the City representative signing any Change Order under this contract.

Books of Account and Auditing. The Contractor shall make available to the City if requested, true and complete records, which support billing statements, reports, performance indices, and all other related documentation. The City's authorized representatives shall have access during reasonable hours to all records, which are deemed appropriate to auditing billing statements, reports, performance indices, and all other related documentation. The Contractor agrees that it will keep and preserve for at least seven years all documents related to the Contract, which are routinely prepared, collected or compiled by the Contractor during the performance of this contract.

The City's Auditor and the Auditor's authorized representatives shall have the right at any time to audit all of the related documentation. The Contractor shall make all documentation available for examination at the Auditor's request at either the Auditor or Contractor's office and without expense to the City.

IN WITNESS WHEREOF, the parties have caused these presents to be executed on the day and the year first above written.

This contract is executed in four (4) counterparts.

THE CITY OF COLORADO SPRINGS, COLORADO:

Steve Gess, City Contracts Manager

SECOND PARTY:

Corporate Name

Signature

Title

Witness

PIKES PEAK RURAL TRANSPORTATION AUTHORITY (PPRTA):

APPROVAL SIGNATURE

10.2 EXCEPTIONS DOCUMENT**EXCEPTIONS:**

Print the words "no exceptions"(here)_____ if there are no exceptions taken to any of the terms, conditions, or specifications of these proposal documents or contract.

If there are exceptions taken to any of the terms, conditions, or specifications of the proposal document or contract, they must be clearly stated on a separate sheet of paper attached to this sheet and returned with your proposal.

Note: All potential Proposers are hereby advised that exceptions taken may be considered during the evaluation phase which may effect the final scoring of proposals. Proposers stipulating that the City must use their contract or agreement may be determined non-responsive and their Proposal determined unacceptable.

Company Name: _____

Address: _____
(City, State and Zip Code)

FIN#: _____

PHONE: _____

FAX: _____

INTERNET ADDRESS: _____

Authorized Signature: _____ Date: _____

Printed Name/Title: _____

10.3 REFERENCES

Pursuant to evaluation criteria, Section IV, Item 4.3 and Section III, Item 3.5, provide a list of clients and at least three (3) references, specifically including any clients whom you believe may be similar in nature to the City of Colorado Springs. Pursuant to evaluation criteria, Section IV, Item 4.4 and Section III, Item 3.6, provide a list of clients and at least three (3) references, specifically including experience with roadway grade separations over railroads.

List of Clients:

Include name of client, contact person, address, and phone number(s).

References:

Return this form with your Proposal.

10.4 MINIMUM INSURANCE REQUIREMENTS

The following listed minimum insurance requirements shall be carried by all contractors and consultants unless otherwise specified in the City's solicitation package, Special Provisions or Standard Specifications. All insurance policies required for work on or adjacent to Union Pacific Railroad Company property shall meet all requirements of the executed Contractor's Right of Entry Agreement with Union Pacific Railroad Company.

The minimum insurance requirements specified in the General Provisions, Section 106 shall be carried by all contractors as specified in the City's solicitation package, Special Provisions and Standard Specifications.

Additional for this solicitation:

Pollution Legal Liability Insurance for limits not less than \$1,000,000 for sudden and accidental incidents including on-site clean-up for new conditions, third party liability for bodily injury and property damage at on-site and off-site locations, and third party clean-up for new and pre-existing conditions.

- Except for workers compensation and employer's liability insurance, the City of Colorado Springs and the Pikes Peak Rural Transportation Authority (PPRTA) must be named as an additional insured. Certificates of Insurance must be submitted before commencing the work and provide 30 days notice prior to any cancellation.
- All coverage furnished by contractor is primary, and that any insurance held by the City of Colorado Springs/PPRTA is excess and non-contributory.
- The certificates of insurance shall provide that there will be no cancellation, reduction or modification of coverage without thirty (30) days' prior written notice to the City. If Contractor does not comply with this section, the City may, in addition to any other remedies it may have, terminate this Agreement, subject to any provision of this Agreement.

The undersigned certifies and agrees to carry and maintain the insurance requirements indicated above throughout the contract Period of Performance.

(Name of Company)

(Signature) (Date)

10.5 COST PROPOSAL

The undersigned declares that it has carefully examined the bid information and complete Solicitation, (The term solicitation means the complete invitation for bid) in submitting a bid for "R07-T108LJ CIMARRON BRIDGE – CIMARRON".

The Offeror's signature will be considered the offerors acknowledgment of understanding and ability to comply with all items in this solicitation. If an offeror makes any changes or corrections to the bid documents (such as white out, or writing over a figure, etc.) such changes or corrections must be initialed and dated by the person signing the offer prior to its submittal.

Total Bid will be evaluated and awarded as follows: **Total Schedule of Values.** The City of Colorado Springs intends to award a contract based partly on the lowest responsible and responsive bidder.

OFFER:

Bid Item No.	Description	Units	Quantity	Unit Price	Extension
1	Clearing and Grubbing	67861	LF		
2	Remove Bridge	1	LS		
3	Remove Inlet	1	EA		
4	Remove Sidewalk	536	SF		
5	Remove Concrete Curb and Gutter	135	LF		
6	Remove Asphalt Curb	1206	LF		
7	Remove Asphalt Material	6471	SY		
8	Remove Asphalt Material (Milling)	250	SY		
9	Remove Storm Drain Pipe	30	LF		
10	Remove Manhole	1	EACH		
11	Remove Overhead Sign Structure	2	EACH		
12	Remove Ground Sign	3	EACH		
13	Remove Concrete Footing	3	EACH		
14	Remove Light Standard	5	EACH		
15	Remove Tree	25	EACH		
16	Remove Fence	250	LF		
17	Remove Guardrail Thrie Beam	525	LF		
18	Remove Temporary Guard Rail	504	LF		
19	Muck Excavation	100	CY		
20	Embankment Material (Complete in Place)	720	CY		
21	Topsoil (4")	2873	SY		
22	Structure Excavation	4615	CY		
23	Structure Backfill (Class 1)	6605	CY		
24	Structure Backfill (Class 2)	662	CY		
25	Mechanical Reinforcement of Soil	1355	CY		
26	Silt Fence	2200	LF		
27	Storm Drain Inlet Protection	5	EACH		
28	Stabilized Construction Entrance	2	EACH		
29	Erosion Bales (Weed Free)	8	EACH		
30	Erosion Control Supervisor	1	LS		

Bid Item No.	Description	Units	Quantity	Unit Price	Extension
31	Concrete Washout Structure	1	LS		
32	Reset Fence	410	LF		
33	Reset Temporary Type 7 Barrier	392	LF		
34	Reset Ground Sign	3	EACH		
35	Reset Sign Panel	2	EACH		
36	Modify/Adjust Sanitary Manhole	1	EACH		
37	Dryland Seeding (Native)	0.6	ACRE		
38	Asphalt Concrete Pavement (Patching)	200	TON		
39	Asphalt Concrete Pavement (Grading S)	2555	TON		
40	Asphalt Concrete Pavement (Grading SX)	795	TON		
41	Sawcut Existing Pavement	303	LF		
42	Steel Piling (HP 14x89)	2422	LF		
43	Steel Sleeve (30 inch)	288	LF		
44	Drilled Caisson (36 inch) (Signal Poles)	28	LF		
45	Drilled Caisson (42 inch)	552	LF		
46	Concrete Slope Paving (Reinforced)	170	CY		
47	Concrete Sealer	3612	SY		
48	Bridge Expansion Device (0-6 inch)	195	LF		
49	Concrete Class B	126	CY		
50	Concrete Class D (Bridge)	1890	CY		
51	Concrete Class D (Wall)	810	CY		
52	Synthetic Stone Veneer	2040	SF		
53	Structural Concrete Stain	2982	SY		
54	Reinforcing Steel	156954	LB		
55	Reinforcing Steel (Epoxy Coated)	455076	LB		
56	18 inch RCP CIP	92	LF		
57	24 inch RCP CIP	19	LF		
58	30 inch RCP CIP	26	LF		
59	Curb Inlet L8 (5-10 Feet)	1	EACH		
60	Curb Inlet L10 (5-10 Feet)	1	EACH		
61	Type 1 Manhole (5' x 4') (10 Feet)	1	EACH		
62	Pipe Collar (Special)	1	EACH		
63	Pipe Repair	1	EACH		
64	Guardrail Type 7 (Style CA)	78	LF		
65	Bridge Rail Type 7 (Special) (Modified) (45 inch)	649	LF		
66	Ornamental Steel Rail	605	LF		
67	Fence Steel Chain Link (42 inch)	761	LF		
68	Fence Steel Chain Link (120 inch)	320	LF		
69	Concrete Sidewalk	4321	SF		
70	Concrete Curb Ramp (Ped Ramp)	279	SF		
71	Concrete Curb and Gutter Type 1	871	LF		
72	Median Cover Material (Patterned Concrete)	1625	SF		
73	CDOT Type 6 Bituminous Curb	431	LF		

Bid Item No.	Description	Units	Quantity	Unit Price	Extension
74	4 inch Electrical Conduit	2000	LF		
75	6 inch Electrical Conduit	5800	LF		
76	1.25 inch Electrical Conduit (Plastic)	1530	LF		
77	2 inch Electrical Conduit (Plastic)	3010	LF		
78	3 inch Electrical Conduit (Plastic)	400	LF		
79	Electrical Vault (6' x 12')	5	EACH		
80	Electrical Vault (4' x 4')	2	EACH		
81	Luminaire High Pressure Sodium (250 Watt)(Wall Pack)	3	EACG		
82	Light Standard Foundation	6	EACH		
83	Sign Panel (Class I)	34	SF		
84	Sign Panel (Class II)	18.5	SF		
85	Steel Sign Support (2 inch Round) (Post)	34	LF		
86	Steel Sign Support (2 inch Round) (Socket)	3	EACH		
87	Steel Sign Support (2.5 inch Round NP-40) (Post)	49.5	LF		
88	Steel Sign Support (2.5 inch Round NP-40) (Slipbase)	4	EACH		
89	Signal Controller Foundation	1	EACH		
90	Post Tensioning	4943	MKFT		
91	Prestressed Concrete I (BT54)	4456	LF		
92	Bridge Bearing Pads	??	EACH		
93	Construction Surveying	1	LS		
94	Mobilization	1	LS		
95	Epoxy Pavement Marking	4286	SF		
96	Thermoplastic Pavement Marking (Word-Symbol)	83	SF		
97	Thermoplastic Pavement Marking (Xwalk-Stopline)	80	SF		
98	Work Zone Traffic Control	1	LS		
99	Public Involvement Plan	1	LS		

TOTAL COST PROPOSAL - Items 1 through 99
\$ _____

**COST PROPOSAL
SIGNATURE PAGE**

By signing in this space, the contractor hereby certifies that this company is not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from bidding/proposing on any federal, state, county or municipal Invitations for Bids or Requests for Proposals.

Signature

Date

Title

THE CONTRACTOR hereby Certifies that at the time of this certification, the Contractor does not knowingly employ or contract with an illegal alien and that the contractor has participated or attempted to participate in the basic pilot program in order to verify that the Contractor does not employ any illegal aliens. "Basic pilot program" means the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, that is administered by the United States department of homeland security.

If awarded the contract, the undersigned hereby agrees to sign said Contract, and furnish the necessary bonds within ten (10) days of receipt of the "Notice of Award", of said contract, and to begin work within ten (10) days from the date of receipt of the "Notice to Proceed" and to complete the work within Thirty (30) Calendar Days.

The undersigned acknowledges and understands the terms, conditions, Specifications and all Requirements contained and/or referenced and are legally authorized by the bidder to make the above bid statements or representations.

(Name of Company)

(Signature)

(Date)

(Address)

(City, State and Zip)

(Telephone Number)

(Name typed/Printed)

(Title)

(Facsimile Number)

FEDERAL TAX ID # _____

This Company Is: Corporation____ Individual____ Partnership____ LLC____

Offeror hereby acknowledges receipt of the following amendments, if applicable (Offeror agrees that it is bound by all Amendments identified herein)

AMENDMENT #1_____ DATED:_____

AMENDMENT #2_____ DATED:_____

AMENDMENT #3_____ DATED:_____

10.6 BOND FORMS**CITY OF COLORADO SPRINGS, COLORADO & PIKES PEAK RURAL TRANSPORTATION
AUTHORITY LABOR AND MATERIAL PAYMENT BOND****1. KNOW ALL MEN BY THESE PRESENTS, THAT:**_____
(contractor name)_____
(address)

as Principal, hereinafter called Principal, and

(surety name)_____
(surety address)

a corporation organized and existing under the laws of the State of _____ and authorized to do business within the STATE OF COLORADO, as Surety, hereinafter called Surety, are held firmly bound unto the CITY OF COLORADO SPRINGS, COLORADO as Obligees, and the PIKES PEAK RURAL TRANSPORTATION AUTHORITY as Obligees, hereinafter called the Obligees, for the use and benefit of claimants as hereinbelow defined, in the amount of: _____/100 dollars--- (\$ _____), lawful money of the United States of America, together with interest as may be provided by law, for the payment whereof Principal and Surety bind themselves, their heirs, executors, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS, Principal and the Obligees have entered into a contract dated the _____ day of _____, 2007 for the following (project):

CIMARRON BRIDGE REPLACEMENT CONSTRUCTION (RFP R07-T108 LJ) (Contract # _____), which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

3. NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall promptly make payments of all amounts lawfully due to all persons supplying or furnishing the Principal or the Principal's subcontractors with labor, materials, rental machinery, tools or equipment used or performed in the prosecution of the work provided for in the Contract; and if the Principal shall indemnify and save harmless the Obligees to the extent of any payments in connection with the carrying out of the Contract which the Obligees may be required to pay under the law, all in accord with Colorado State Law, Section 38-26-105 C.R.S., then this obligation shall be null and void; otherwise this obligation shall remain in full force and effect.

AND FURTHER, should the Principal or the Principal's subcontractors fail to duly pay for any labor, materials, team hire, sustenance, provisions, provender, or other supplies used or consumed by the Principal or the Principal's subcontractors in the performance of the work contracted to be done or fails to pay any person who supplies rental machinery, tools or equipment, all amounts due as the result of the use of such machinery, tools, or equipment, in the prosecution of the work under the Contract, the Surety shall pay the same in an amount not exceeding the sum specified in this Bond together with interest at the rate of eight percent per annum, in accord with Colorado State Law, Section 38-26-106 C.R.S.

In accord with Colorado State Law, Section 38-26-105 C.R.S., actions against the Principal and Surety under this Bond shall be brought within six months after the final completion of the Contract as defined by the ordinances, rules and regulations of the City of Colorado Springs, Colorado, a home rule City, and not afterwards.

4. The Surety for value received agrees that no extension of time, change in, addition to, or other alteration or modification of the terms, conditions or obligations of the Contract or work to be performed thereunder, or any forbearance on the part of either the Obligees or the Principal to the other shall in any way release or affect the Surety's liability or obligation on this Bond, and the surety hereby waives notice of any such extension of time, change, addition, modification, alteration or forbearance.

Signed and sealed on the dates set forth below.

_____	FOR:	
_____		_____
(witness)		(Principal's Name)
	BY:	
_____		_____
(seal)	ITS:	

		this ____ day of _____, 200__
_____	FOR:	
_____		_____
(witness)		(Surety's Name)
	BY:	
_____		_____
(seal)	ITS:	

		this ____ day of _____, 200__

BOND # _____

This Bond (___ is) (___ is not) a SBA Guaranteed Bond.

CITY OF COLORADO SPRINGS/PPRTA
**CITY OF COLORADO SPRINGS, COLORADO & PIKES PEAK RURAL
TRANSPORTATION AUTHORITY PERFORMANCE BOND**

1. KNOW ALL MEN BY THESE PRESENTS, THAT:

(contractor name)

(address)

as Principal, hereinafter called Principal, and

(surety name)

(surety address)

a corporation organized and existing under the laws of the State of _____
_____ and authorized to do business within the STATE OF COLORADO, as Surety, hereinafter
called Surety, are held firmly bound unto the CITY OF COLORADO SPRINGS, COLORADO as
Obligee, and the PIKES PEAK RURAL TRANSPORTATION AUTHORITY as Obligees, hereinafter
called the Obligees, for the use and benefit of claimants as hereinbelow defined, in the amount of:

_____/100 dollars---
(\$ _____), lawful money of the United States of America, together with interest as may
be provided by law, for the payment whereof Principal and Surety bind themselves, their heirs,
executors, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS, Principal and the Obligees have entered into a contract dated the ____ day
of _____, 2007 for the following (project): **CIMARRON BRIDGE REPLACEMENT
CONSTRUCTION (RFP R07-T108 LJ) (Contract # _____)**, which contract is by reference made
a part hereof, and is hereinafter referred to as the Contract.

3. NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the
Principal shall promptly and faithfully perform all terms, conditions and other obligations of the
Contract, and any modifications or extensions thereof granted by the Obligees, then this
obligation shall be null and void; otherwise this obligation shall remain in full force and effect.

4. The Surety for value received agrees that no extension of time, change in, addition to, or
other alteration or modification of the terms, conditions or obligations of the Contract or work to be
performed thereunder, or any forbearance on the part of either the Obligees or the Principal to the
other shall in any way release or affect the Surety's liability or obligation on this Bond, and the
surety hereby waives notice of any such extension of time, change, addition, modification,
alteration or forbearance.

Page 2

Signed and sealed on the dates set forth below.

FOR:

(witness) BY: (Principal's Name)

(seal) ITS:

this ____ day of _____, 200__

FOR:

(witness) BY: (Surety's Name)

(seal) ITS:

this ____ day of _____, 200__

BOND # _____
This Bond (___ is) (___ is not) a SBA Guaranteed Bond.

CITY OF COLORADO SPRINGS/PPRTA
**CITY OF COLORADO SPRINGS, COLORADO & PIKES PEAK RURAL
TRANSPORTATION AUTHORITY MAINTENANCE BOND**

1. KNOW ALL MEN BY THESE PRESENTS, THAT:

(contractor name)

(address)
as Principal, hereinafter called Principal, and

(surety name)

(surety address)
a corporation organized and existing under the laws of the State of _____
_____ and authorized to do business within the STATE OF COLORADO, as Surety, hereinafter
called Surety, are held firmly bound unto the CITY OF COLORADO SPRINGS, COLORADO as
Obligee, and the PIKES PEAK RURAL TRANSPORTATION AUTHORITY as Obligee, hereinafter
called the Obligees, for the use and benefit of claimants as hereinbelow defined, in the amount of:
_____/100 dollars---
(\$ _____), lawful money of the United States of America, together with interest as may
be provided by law, for the payment whereof Principal and Surety bind themselves, their heirs,
executors, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS, Principal and the Obligees have entered into a contract dated the _____
day of _____, 2007 for the following (project):

CIMARRON BRIDGE REPLACEMENT CONSTRUCTION (RFP R07-T108 LJ) (Contract #
_____), which contract is by reference made a part hereof, and is hereinafter referred to
as the Contract.

3. NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the
Principal shall promptly, properly and with out cost to the Obligees perform all maintenance and
other guarantee obligations under the terms of the Contract, including any modifications or
extensions thereof granted by the Obligees, for a period of **two (2) years** from the date of final
payment upon the Contract by the Obligees, and in the case of each correction or repair, during a
period of one year after the date of said correction or repair or for the remaining period of years
set forth herein, whichever is longer, then this obligation shall be null and void; otherwise this
obligation shall remain in full force and effect.

4. The Surety for value received agrees that no extension of time, change in, addition to, or
other alteration or modification of the terms, conditions or obligations of the Contract or work to be
performed thereunder, or any forbearance on the part of either the Obligees or the Principal to the
other shall in any way release or affect the Surety's liability or obligation on this Bond, and the
surety hereby waives notice of any such extension of time, change, addition, modification,
alteration or forbearance.

Page 2

Signed and sealed on the dates set forth below.

FOR:

(witness) BY: (Principal's Name)

(seal) ITS:

this ____ day of _____, 200__

FOR:

(witness) BY: (Surety's Name)

(seal) ITS:

this ____ day of _____, 200__

BOND # _____
This Bond (___ is) (___ is not) a SBA Guaranteed Bond.

10.7 SUBMISSION CHECKLIST

The following information is a checklist for what should be submitted in the Proposal. The Proposal should include all information required in Section III of this RFP:

1. Cost Proposal – **SUBMIT IN SEPARATE SEALED ENVELOPE**
2. Construction Schedule (including CD with electronic copy)
3. Qualifications
4. Experience with Railroads
5. Personnel to Include Subcontractors
6. References
7. Exceptions Document
8. Minimum Insurance Requirements
9. Letter from Bonding Company

10.8 LIST OF DRAWINGS**INDEX OF DRAWINGS**

<u>SHEET #</u>	<u>DESCRIPTION</u>
1	TITLE SHEET AND INDEX
2	STANDARD PLANS LIST
3	SUMMARY OF APPROXIMATE QUANTITIES
4	GENERAL NOTES
5	STANDARD SYMBOLS AND ABBREVIATIONS
6	TYPICAL SECTIONS
7 – 9	RIGHT OF WAY PLANS
10	DEMOLITION PLAN
11	GEOMETRIC CONTROL LAYOUT
12	ROADWAY PLAN
13	ROADWAY PROFILE
14 – 15	INTERSECTION DETAIL SHEETS
16	GRADING DETAIL SHEET
17 – 20	CONSTRUCTION PHASING SHEETS
21 – 24	DRAINAGE PLANS
25	EROSION & STORMWATER QUALITY CONTROL PLAN
26	SIGNING AND STRIPING PLAN
27	SIGNING AND STRIPING TABULATION SHEET
28 – 31	LIGHTING PLANS
32	SIGNAL PLAN
33 – 83	BRIDGE PLANS
84 – 88	RETAINING WALL SHEETS
89 – 93	UTILITY PLANS
94 – 115	ROADWAY CROSS SECTIONS

10.9 SAMPLE CONTRACTOR'S RIGHT OF ENTRY AGREEMENT WITH UNION PACIFIC RAILROAD

SAMPLE AGREEMENT – FOLLOWS THIS PAGE
(Latest copy available to City)

Contractor's Right of Entry -
07/30/01 Form Approved - AVP Law
CONTRACTOR'S

RIGHT OF ENTRY AGREEMENT

THIS AGREEMENT is made and entered into as of the _____ day of _____, 200_,
by and between **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation (the "Railroad"); and:

(Name of Contractor)

to be addressed at _____

(hereinafter the "Contractor").

RECITALS:

Contractor has been hired by _____ to perform work relating to the
construction of industrial tracks (the "Work"), with all or a portion of such work to be
performed on property of Railroad in the vicinity of **Milepost** _____ ± _____, in
_____.

Contractor has requested Railroad to permit it to perform the work on Railroad's
property, and Railroad is agreeable thereto, subject to the following terms and conditions.

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between the Railroad and Contractor, as
follows: **ARTICLE 1 - DEFINITION OF CONTRACTOR.**

For purposes of this agreement, all references in this agreement to the Contractor shall include the
Contractor's contractors, subcontractors, officers, agents and employees, and others acting under its or
their authority.

ARTICLE 2 - RIGHT GRANTED; PURPOSE.

The Railroad hereby grants to the Contractor the right, during the term hereinafter stated and upon
and subject to each and all of the terms, provisions and conditions herein contained, to enter upon and
have ingress to and egress from the property described in the Recitals for the purpose of performing any
work described in the Recitals above. The right herein granted to Contractor is limited to those portions
of Railroad's property specifically described herein, or as designated by the Railroad Representative named
in Article 4.

ARTICLE 3 - TERMS AND CONDITIONS CONTAINED IN EXHIBITS A, B AND C.

The terms and conditions contained in **Exhibit A, Exhibit B and Exhibit C**, attached hereto, are
hereby made a part of this agreement.

ARTICLE 4 - ALL EXPENSES TO BE BORNE BY CONTRACTOR; RAILROAD REPRESENTATIVE.

A. The Contractor shall bear any and all costs and expenses associated with any work performed by the Contractor, or any costs or expenses incurred by the Railroad relating to this agreement.

B. The Contractor shall coordinate all of its work with the following Railroad representative or his or her duly authorized representative (the "Railroad Representative"):

[Insert Director-Track Maintenance]

C. The Contractor, at its own expense, shall adequately police and supervise all work to be performed by the Contractor and shall ensure that such work is performed in a safe manner as set forth in Section 7 of **Exhibit A**. The responsibility of the Contractor for safe conduct and adequate policing and supervision of the Contractor's work shall not be lessened or otherwise affected by the Railroad's approval of plans and specifications involving the work, or by the Railroad's collaboration in performance of any work, or by the presence at the work site of the Railroad Representative, or by compliance by the Contractor with any requests or recommendations made by the Railroad Representative.

ARTICLE 5 - TERM; TERMINATION.

A. The grant of right herein made to Contractor shall commence on the date of this agreement, and continue until _____, unless sooner terminated as herein provided, or at such time as Contractor has completed its work on Railroad's property, whichever is earlier. Contractor agrees to notify the Railroad Representative in writing when it has completed its work on Railroad property.

B. This agreement may be terminated by either party on ten (10) days written notice to the other party.

ARTICLE 6 - CERTIFICATE OF INSURANCE.

A. Before commencing any work, Contractor will provide Railroad with the insurance binders, policies, certificates and/or endorsements set forth in Exhibit **B** of this agreement.

B. All insurance correspondence, binders, policies, certificates and/or endorsements shall be directed to:

Union Pacific Railroad Company
Industrial Development Department
1400 Douglas Street - Stop 1370
Omaha, NE 68179-1370

ARTICLE 7 - DISMISSAL OF CONTRACTOR/SUBCONTRACTOR EMPLOYEE.

At the request of Railroad, Contractor shall remove from Railroad property any employee of Contractor or any subcontractor who fails to conform to the instructions of the Railroad Representative in connection with the work on Railroad's property, and any right of Contractor shall be suspended until such removal has occurred. Contractor shall indemnify Railroad against any claims arising from the removal of any such employee from Railroad property.

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ARTICLE 8 - CROSSINGS.

No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

ARTICLE 9 - EXPLOSIVES.

Explosives or other highly flammable substances shall not be stored on Railroad property without the prior written approval of the Railroad.

IN WITNESS WHEREOF, the parties hereto have duly executed this agreement in duplicate as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY

By
General Director-Industrial Development

(Contractor's Name)

By _____
Title

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AVP **Law**

CITY OF COLORADO SPRINGS/PPRTA

CITY OF COLORADO SPRINGS/PPRTA
EXHIBIT A
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

Section 1. NOTICE OF COMMENCEMENT OF WORK - FLAGGING.

A. The Contractor agrees to notify the Railroad Representative at least ten (10) working days in advance of Contractor commencing its work and at least ten (10) working days in advance of proposed performance of any work by the Contractor in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Railroad's track(s) at any time, for any reason, unless and until a Railroad flagman is provided to watch for trains. Upon receipt of such ten (10)-day notice, the Railroad Representative will determine and inform the Contractor whether a flagman need be present and whether the Contractor need implement any special protective or safety measures. If flagging or other special protective or safety measures are performed by the Railroad, such services will be provided at Contractor's expense with the understanding that if the Railroad provides any flagging or other services, the Contractor shall not be relieved of any of its responsibilities or liabilities set forth herein. Contractor shall promptly pay to Railroad all charges connected with such services within thirty (30) days after presentation of a bill.

B. The rate of pay per hour for each man will be the prevailing hourly rate in effect for an eight hour day for the class of men used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect on the day of execution of this agreement. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays; two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between the Railroad and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized Governmental Agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, the Contractor shall pay on the basis of the new rates and charges.

C. Reimbursement to the Railroad will be required covering the full eight hour day during which any flagman is furnished, unless he can be assigned to other Railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other Railroad work. Reimbursement will also be required for any day not actually worked by said flagman following his assignment to work on the project for which the Railroad is required to pay the flagman and which could not reasonably be avoided by the Railroad by assignment of such flagman to other work, even though the Contractor may not be working during such time. When it becomes necessary for the Railroad to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, the Contractor must provide the Railroad a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5)-days notice of cessation is not given, the Contractor will still be required to pay flagging charges for the five (5)-day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional ten (10) days notice must then be given to the Railroad if flagging service are needed again after such five day cessation notice has been given Railroad.

Section 2. LIMITATION AND SUBORDINATION OF RIGHTS GRANTED

A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Railroad to use and maintain its entire property including the right and power of the Railroad to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, roadways, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by the Railroad without liability to the Contractor or to any other party for compensation or damages.

B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of the Railroad's property, and others) and the right of the Railroad to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 3. NO INTERFERENCE WITH OPERATIONS OF RAILROAD AND ITS TENANTS.

A. The Contractor shall conduct its operations so as not to interfere with the continuous and uninterrupted use and operation of the railroad tracks and property of the Railroad, including without limitation, the operations of the Railroad's lessees, licensees or others, unless specifically authorized in advance by the Railroad Representative. Nothing shall be done or permitted to be done by the Contractor at any time that would in any manner impair the safety of such operations. When not in use, Contractor's machinery and materials shall be kept at least fifty (50) feet from the centerline of the Railroad's nearest track, and there shall be no vehicular crossings of Railroads tracks except at existing open public crossings.

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B. Operations of the Railroad and work performed by the Railroad personnel and delays in the work to be performed by the Contractor caused by such railroad operations and work are expected by the Contractor, and Contractor agrees that the Railroad shall have no liability to Contractor, its subcontractors or any other person or entity for any such delays. The Contractor shall coordinate its activities with those of the Railroad and third parties so as to avoid interference with railroad operations. The safe operation of the Railroad takes precedence over any work to be performed by the Contractor.

Section 4. LIENS.

The Contractor shall pay in full all persons who perform labor or provide materials for the work to be performed by Contractor. The Contractor shall not create, permit or suffer any mechanic's or materialmen's liens of any kind or nature to be created or enforced against any property of the Railroad for any such work performed. The Contractor shall indemnify and hold harmless the Railroad from and against any and all liens, claims, demands, costs or expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished. If the Contractor fails to promptly cause any lien to be released of record, the Railroad may, at its election, discharge the lien or claim of lien at Contractor's expense.

Section 5. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

A. Fiber optic cable systems may be buried on the Railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Contractor shall telephone the Railroad during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on the Railroad's premises to be used by the Contractor. If it is, Contractor will telephone the telecommunications company(ies) involved, make arrangements for a cable locator and, if applicable, for relocation or other protection of the fiber optic cable. The Contractor shall not commence any work until all such protection or relocation (if applicable) has been accomplished.

B. In addition to other indemnity provisions in this Agreement, the Contractor shall indemnify, defend and hold the Railroad harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys fees, court costs and expenses) arising out of any act or omission of the Contractor, its contractor, agents and/or employees, that causes or contributes to (1) any damage to or destruction of any telecommunications system on Railroad's property, and/or (2) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents and/or employees, on Railroad's property. Contractor shall not have or seek recourse against Railroad for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Railroad's property or a customer or user of services of the fiber optic cable on Railroad's property.

Section 6. PERMITS - COMPLIANCE WITH LAWS.

In the prosecution of the work covered by this agreement, the Contractor shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 7. SAFETY.

A. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by the Contractor. The Contractor shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work: The Contractor shall at a minimum comply with the Railroad's safety standards listed in **Exhibit C**, hereto attached, to ensure uniformity with the safety standards followed by the Railroad's own forces. As a part of the Contractor's safety responsibilities, the Contractor shall notify the Railroad if the Contractor determines that any of the Railroad's safety standards are contrary to good safety practices. The Contractor shall furnish copies of **Exhibit C** to each of its employees before they enter on the job site.

B. Without limitation of the provisions of paragraph A above, the Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately trained in all safety and health aspects of the job.

C. The Contractor shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. The Contractor shall promptly notify the Railroad of any U.S. Occupational Safety and Health Administration reportable injuries. The Contractor shall have a nondelegable duty to control its employees while they are on the job site or any other property of the Railroad, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.

D. If and when requested by the Railroad, the Contractor shall deliver to the Railroad a copy of the Contractor's safety plan for conducting the work (the "Safety Plan"). Railroad shall have the right, but not the obligation, to require the Contractor to correct any deficiencies in the Safety Plan. The terms of this agreement shall control if there are any inconsistencies between this agreement and the Safety Plan.

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Section 8. INDEMNITY.

A. • To the extent not prohibited by applicable statute, the Contractor shall indemnify, defend and hold harmless the Railroad, its affiliates, and its and their officers, agents and employees ("Indemnified Parties") from and against any and all loss, damage, injury, liability, claim, demand, cost or expense (including, without limitation, attorney's, consultant's and expert's fees, and court costs), fine or penalty (collectively, "Loss") incurred by any person (including, without limitation, any Indemnified Party, the Contractor, or any employee of the Contractor or of any Indemnified Party) arising out of or in any manner connected with (i) any work performed by the Contractor, or (ii) any act or omission of the Contractor, its officers, agents or employees, or (iii) any breach of this agreement by the Contractor.

B. The right to indemnity under this Section 8 shall accrue upon occurrence of the event giving rise to the Loss, and shall apply regardless of any negligence or strict liability of any Indemnified Party, except where the Loss is caused by the sole active negligence of an indemnified Party as established by the final judgment of a court of competent jurisdiction. The sole active negligence of any Indemnified Party shall not bar the recovery of any other Indemnified Party.

C. The Contractor expressly and specifically assumes potential liability under this Section 8 for claims or actions brought by the Contractor's own employees. The Contractor waives any immunity it may have under worker's compensation or industrial insurance acts to indemnify the Railroad under this Section 8. Contractor acknowledges that this waiver was mutually negotiated by the parties hereto.

D. No court or jury findings in any employee's suit pursuant to any worker's compensation act or the Federal Employers' Liability Act against a party to this agreement may be relied upon or used by the Contractor in any attempt to assert liability against the Railroad.

E. The provisions of this Section 8 shall survive the completion of any work performed by the Contractor or the termination or expiration of this agreement. In no event shall this Section 8 or any other provision of this agreement be deemed to limit any liability the Contractor may have to any Indemnified Party by statute or under common law.

Section 9. RESTORATION OF PROPERTY.

In the event the Railroad authorizes the Contractor to take down any fence of the Railroad or in any manner move or disturb any of the other property of the Railroad in connection with the work to be performed by Contractor, then in that event the Contractor shall, as soon as possible and at Contractor's sole expense, restore such fence and other property to the same condition as the same were in before such fence was taken down or such other property was moved or disturbed. The Contractor shall remove all of Contractor's tools, equipment, rubbish and other materials from Railroad's property promptly upon completion of the work, restoring Railroad's property to the same state and condition as when Contractor entered thereon.

Section 10. WAIVER OF DEFAULT.

Waiver by the Railroad of any breach or default of any condition, covenant or agreement herein contained to be kept, observed and performed by the Contractor shall in no way impair the right of the Railroad to avail itself of any remedy for any subsequent breach or default.

Section 11. MODIFICATION - ENTIRE AGREEMENT.

No modification of this agreement shall be effective unless made in writing and signed by the Contractor and the Railroad. This agreement and the exhibits attached hereto and made a part hereof constitute the entire understanding between the Contractor and the Railroad and cancel and supersede any prior negotiations, understandings or agreements, whether written or oral, with respect to the work to be performed by the Contractor.

Section 12. ASSIGNMENT - SUBCONTRACTING.

The Contractor shall not assign or subcontract this agreement, or any interest therein, without the written consent of the Railroad. The Contractor shall be responsible for the acts and omissions of all subcontractors, and shall require all subcontractors to maintain the insurance coverage required to be maintained by the Contractor as provided in this agreement, and to indemnify the Contractor and the Railroad to the same extent as the Railroad is indemnified by the Contractor under this agreement.

EXHIBIT B
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT
Union Pacific Railroad Company
Insurance Requirements

Contractor shall, at its sole cost and expense, procure and maintain during the life of this Agreement (except as otherwise provided in this Agreement) the following insurance coverage:

- A. Commercial General Liability** insurance. Commercial general liability (CGL) with a limit of not less than \$1,000,000 each occurrence and an aggregate limit of not less than \$2,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, which must be stated on the certificate of insurance:

- Contractual Liability Railroads ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Property" as the Designated Job Site.
- B. Business Automobile Coverage** insurance. Business auto coverage written on ISO Form CA 00 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less \$1,000,000 for each accident.

The policy must contain the following endorsements, which must be stated on the certificate of insurance:

- Coverage for Certain Operations in Connection with Railroads ISO Form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Property" as the Designated Job Site.
 - Motor Carrier Act Endorsement - Hazardous Materials Cleanup (MCS-90) if required by law.
- C. Workers' Compensation and Employers Liability** insurance. Coverage must include but not be limited to:

- Contractor's statutory liability under the workers' compensation laws of the state(s) affected by this Agreement.
- Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 disease policy limit, \$500,000 each employee.

If Contractor is self-insured, evidence of state approval" and excess Workers' Compensation coverage must be provided. Coverage must include liability arising out of the U.S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

The policy must contain the following endorsement, which must be stated on the certificate of insurance:

- Alternate Employer Endorsement ISO Form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).
- D. Railroad Protective Liability** insurance. Contractor must maintain Railroad Protective Liability insurance written on ISO Occurrence Form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate of \$6,000,000. A binder stating the policy is in place must be submitted to Railroad before the work may be commenced and until the original policy is forwarded to Railroad.
- E. Umbrella or Excess** insurance. If Contractor utilizes umbrella or excess policies, these policies must "follow form" and afford no less coverage than the primary policy.

Approved: Insurance Group
 Created: 9/23/05
 Last Modified: 9/23/05

- F. **Pollution Liability** insurance. Pollution liability coverage must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00 39 12 04 (or a substitute form providing equivalent liability coverage), with limits of at least \$5,000,000 per occurrence and an aggregate limit of \$10,000,000.

If the scope of work as defined in this Agreement includes the disposal of any hazardous or non-hazardous materials from the job site, Contractor must furnish to Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of \$1,000,000 per loss, and an annual aggregate of \$2,000,000.

Other Requirements

- G. All policy(ies) required above (except Worker's Compensation and Employers' Liability) must include Railroad as "Additional Insured" using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26 and 'CA 20 48, provide coverage for Railroad's negligence whether, sole or partial, active or passive, and shall not be limited by Contractor's liability under the indemnity provisions of this Agreement.
- H. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless the law governing this Agreement prohibits all punitive damages that might arise under this Agreement.
1. Contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees. This waiver must be stated on the certificate of insurance.
- J. Prior to commencing the work, Contractor shall furnish Railroad with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements in this Agreement.
- K. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the work is to be performed.
- L. The fact that insurance is obtained by Contractor or by Railroad on behalf of Contractor will not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Contractor or any third party will not be limited by the amount of the required insurance coverage.

CITY OF COLORADO SPRINGS/PPRTA
.EXHIBIT C
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT
MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of the Contractor as well as all employees of any subcontractor or agent of the Contractor.

1. Clothing

- A. All employees of the Contractor will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet. Specifically, the Contractor's employees must wear:

Waist-length shirts with sleeves.
Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safetytoed footwear that conforms to the American National Standards Institute (ANSI) and FRA footwear requirements.

- B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.
- C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

2. Personal Protective Equipment

The Contractor shall require its employees to wear personal protective equipment as specified by Railroad rules, regulations, or recommended or requested by the Railroad Representative.

- Hard hat that meets the American National Standard (ANSI) Z89.1- latest revision. Hard hats should be affixed with the contractor's or subcontractor's company logo or name.
- Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, Z87.1 - latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.
- Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:
 - 100 feet of a locomotive or roadway/work equipment
 - 15 feet of power operated tools
 - 150 feet of jet blowers or pile drivers
 - 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection - plugs and muffs)
- Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

3. On Track Safety

The Contractor is responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection regulations - 49CFR214, Subpart C and Railroad's On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

- Maintain a distance of twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.
- Wear an orange, reflectorized workwear approved by the Railroad Representative.
- Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Contractors must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track. The Contractors will also receive special instructions relating to the work zone around machines and minimum distances between machines while working or traveling.

4. Equipment

- A. It is the responsibility of the Contractor to ensure that all equipment is in a safe condition to operate. If, in the opinion of the Railroad Representative, any of the Contractor's equipment is unsafe for use, the Contractor shall remove such equipment from the Railroad's property. In addition, the Contractor must ensure that the operators of all equipment are properly trained and competent in the safe operation of the equipment. In addition, operators must be:
- Familiar and comply with Railroad's rules on lockout/tagout of equipment.
 - Trained in and comply with the applicable operating rules if operating any by-rail equipment on track.
 - Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other railbound equipment.
- B. All self-propelled equipment must be equipped with a first-aid kit, fire extinguisher, and audible back-up warning device.
- C. Unless otherwise authorized by the Railroad Representative, all equipment must be parked a minimum of twenty-five (25) feet from any track. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.
- D. Cranes must be equipped with three orange cones that will be used to mark the working area of the crane and the minimum clearances to overhead powerlines.

5. General Safety Requirements

- A. The Contractor shall ensure that all waste is properly disposed of in accordance with applicable federal and state regulations.
- B. The Contractor shall ensure that all employees participate in and comply with a job briefing conducted by the Railroad Representative, if applicable. During this briefing, the Railroad Representative will specify safe work procedures, (including On-Track Safety) and the potential hazards of the job. If any employee has any questions or concerns about the work, the employee must voice them during the job briefing. Additional job briefings will be conducted during the work as conditions, work procedures, or personnel change.
- C. All track work performed by the Contractor meets the minimum safety requirements established by the Federal Railroad Administration's Track Safety Standards 49CFR213.
- D. All employees comply with the following safety procedures when working around any railroad track:
- Always be on the alert for moving equipment. Employees must always expect movement on any track, at anytime, in either direction.
 - Do not step or walk on the top of the rail, frog, switches, guard rails, or other track components.
 - In passing around the ends of standing cars, engines, roadway machines or work equipment, leave at least 20 feet between yourself and the end of the equipment. Do not go between pieces of equipment if the opening is less than one car length (50 feet).
 - Avoid walking or standing on a track unless so authorized by the employee in charge.
 - Before stepping over or crossing tracks, look in both directions first.
 - Do not sit on, lie under, or cross between cars except as required in the performance of your duties and only when track and equipment have been protected against movement.
- E. All employees must comply with all federal and state regulations concerning workplace safety.