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

REQUEST FOR PROPOSALS

Construction

R20-T034AM

Date Issued: March 11, 2020

FOR

PPRTA SIDEWALK INFILL PROJECT

PRE-PROPOSAL CONFERENCE

11:00 AM MARCH 18, 2020
ACADEMY CONFERENCE ROOM, CITY HALL
107 N. NEVADA AVE, SUITE 121

PROPOSALS ARE DUE NO LATER THAN

2:00 PM APRIL 8, 2020

Contact
Alyssa Mendelsohn, Contracts Specialist
107 N. Nevada, Suite 125
City of Colorado Springs, Colorado 80903
(719) 385-7629
Alyssa.Mendelsohn@ColoradoSprings.gov
The City of Colorado Springs requests Fixed Unit Price (FUP) proposals, as detailed in this Request for Proposal (RFP), for the PPRTA Sidewalk Infill Project.
SECTION INDEX

SECTION I  PROPOSAL INFORMATION
SECTION II PROPOSAL CONTENT
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SECTION IV SPECIAL CONTRACT TERMS AND CONDITIONS/SPECIAL SOLICITATION PROVISIONS
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1.0 PROPOSAL INFORMATION

Section I provides general information to potential Offerors, such as proposal submission instructions and other similar administrative elements. This RFP is available on Rocky Mountain E-Purchasing System: www.rockymountainbidsystem.com.

All addenda or amendments shall be issued through the Rocky Mountain E-Purchasing System and may not be available through any other source.

1.1 RFP SCHEDULE OF EVENTS

The schedule of events is as follows:

<table>
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<th>Date</th>
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<tr>
<td>Issue Request for Proposal</td>
<td>March 11, 2020</td>
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<td>Pre-Proposal Conference</td>
<td>March 18, 2020</td>
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A pre-proposal conference will be held at 11:00 AM March 18, 2020 at:

City of Colorado Springs City Hall
107 N. Nevada Ave, Suite 121 Academy Conference Room
Colorado Springs, CO 80903

This meeting is not mandatory; however, all Offerors are encouraged to attend.

Cut Off Date for Questions 2:00 PM March 25, 2020

Questions about the RFP must be emailed in writing and directed to Alyssa Mendelsohn at the following email address: Alyssa.Mendelsohn@ColoradoSprings.gov.

A written response to any inquiry may be provided in the form of an Amendment to the solicitation. See 1.7 Amendments. Questions MUST be received no later than 2:00 PM March 25, 2020.

DO NOT CONTACT ANY OTHER INDIVIDUAL AT THE CITY OF COLORADO SPRINGS REGARDING THIS SOLICITATION

The only acceptable method of submitting questions is by email to the above-named Contract Specialist. Faxes or physical mail delivery are not acceptable.

Proposal Due Date 2:00 PM April 8, 2020
Interviews, if applicable: Tentatively week of April 13, 2020
Award of Contract: Tentatively week of April 20, 2020
Notice to Proceed: May 2020

1.2 SUBMISSION OF PROPOSAL

Proposals are to be submitted to:

Alyssa Mendelsohn
Contracts Specialist
107 N. Nevada Ave, Suite 125
Colorado Springs, CO 80903

******************NO LATE OFFERS WILL BE ACCEPTED******************

Date/Time:

Proposals shall be received on or before 2:00 PM April 8, 2020

Identification of Proposal:

Proposals shall be submitted in an envelope(s) or container(s) with the solicitation number, date for submission of offer and the Offeror’s name clearly marked on the outside of the envelope(s) or container(s).

RFP No. and Title: R20-T034AM PPRTA Sidewalk Infill Project
Due Date: April 8, 2020
Company:

Any offer that is submitted without being properly marked may be opened for identification prior to the deadline for receipt of proposals and then resealed.

1.3 NUMBER OF COPIES

Offerors shall submit three (3) hardcopies of the proposal documents. Offerors shall also submit one (1) softcopy on USB or CD. Upon submission, all proposal documents shall become and remain the property of the City of Colorado Springs.

1.4 SPECIAL TERMS

Please note the following definitions of terms as used herein:

The term “City” means the City of Colorado Springs.
The term “Contractor” or “Consultant” means the Offeror whose offer is accepted and is awarded the contract to provide the products or services specified in the RFP.

The term “Offer” means the proposal.

The term “Offeror” means the person, firm, or corporation that submits a formal proposal or offer and that may or may not be successful in being awarded the contract.

The term “Project” refers to the PPRTA Sidewalk Infill Project.

The term “Request for Proposal” or “RFP” means this solicitation of a formal, negotiable proposal/offer. Any offer that is accepted will be the offer that is deemed by the City of Colorado Springs to be most advantageous in terms of the criteria designated in the RFP.

1.5 RFP OBJECTIVE

The objective of this RFP is to provide sufficient information to enable qualified Offerors to submit written proposals to the City of Colorado Springs. The RFP is not a contractual offer or commitment to purchase products or services. The Offeror may present options and variables to the scope while still meeting the minimum requirements of this solicitation. Innovative proposals/solutions are encouraged and considered in the selection and/or award.

All information included in proposals must be legible. Any and all corrections and/or erasures must be initialed by Offeror. Each proposal shall be accompanied by a cover letter signed by an authorized representative of the Offeror. The contents of the proposal submitted by the successful Offeror may become part of any contract awarded as a result of this solicitation.

1.6 CONFIDENTIAL OR PROPRIETARY INFORMATION

If an Offeror believes that parts of an offer are confidential, then the Offeror must so specify. The Offeror must include in bold letters the term “CONFIDENTIAL” on that part of the offer which the Offeror believes to be confidential. The Offeror must submit in writing specific detailed reasons, including any relevant legal authority, stating why the Offeror 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 acceptable. Decisions regarding the confidentiality of information will be made when requests are made to make the information public. All offers and parts of offers, which are not marked as confidential, will automatically be 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
Amendments to this RFP may be issued at any time prior to the time set for receipt of proposals. Offerors are required to acknowledge receipt of any amendments issued to this RFP by returning a signed copy of each amendment issued. Signed copies of each amendment must be received on or before the time set for receipt of offers.

The City of Colorado Springs will post all amendments on the Rocky Mountain E-Purchasing System (www.rockymountainbidsystem.com). It is the Offeror's responsibility to check the website for posted amendments or contact the Contracts Specialist listed to confirm the number of amendments which have been issued.

1.8 WITHDRAWAL OR MODIFICATION OF OFFERS

Any Offeror may modify or withdraw an offer in writing at any time prior to the deadline for submission of an offer.

1.9 ACCEPTANCE

Any offer received and not withdrawn shall be considered an offer, which may be accepted by the City of Colorado Springs based on initial submission without discussions or negotiations.

By submitting an offer in response to this solicitation, the Offeror agrees that any offer it submits may be accepted by the City of Colorado Springs at any time within 90 calendar days from the date of submission deadline.

The City of Colorado Springs reserves the right (a) to reject any or all offers; (b) to waive informalities and minor irregularities in offers received; and/or (c) to accept any portion of an offer if deemed in the best interest of the City of Colorado Springs. Failure of the Offeror to provide in its offer any information requested in the RFP may result in rejection of the offer for non-responsiveness.

1.10 PROPOSAL PREPARATION COST

The cost of proposal preparation is not a reimbursable cost. Proposal preparation shall be at the Offeror’s sole expense and is the Offeror’s total and sole responsibility.

1.11 AWARD

The City of Colorado Springs intends to make an award using the evaluation criteria listed in this RFP to determine the best value, considering all factors and criteria in the proposals submitted. Best value means the expected outcome of an acquisition that, in the City’s estimation, provides the greatest overall benefit in response to the requirements detailed in the RFP. The City of Colorado Springs reserves the right to reject any or all offers and to not make an award.
1.12 PERFORMANCE PERIOD

The performance period of any contract awarded as a result of this RFP is anticipated to be as follows.

Base Year: May 2020 – December 31, 2020
Option Year 1: January 1, 2021 – December 31, 2021
Option Year 2: January 1, 2022 – December 31, 2022
Option Year 3: January 1, 2023 – December 31, 2023
Option Year 4: January 1, 2024 – December 31, 2024

1.13 DEBRIEFING

Offerors not selected may request a debriefing on the selection process as well as discussion of the strengths and weaknesses of their proposal upon receipt of notification that their offer was not selected.

A debriefing may be scheduled by contacting the Contracts Specialist listed above. The Contracts Specialist must receive a written request for debriefing no later than ten (10) calendar days after issuance of a notification that the Offeror’s offer was not selected.

1.14 SUBSTANTIVE PROPOSALS

By responding to this RFP, the Offeror certifies (a) that Offeror’s proposal is genuine and is not made in the interest of, or on behalf of, an undisclosed person, firm, or corporation; (b) that Offeror has not directly or indirectly induced or solicited any other Offerors to put in a false or sham proposal; (c) that Offeror has not solicited or induced any other person, firm, or corporation to refrain or abstain from proposing an offer or proposal; (d) that Offeror has not sought by collusion to obtain for themselves any advantage over any other Offerors or over the City of Colorado Springs; and (e) that Offeror has not violated or caused any person to violate, and shall not violate or cause any person to violate, the City’s Code of Ethics contained in Article 3 of Chapter 1 of the City Code and in the City’s Procurement Rules and Regulations.

1.15 OFFEROR’S QUALIFICATIONS

Each Offeror must complete Exhibit 6 – Qualification Statement.

No contract will be awarded to any Offeror who is in arrears to the City, upon any debt or contract, or who is in default, in any capacity, upon any obligation to the City or is deemed to be irresponsible or unreliable by the City based on past performance.

1.16 NON-COLORADO ENTITIES
If Offeror is a foreign entity, Offeror shall comply with C.R.S. section 7-90-801, “Authority to transact business or conduct activities required,” and section 7-90-802, “Consequences of transacting business or conducting activities without authority.”

Before or at the time that the contract is awarded to an entity organized or operating outside the State of Colorado, such entity shall obtain authorization to do business in the State of Colorado, designate a place of business herein, and appoint an agent for service of process.

Such entity must furnish the City of Colorado Springs 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 that office and is still valid. The entity shall also provide the City with a certified copy of the designation of place of business and appointment of agent for service of process from the Colorado Secretary of State, or a letter from the Colorado Secretary of State that such designation of place of business and agent for service of process has been made.

1.17 PROCUREMENT RULES AND REGULATIONS

All projects 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 website: https://www.coloradosprings.gov. The Contracts Specialist may also provide a softcopy of the Rules and Regulations upon request. Any discrepancies regarding conflicting statements, decisions, irregularities, clauses, or specifications will be rectified utilizing the City’s Procurement Rules and Regulations, when applicable. It is the Offeror’s responsibility to advise the Contracts Specialist listed in this RFP of any perceived discrepancies prior to the date and time the offer is due.

1.18 FAIR TREATMENT OF OFFERORS

The City Procurement Services Division 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. If an Offeror believes that a procurement is not conducted in a fair and equitable manner, the Offeror is encouraged to inform the City Procurement Services Manager as soon as possible.

1.19 ORDER OF PRECEDENCE

Any inconsistency in this solicitation shall be resolved by giving precedence in the following order:

A. Sections I-IV of this Solicitation
B. Special Construction Terms and Conditions
C. General Construction Terms and Conditions
D. Exhibits
E. Plans
   a. Detailed Plans
   b. Standard Drawings
      Calculated dimensions will govern over scaled dimensions
F. Special Specifications
G. Standard Specifications
H. Other Appendices, Schedules, Exhibits, or Attachments

1.20 SALES TAX

The successful Offeror, if awarded a contract, shall apply to the Colorado Department of Revenue for a tax-exempt certificate for this project. The certificate does not apply to City of Colorado Springs Sales and Use Tax which shall be applicable and should be included in all proposals. The tax exempt project number and the exemption certificate only apply to County, PPRTA (Pikes Peak Rural Transportation Authority), and State taxes when purchasing construction and building materials to be incorporated into this project.

Furthermore, the exemption does not include or apply to the purchase or rental of equipment, supplies or materials that do not become a part of the completed project or structure. In these instances, the purchase or rental is subject to full taxation at the current taxation rate.

The Offeror and all subcontractors shall include in their Offer City of Colorado Springs Sales and Use Tax on the work covered by the offer, and all other applicable taxes.

Forms and instructions can be downloaded at: https://coloradosprings.gov/cat/government/tax-information/sales-tax.

Questions can be directed to the City Sales Tax Division at (719) 385-5903.

   Our Registration Numbers are as follows:
   City of Colorado Springs
   Federal I.D.: 84-6000573
   Federal Excise: A-138557
   State Sales Tax: 98-03479

1.21 BOND REQUIREMENTS

The Offeror is advised that the successful Offeror shall be required to furnish to the City of Colorado Springs, upon award, one 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 Offeror’s offer.

Bonds shall:

A. Be for the full amount of the contract price.
B. Guarantee the Contractor's faithful performance of the work under the contract, and the prompt and full payment for all labor and materials involved therein.
C. Guarantee protection to the City of Colorado Springs against liens of any kind.
D. Be, when a surety bond is furnished, from a surety company operating lawfully in the State of Colorado and be accompanied with an acceptable "Power-of-Attorney" form attached to each bond copy.
E. Be issued from a surety company that is acceptable to the City of Colorado Springs.
F. Be submitted using the forms in the Exhibit section of this solicitation.

1.22 INTERPRETATION OF QUANTITIES IN PROPOSAL FORM

Except as otherwise provided in this RFP, the quantities appearing in the proposal form are estimates prepared for the comparison of proposals.

After award, payment to the Contractor will be made in accordance with the following procedures:

A. Measurement required. When the Contract requires measurement of work performed or material furnished, payment will be made for actual quantities measured and accepted.

B. Measurement Not Required. When the Contract does not require quantities of work performed or materials furnished to be measured, payment will be made for the quantities appearing in the Contract.

The estimated quantities of work to be performed and materials to be furnished may be increased, decreased or omitted.

1.23 INTERPRETATION OF PLANS AND SPECIFICATIONS

Any change to proposal forms, plans, or specifications prior to the opening of proposals will be issued by the City in the form of an Amendment. Certain individuals may be named in the RFP that have authority to provide information, clarification or interpretation to Offerors prior to opening of proposals. Information obtained from persons other than those named individuals is invalid and shall not be used for proposal purposes.

1.24 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK.

The Offeror is expected to examine the site of the proposed work, the proposal, plans, specifications, supplemental specifications, special provisions, and Contract forms, before submitting a proposal. The submission of a proposal will be considered conclusive evidence that the Offeror has made this examination and is aware of the conditions to be encountered in performing the work according to the Contract.

Boring logs and other records of subsurface investigations, if they exist, are available for inspection by Offerors. These logs and records are made available so that all Offerors
have access to identical subsurface information that is available to the City, and is not intended as a substitute for personal investigation, interpretation, and judgment of the Offerors.

The City does not warrant the adequacy of boring logs and other records of subsurface investigations, and such information is not considered to be a part of the Contract. When a log of test borings is included in the subsurface investigation record, the data shown in the individual log of each test boring apply only to that particular boring and are not intended to be conclusive as to the character of any material between or around test borings. If Offerors use this information in preparing a proposal, it is used at their own risk, and Offerors are responsible for all conclusions, deductions, and inferences drawn from such information.

Offerors may conduct subsurface investigations at the project site at Offeror's expense; the City will afford them this opportunity prior to public opening of proposals.

If an Offeror discovers an apparent error or omission in the proposal form, estimated quantities, plan, or specifications, the Offeror shall immediately notify the Contracting Specialist to enable the City to make any necessary revisions. The City may consider it to be detrimental to the City for an Offeror to submit an obviously unbalanced unit proposal price.

1.25 COMBINATION OR CONDITIONAL PROPOSALS

If an RFP is issued for projects in combination and separately, the Offeror may submit proposals either on the combination or on separate units of the combination. The City reserves the right to make awards on combination or separate proposals to the advantage of the City. Combination proposals will be considered, only when specified.

1.26 ANTI-COLLUSION AFFIDAVIT

The Offeror, by signing their proposal submitted to the City, is certifying that the Offeror has not participated in any collusion or taken any action in restraint of free competitive bidding. This statement may also be in the form of an affidavit provided by the City and signed by the Offeror. The original of the signed anti-collusion affidavit, if separately required and provided with the RFP, shall be submitted with the proposal. The proposal will be rejected if it does not contain the completed anti-collusion affidavit.

1.27 MATERIAL GUARANTY

The successful Offeror may be required to furnish a complete statement of the origin, composition, and manufacture of materials used in the construction of the work together with samples, which will be tested for conformance with Contract requirements.
SECTION II – PROPOSAL CONTENT

2.0 PROPOSAL CONTENT

Section II provides instructions regarding the format and content required for proposals submitted in response to this solicitation.

2.1 PROPOSAL FORMAT

Offeror’s written proposal should include concise, but complete, information, emphasizing why the Offeror is best or best qualified to provide the required services. The Offeror’s written proposal should include the information in the format outlined below and must be limited to no more than twenty-five (25) pages. **A page shall be defined as 8-1/2" x 11"; single sided, with one inch margins, and a minimum font of Times New Roman 10.** The only exception to the 8-1/2” x 11” paper size is the proposed project schedule. It may be submitted on 11” x 17” paper. Each 11” x 17” page for the schedule shall be counted in the overall page limitations above. Each section of the proposal should be labeled to clearly follow the requirements sections identified in this section of the RFP. The following listed Exhibits must be filled out and returned with the proposal and are not counted against the page limit:

- Exhibit 1 Proposal Certification
- Exhibit 3 Exceptions Form
- Exhibit 4 Minimum Insurance Requirements
- Exhibit 6 Qualification Statement
- Schedule A Rate Sheet

2.2 COVER LETTER

The cover letter shall be no more than three pages. The cover letter shall contain at least the following information:

A. RFP Number and Project Name;
B. Statement that the Offeror is qualified to perform the work;
C. Certification Statement that the information and data submitted are true and complete, to the best knowledge of the individual signing the letter;
D. Name, telephone number, email address and physical address of the individual to contact regarding the proposal;
E. The signature of an authorized principal, partner or officer of the Offeror.

2.3 PROPOSAL CERTIFICATION

The Offeror must fill out and submit Exhibit 1 with its Proposal.

2.4 ORGANIZATIONAL BACKGROUND AND OVERVIEW
The Offeror must provide a brief history and overview of its company and its organizational structure, with special emphasis on how this project will fit within that structure. Also include principal place of business location(s), office locations, size of firm, and assessment of financial stability.

2.5 TECHNICAL AREA AND PROJECT APPROACH

In the proposal narrative/technical and management approach section, the Offeror should explain what the Offeror will do and how it will perform if awarded a contract.

A. Understanding of and Compliance with Technical Requirements

The Offeror must explain its overall solution, considering the scope of work or statement of work provided. The content must include, but not necessarily be limited to, the following information:

In this area, the Offeror should address each work area in sufficient detail to demonstrate a clear and full understanding of the work. The proposal should not merely parrot the requirements of the RFP. Further, the Offeror should provide evidence of sufficient planning to ensure the work is completed on schedule and within budget. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Does the proposal demonstrate a firm understanding of the requirements and goals of the Statement of Work, as well as industry standards and reasonable expectations for a company in the industry?
2. Does the proposal fully and completely address each requirement and goal of the Statement of Work?
3. Does the proposal provide solutions to indicate that requirements and goals will be met on schedule?
4. Does the technical solution seem realistic?
5. Does it generally appear that the Offeror knows and thoroughly understands the business and requirements?

B. Project Approach

In the Technical Area/Project Approach, the Offeror should clearly present proposed solutions and indicate that it has performed adequate planning to accomplish project tasks as defined in the Statement of Work. Innovations, efficiencies, and detailed specifics are all encouraged.

The Offeror must at least address the following areas:

1. Construction phasing and traffic control for the project. Explain the phases, traffic control for each phase, and the logic in the construction phasing, including pedestrian traffic control.
2. Erosion and sediment control during all phases of construction as well as post construction efforts through permit closure.

3. Coordination with utilities. Discuss Offeror’s understanding of the key utility relocations required for this project and how Offeror will coordinate and phase construction to both facilitate and accommodate those relocations and the constraints that they impose.

4. Schedule Management. Discuss Offeror’s approach to schedule management including updating and reporting progress of the work.

5. Quality Control. Discuss Offeror’s quality control plan, processes and approach to ensure that the City receives a quality product. Offeror’s quality control plan should include, but no be limited to, concrete construction requirements, and protection of work in cold weather.

6. Safety. Discuss Offeror’s approach and commitment to safety for both construction workers and the public traveling through the construction site.

7. Potential issues that Offeror foresees with this project and how Offeror would make adjustments if encountered. Describe factors limiting construction phasing flexibility and potential remedies.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. Does the proposal include a complete plan to accomplish each requirement, including subcontracting (if applicable)?
2. Does the proposal demonstrate that appropriate and qualified personnel and equipment will be provided to carry out the requirement?
3. Is the proper level of effort directed toward each requirement? Does the level of effort look unrealistically low or unreasonably high?

### 2.6 EXPERTISE AND QUALIFICATIONS

In this section, the Offeror must explain its method of managing the work to be performed and demonstrate that it meets and/or exceeds all requirements regarding past performance/expertise and qualifications of personnel proposed to complete the work defined in the Statement of Work/Scope of Services of this RFP.

A. Program Management Controls

In the Management Area, the Offeror should provide:

1. A plan of operation, to include management of personnel, workload, schedule and budget;
2. If the Offeror plans to subcontract more than 10% of the work, include information on how the Offeror plans to manage its subcontractors;
3. A detailed construction plan for the project, showing the key construction activities and how they will accommodate the field design nature of this project while also
maximizing construction efficiency to provide the best value to the City and minimize impacts to the public.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. Does the proposal address the issues above in sufficient detail to demonstrate a sophisticated and mature management control system?
2. Are program management controls consistent with the technical portion of the proposal, especially regarding schedule and level of effort?
3. Do the plan and controls indicate that the Offeror will obtain, keep, and efficiently utilize high-quality personnel?
4. Does the proposal explain how the Offeror will address corrective actions in case of delays (e.g. expediting materials, additional resources, etc.)?
5. Does the proposal explain how the Offeror will remain within schedule and budget?

B. Past Performance/Relevant Experience

The Offeror should provide at least three references or name contracts demonstrating that it successfully provided services/products that are the same or similar to those required in the RFP. The Offeror should also provide photo documentation of completed projects of at least three (3) examples of past projects demonstrating that it successfully provided services/products that are the same or similar to those required in the RFP. The proposal should adequately explain how the projects were completed on schedule, with minimal impact to adjacent properties, and within budget. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Does the proposal include at least three references or past performance citations?
2. Does the proposal include photo documentation of at least three examples of past performance?
3. Are the references or past performance citations relevant to the requirements of the Statement of Work of the RFP?
4. Does the Offeror explain how they were successful on the projects provided as past performance?
5. Does the Offeror apply the past performance to the City requirement in such a way as to demonstrate added value due to experience?

C. Key Personnel

In the Key Personnel Area, résumés must be provided for all senior personnel considered key, as required by the RFP. Résumés do not count toward the page limit. The Offeror should also provide names of Foreman/Crew Leads that will be utilized on the project and examples of past similar projects that they worked on (full résumés not required). The Offeror should also provide names of Subcontractors (if any) that will be used for task such as Traffic Control, Landscape Restoration or Tree Removal.
It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Explain how the key personnel were related to the projects cited as relevant past performance.
2. Does the Offeror provide complete résumés, including education, experience, background information, accomplishments, and other pertinent information for all senior personnel?
3. Do the resumes demonstrate adequate professional, technical, and management levels to accomplish the work effectively and efficiently?
4. Does the Offeror provide information of Foreman/Crew Leads to demonstrate adequate work history and technical skills to accomplish the work effectively and efficiently?
5. Does the Offeror provide information for Subcontractors to demonstrate adequate work history and technical skills to accomplish the work effectively and efficiently?

2.7 PRICE AREA

In the Price Area, the Offeror should provide a detailed breakdown of the price for each year of performance. The price must be all-inclusive and include all unit costs for material, labor, other direct costs (e.g. travel), indirect costs (i.e. overhead and general and administrative costs), and profit/fee. Offers must include sufficient detail to allow insight into the fairness and reasonableness of the price. If the contract type will be Time and Material (T&M) labor categories, labor rates, separated profit, and estimated material costs must be included in detail.

In addition, although price may not be the most important factor, it is still very important to the City of Colorado Springs. The Offeror’s pricing must be competitive as compared to the budget amount, market pricing in the industry, and the pricing of other Offerors. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. How does the price compare to the industry competition?
2. If low, is it unrealistically low?
3. If high, is there demonstrated added value for the additional cost?
4. Is the price itemized, so that it is clear how the cost was built? If so, do the costs look appropriate for the task?
5. Does the Offeror leave applicable costs out of the calculations? For instance, some will say travel is not included and will be an extra cost. This will be considered when comparing to other Offerors.
6. Are there additional costs not addressed that the City would incur if the Offeror were awarded the contract?

2.8 PROPOSAL PRESENTATION
Presentation is an important factor. Offerors should provide a highly professional product, which is complete, accurate, easily understood, and effectively presented.

### 2.9 EXCEPTIONS

All Offerors must complete Exhibit 3, Exceptions Form and return it with their proposal. Some terms and conditions are not negotiable. Exceptions may be grounds for rendering the proposal unacceptable without further discussions.

### 2.10 INSURANCE REQUIREMENTS

All Offerors must complete Exhibit 4, Minimum Insurance Requirements and return with their proposal. Lack of responsiveness in this area may be grounds for rendering the proposal unacceptable without further discussions.
SECTION III – EVALUATION FACTORS

3.0 EVALUATION AND AWARD

Section III provides information regarding evaluation criteria and scoring. It also includes information regarding proposal selection and award of the resultant contract.

3.1 EVALUATION CRITERIA

3.1.1 TECHNICAL AREA – UNDERSTANDING OF AND COMPLIANCE WITH TECHNICAL REQUIREMENTS
See Section II – Item 2.5A

3.1.2 TECHNICAL AREA – PROJECT APPROACH
See Section II - Item 2.5B

3.1.2 EXPERTISE AND QUALIFICATIONS – PROGRAM MANAGEMENT CONTROLS
See Section II – Item 2.6A

3.1.3 EXPERTISE AND QUALIFICATIONS – PAST PERFORMANCE
See Section II – Item 2.6B

3.1.3 EXPERTISE AND QUALIFICATIONS – KEY PERSONNEL
See Section II – Item 2.6C

3.1.4 PRICE AREA
See Section II – Item 2.7

3.1.5 PROPOSAL PRESENTATION
See Section II – Item 2.8

3.1.6 EXCEPTIONS AND INSURANCE
See Section II – Items 2.9 and 2.10

3.2 RANKING

A. The order of ranking or importance in the evaluation shall be as follows:

First: Price Area Section II – Item 2.7
Second: Expertise and Qualifications Area Section II – Item 2.6
Third: Technical Area Section II – Item 2.5
Fourth: Proposal Presentation Area Section II – Item 2.8

Exceptions and Insurance areas will be scored as pass or fail. Failure in this area may result in disqualification from award.
B. Possible scores for each criterion shall be as follows:
   5 – Exceptional
   4 – Very Good
   3 – Satisfactory
   2 – Marginal
   1 – Unacceptable

C. Definitions for scoring are as follows:

1. **The following apply to the Technical and Expertise and Qualifications Areas:**

   Exceptional – The proposal meets all and exceeds many of the requirements of the RFP to the benefit of the City, and the information provided is of such a nature as to answer all questions without need for further inquiry. There are no corrective actions required, and no compromise of requirements is needed.

   Very Good – The proposal meets all and exceeds some of the requirements of the RFP to the benefit of the City, and the information provided is of such a nature as to answer most questions without need for further inquiry. There are no corrective actions required, and no compromise of requirements is needed.

   Satisfactory – The proposal meets the requirements of the RFP, and the information provided is of such a nature as to answer many questions without need for further inquiry. There are very few corrective actions required, and no substantive compromise of requirements is needed.

   Marginal – The proposal does not meet some of the requirements of the RFP, and the information provided is of such a nature as to require some clarification. There are some corrective actions required, and some non-substantive compromise of requirements is needed.

   Unacceptable – The proposal does not meet many of the requirements of the RFP, and the information provided is of such a nature as to require much clarification. There are many corrective actions required, and substantive compromise of requirements is needed.

2. **The following apply to the Price Area:**

   Exceptional – The proposal meets all and exceeds many of the requirements of the RFP to the benefit of the City, and the information provided is of such a nature as to answer all questions without need for further inquiry. There are no corrective actions required, and no compromise of requirements is needed. The price is lower than the budget amount and/or the average price of the competition.
Very Good – The proposal meets all and exceeds some of the requirements of the RFP to the benefit of the City, and the information provided is of such a nature as to answer most questions without need for further inquiry. There are no corrective actions required, and no compromise of requirements is needed. The price is lower than the budget amount and/or the average price of the competition.

Satisfactory – The proposal meets the requirements of the RFP, and the information provided is of such a nature as to answer many questions without need for further inquiry. There are very few corrective actions required, and no substantive compromise of requirements is needed. The price is very close to the budget amount and/or the average price of the competition.

Marginal – The proposal does not meet some of the requirements of the RFP, and the information provided is of such a nature as to require some clarification. There are some corrective actions required, and some non-substantive compromise of requirements is needed. The price exceeds the budget amount and/or the average price of the competition.

Unacceptable – The proposal does not meet many of the requirements of the RFP, and the information provided is of such a nature as to require much clarification. There are many corrective actions required, and substantive compromise of requirements is needed. The price significantly exceeds the budget amount and/or the average price of the competition.

3. The following apply to the Proposal Presentation Area:

   Exceptional – The proposal is professionally communicated, complete in all areas, provides sufficient detail, and is presented in a clear and effective manner. The quality far exceeds that of the competition, industry standard, or reasonable expectation.

   Very Good – The proposal is professionally communicated, complete in all areas, provides sufficient detail, and is presented in a clear and effective manner. The quality exceeds that of the competition, industry standard, or reasonable expectation.

   Satisfactory – The proposal is professionally communicated, complete in all areas, provides sufficient detail, and is presented in a clear and effective manner. The quality is equal to that of the competition, industry standard, or reasonable expectation.

   Marginal – The proposal is not professionally communicated and is incomplete in some areas, provides insufficient detail, and is not presented
in a clear and effective manner. The quality is below that of the competition, industry standard, or reasonable expectation.

Unacceptable – The proposal is not professionally communicated and is incomplete in many areas, provides insufficient detail, and is not presented in a clear and effective manner. The quality is far below that of the competition, industry standard, or reasonable expectation.

4. **The following apply to the Exceptions and Insurance Areas**

Exceptions and insurance will be evaluated as pass or fail. Whether exceptions to City terms and conditions are acceptable or unacceptable will be determined at the sole discretion of the City. Any exceptions deemed unacceptable may result in a “fail” rating. The Insurance Area will be rated as “pass,” unless the Offeror fails to meet any stated insurance requirement provided in this RFP. If the Offeror fails to meet any stated insurance requirement provided in this RFP, the Offeror will be rated “fail” in the Insurance Area. A rating of “fail” in either of these areas may result in disqualification from award.

**D. Area Scoring**

The score for each area will be determined by multiplying the sum of the criteria in each area by the area evaluation factor. The area evaluation factors are as follows:

- **Price Area:** 0.35
- **Expertise and Qualifications Area:** 0.30
- **Technical Area:** 0.25
- **Proposal Presentation:** 0.10

**E. Final/Overall Scoring**

The final proposal score will be determined by adding the area scoring. The sum of the area scores will be the final/overall score.

### 3.3 SELECTION COMMITTEE

A selection committee will review all proposals. Through this process, the City will determine which proposals are acceptable or unacceptable. The City will notify, in writing, the Offerors whose proposals are deemed to be unacceptable. Those Offerors offering proposals deemed to be acceptable by the City will be evaluated and scored by the selection committee. This scoring will determine which Offerors are considered to be in the competitive range and may be the basis for an award decision without further steps.

If the selection committee elects not to award based upon evaluation scoring, it may engage in a forced elimination process. To inform this process, it may require oral
 presentations or interviews with the Offerors considered to be in the competitive range. If oral presentations or interviews are conducted, they may also be scored, or they may simply be considered as information supporting the forced elimination process. The selection committee may request revisions to the proposal from each of the Offerors at the conclusion of the interviews. The intent of the forced elimination process is to reach consensus. The decision will be based on all relevant factors, and based upon perception of best value. The final decision may or may not exactly reflect scoring ranking.

The City also reserves the right to request best and final offers from all Offerors at any point in the proposal evaluation process.

3.4 AWARD OF CONTRACT

It is anticipated that there will be negotiations or discussions with Offerors. However, the City reserves the right to award without negotiations or discussions. The City also reserves the right to award a contract not necessarily or merely to the Offeror with the most advantageous price. The City intends to award to the Offeror that demonstrates the best value to the City and the most substantiated ability to fulfill the requirements contained in this Request for Proposal. A contract prepared by the City will be finalized and/or negotiated with the successful Offeror. In the event a contract cannot be negotiated with the top ranked Offeror, the City may enter into negotiations with the second highest ranked Offeror, or the City may decide to call for new proposals. Immediately after the notice of award, the successful Offeror will begin planning in conjunction with the City of Colorado Springs staff (to be designated by the City) to ensure fulfillment of all its obligations. The successful Offeror may be expected to attend regular meetings as required by the City to assist in the preparation for startup.
SECTION IV – SPECIAL CONTRACT TERMS AND CONDITIONS

4.0 SPECIAL CONTRACT TERMS AND CONDITIONS/SPECIAL SOLICITATION PROVISIONS

In addition to the special contract terms and conditions listed below, the City’s sample contract (see Exhibit 2) contains contract terms and conditions.

4.1 ADA STANDARDS

It is a requirement of the City and required by law that any new or renovated facility meet the scoping and technical requirements of the 2010 ADA Standards for newly designed and constructed or altered local government facilities, public accommodations, and facilities. The selected Design Professional shall design the project so it both conforms to the 2010 ADA Standards, as applicable and as amended, and is readily accessible to and usable by individuals with disabilities. The selected Contractor shall build the project so it both conforms to the 2010 ADA Standards, as applicable and as amended, and is readily accessible to and usable by individuals with disabilities. Facilities that are designed, constructed, and/or altered facilities that meet or exceed the IBC 2015/ANSI A117.1 2009, used by Pikes Peak Regional Building Department, will be accepted as meeting or exceeding the 2010 ADA Standards.

4.2 PPRTA-FUNDED PROJECTS SPECIAL PROVISIONS (REVISED AUGUST 17, 2016)

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

This Contract is a joint contract between the Contractor/Consultant (hereinafter “Contractor”), the City, and the PPRTA. The parties therefore agree to the following:

A. Conflicts: This PPRTA Special Provision shall supersede any contrary provision of this Contract.

B. Parties: 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.

C. Payments: 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 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.

D. Bonds: All bonds under this Contract shall include the City and the PPRTA as Obligees.
E. Insurance: All insurance policies provided by the Contractor or by any subcontractor for any work pursuant to contracts with the Contractor pursuant to this Contract shall name both the City and the PPRTA as additional insureds and shall waive all rights of subrogation, in accordance with the terms of this Contract, against both the City and the PPRTA.

F. 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; the Resolutions and 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 ensure 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.

G. Appropriation and Availability of Funds: In accordance 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 Contract without compensation to the Contractor. Performance of the PPRTA’s obligations under this Contract is 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 due to legal limitations or non-availability, then the City and the PPRTA may terminate this Contract without compensation to the Contractor.

H. Indemnification: Subject to the provisions of Section 13-50.5-102(8), C.R.S., to the extent applicable to this Contract, the Contractor agrees that the Contractor shall indemnify, defend and hold harmless 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. To the extent the terms of Section 13-50.5-102(8), C.R.S., are applicable to this Contract, the Contractor and the PPRTA hereby agree for the purposes of this Section that: (i) “the degree or percentage of negligence or fault attributable” to
the Contractor as used in Section 13-50.5-102(8)(a), C.R.S., shall be conclusively determined by a trial court at the state or federal level and (ii) the term “adjudication” used in Section 13-50.5-102(8)(c), C.R.S., shall mean a trial court order at the state or a federal level.

I. Governmental Immunity: Nothing in this Contract or in any actions taken by the PPRTA pursuant to this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections or other provisions of the Colorado Governmental Immunity Act, Sections 24-10-101, et. Seq., C.R.S.

J. Warranties: All warranties provided by the Contractor under or pursuant to this Contract to the City shall also apply to the PPRTA.

K. 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.

L. 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 also apply to the PPRTA.

M. Contract Changes: Any changes to the Contract, including but not limited to additions and/or deletions, which are not insignificant to the scope, design and requirements of the Contract shall be subject to prior approval of the PPRTA.
SECTION V – EXHIBITS

5.0 EXHIBITS

Exhibit 1  Proposal Certification
Exhibit 2  Sample Contract
Exhibit 3  Exceptions Form
Exhibit 4  Minimum Insurance Requirements
Exhibit 5  Statement of Work
Exhibit 6  Qualification Statement
Exhibit 7  Evaluation Scoresheet
EXHIBIT 1 – PROPOSAL CERTIFICATION

Check or Mark the space after each number to indicate compliance.

1. ______ Address of Offeror’s Principal Place of Business:

________________________________________________________
________________________________________________________
________________________________________________________

Does Offeror have an established office or facility in Colorado Springs?
Yes _____ No _____

If yes, indicate address below if different than Principal Place of Business.

Colorado Springs Facility – Year established ____________

Address of Colorado Springs Facility:
________________________________________________________
________________________________________________________
________________________________________________________

Percent of Work to be Performed from Principal Place of Business? ______

Percent of Work to be Performed from Colorado Springs Facility? ______

2. ______ Indicate your ability to provide a certificate of insurance evidencing the required coverage types and limits specified in Minimum Insurance Requirements Exhibit. (The certificate of insurance must reflect the City of Colorado Springs and the PPRTA as an Additional Insured, as applicable.)

Indicate your ability to comply with the following requirements:

The City shall be added as an Additional Insured to all liability policies:

Yes _____ No _____

Your property and liability insurance company is licensed to do business in Colorado:
Yes _____ No _____

Provide the name of your property and liability insurance company here:

Name:___________________________________________________________

Your property and liability insurance company has an AM best rating of not less than B+ and/or VII:

Yes _____ No _____

Worker’s Compensation Insurance is carried for all employees and covers work done in Colorado.

Yes _____ No _____

3. ______ Provide one (1) copy of current financial statements (if required). Enclose financial information in a separate envelope; do not bind with the other proposal copies. If review of the information is to be restricted to the City’s financial officer, it must be marked accordingly.

4. ______ Provide the completed and signed proposal. (Proposals must be identified as specified in this RFP document). All required Exhibits are attached.

By signing below, the Offeror certifies that no person or firm other than the Offeror or as otherwise indicated has any interest whatsoever in this offer or any Contract that may be entered into as a result of this offer and that in all respects the offer is legal and firm, submitted in good faith without collusion or fraud.

Offeror has appointed __________________ as the Offeror’s representative and contact for all questions or clarifications in regard to this Offeror.

Telephone:  (___)__________

Email:  ____________________

The undersigned acknowledges and understands the terms, conditions, Specifications and all Requirements contained and/or referenced and are legally authorized by the Offeror to make the above statements or representations.
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:______________

Please Note the attached Representations and Certifications must be initialed by Offeror in the spaces provided and returned with this certification.
1. INSURANCE REQUIREMENTS

Offeror shall comply with all insurance requirements and will submit the Insurance Certificates prior to performance start date. If limits are different from the stated amounts, Offeror shall explain variance. Certain endorsements and “additionally insured” statements may require further clarification and specific statements on a project specific basis and should have been described in the Offeror’s proposal.

Initials for 1

2. ETHICS VIOLATIONS

a) The Offeror shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in this clause in its own operations and direct business relationships.

b) Offeror certifies the Offeror has not violated or caused any person to violate, and shall not violate or cause any person to violate, the City’s Code of Ethics contained in Article 3, of Chapter 1 of the City Code and in the City’s Procurement Rules and Regulations

c) When the Offeror has reasonable grounds to believe that a violation described in this clause may have occurred, the Offeror shall promptly report the possible violation to the City Contracts Specialist in writing.

d) The Offeror must disclose with the signing of this proposal, the name of any officer, director, or agent who is also an employee of the City and any City employee who owns, directly or indirectly, an interest of ten percent (10%) or more in the Offeror’s firm or any of its branches.

e) In addition, the Offeror must report any conflict or apparent conflict, current or discovered during the performance of the Contract, to the City Contracts Specialist.

f) The Offeror shall not engage in providing gifts, meals or other amenities to City employees. The right of the Offeror to proceed may be terminated by written notice issued by City Contracts Specialist if Offeror offered or gave a gratuity to an officer, official, or employee of the City and intended by the gratuity to obtain a contract or favorable treatment under a contract.

g) The Offeror shall cooperate fully with the City or any agency investigating a possible violation on behalf of the City. If any violation is determined, the Offeror will properly compensate the City.

h) The Offeror agrees to incorporate the substance of this clause (after substituting “Contractor” for “Offeror”) in all subcontracts under this offer.

Initials for 2
3. **ILLEGAL ALIENS**

If Offeror has any employees or subcontractors, Offeror shall comply with § 8-17.5-101, *et seq.*, C.R.S. regarding Illegal Aliens – Public Contracts for Services, and this section of this Agreement. 8-17.5-102 includes, in part, that:

1. Offeror shall not:
   a. Knowingly employ or contract with an illegal alien to perform work under this Agreement; or
   b. Enter into a contract with a subcontractor that fails to certify to Offeror that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

2. Offeror has verified or attempted to verify that Offeror does not employ any illegal aliens, and will participate in the E-Verify Program or State Department program in order to confirm eligibility of all employees who are newly hired to perform work under public contract for services.

3. Offeror will not use E-Verify Program or State Department program procedures to undertake pre-employment screening of job applicants while the public contract for services is being performed.

4. If Offeror obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Provider shall:
   a. Notify the subcontractor and the City within three days that Offeror has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
   b. Terminate the subcontract with the subcontractor if within three days of receiving such notice, the subcontractor does not stop employing or contracting with the illegal alien. However, the Offeror shall not terminate the contract with the subcontractor if during this three day period:
      i. The subcontractor provides information which establishes that the subcontractor has not knowingly employed or contracted with an illegal alien, and
      ii. The Offeror will not employ the illegal aliens in the performance of any City contract.

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

6. If Offeror violates this provision, the City may terminate the contract for a breach of contract. If the Agreement is terminated, the Offeror shall be liable for actual and consequential damages.

Initials for 3

4. **COOPERATION WITH OTHER CONTRACTORS**
Other City activities/contracts may be in progress or start during the performance of this contract. The Offeror shall coordinate the work harmoniously with the other contractors or City personnel, if applicable.

Initials for 4

5. **INTERNET USE**

Should the Offeror require access to City Internet resources in the performance of this requirement, a “Contractor's Internet Use Agreement” form must be separately signed by each individual having access to the City Network. The completed Contractor's Internet Use Agreement will be maintained with this agreement. Inappropriate use of the City Network will be grounds for immediate termination of any awarded contract.

Initials for 5

6. **LITIGATION**

If awarded a contract, Offeror shall notify the City within five (5) calendar days after being served with a summons, complaint, or other pleading in any matter which has been filed in any federal or state court or administrative agency. The Offeror shall deliver copies of such document(s) to the City's Procurement Services Manager. The term "litigation" includes an assignment for the benefit of creditors, and filings of bankruptcy, reorganization and/or foreclosure.

Initials for 6

7. **CONTRACTOR’S REGISTRATION INFORMATION**

Offeror’s firm verifies and states that they are (check all that apply):

- [ ] Large Business (i.e. do not qualify as a small business or non-profit)
- [ ] Nonprofit
- [ ] Small Business
- [ ] Minority Owned Business/Small Disadvantaged Business
- [ ] Woman Owned Business
- [ ] Veteran Owned Business
Service-Disabled Veteran Owned Business

HUBZone Business

Note: The City accepts self-certification for these categories in accordance with Small Business Administration (SBA) standards. The SBA size standards are found on the SBA website https://www.sba.gov/content/am-i-small-business-concern.

Initials for 8

8. CONTRACTOR PERSONNEL

1. The Offeror shall appoint one of its key personnel as the “Authorized Representative” who shall have the power and authority to interface with the City and represent the Offeror in all administrative matters concerning this proposal and any awarded contract, including without limitation such administrative matters as correction of problems modifications, and reduction of costs.

2. The Authorized Representative shall be the person identified in the Offeror’s proposal, unless the Offeror provides written notice to the City naming another person to serve as its Authorized Representative. Communications received by the City Contracts Specialist from the Authorized Representative shall be deemed to have been received from the Offeror.

The individual, __________________________ (Name)
with position, __________________________ (Title)
Can be reached at:
Work telephone number: __________________________
Home telephone number: __________________________
Cellular telephone number: __________________________
E-mail address: __________________________

Initials for 9

9. OFFEROR’S CERTIFICATION

The undersigned hereby affirms that:
1. He/She is a duly authorized agent of the Offeror;
2. He/She has read and agrees to the City’s standard terms and conditions attached.
3. The offer is presented in full compliance with the collusive prohibitions of the City of Colorado Springs. The Offeror certifies that no employee of its firm has discussed, or compared the offer with any other offeror or City employee and has not colluded with any other offeror or City employee.
4. The Offeror certifies that it has checked all of its figures, and understands that the City will not be responsible for any errors or omissions on the part of the Offeror in preparing its proposal.
5. By submitting an offer the Offeror certifies that it has complied and will comply with all requirements of local, state, and federal laws, and that no legal requirements have been or will be violated in making or accepting this solicitation.

6. I hereby certify that I am submitting the proposal based on my company's capabilities to provide quality products and/or services on time.

Initials for 9

10. OFFEROR CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS:

1. The Offeror certifies to the best of its knowledge and belief, that the Offeror and/or any of its Principals
   a. Are ( ), Are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
   b. Have ( ), Have not ( ), within a three year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and,
   c. Are ( ), Are not ( ) presently indicated for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in any paragraphs above.

2. The Offeror shall provide immediate written notice to the City Contracts Specialist if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reasons of changed circumstances.

3. The certification in paragraph 1. above, is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the City, the City Contracts Specialist may terminate the contract resulting from this solicitation for default. Termination for default may result in additional charges being levied for the costs incurred by the City to initiate activities to replace the awarded Contractor.

Initials for 10

11. ACCEPTANCE OF CITY CONTRACTS SPECIALIST’S SOLE AUTHORITY FOR CHANGES
Unless otherwise specified in the Contract, the Offeror hereby agrees that any changes to the scope of work, subsequent to the original contract signing, shall be generated in writing and an approval signature shall be obtained from the City Contracts Specialist prior to additional work performance.

12. CITY CONTRACTOR SAFETY PROGRAM

The Offeror hereby agrees to adhere to a worker safety program for contractor employees on a City job site or location. By initialing below, the Offeror has reviewed the information and will abide by the City Policy which is available for review at:


13. ACCEPTANCE OF CITY ENVIRONMENTALLY PREFERRED PURCHASING (EPP) POLICY

The City of Colorado Springs is committed to buying more environmentally preferable goods and services, as long as they meet performance needs and are available within a reasonable time and at a reasonable cost. The Offeror hereby acknowledges review of this policy by initialing below.


14. FRAUD, WASTE, AND ABUSE

Everyone has a duty to report any suspected unlawful act impacting the City of Colorado Springs operations and its enterprises. Anyone who becomes aware of the existence or apparent existence of fraud, waste, and abuse in City of Colorado Springs is encouraged to report such matters to the City Auditor’s Office in writing or on the telephone hotline (719) 385-2387 (ADTR). Written correspondence can be mailed to:

City Auditor  
P.O. Box 2241  
Colorado Springs CO 80901
Or submitted via email at: CityAuditManagement@springsgov.com. Any of these mechanisms allow for anonymous reporting. For more information, please go to the following website: https://coloradosprings.gov/cityfraud.

Initials for 14

______________________________
Name of Company

______________________________
Federal Tax ID Number

______________________________
DUNS Number

______________________________
Principal Place of Business

______________________________
Signature of Authorized Representative

______________________________
Printed Name

______________________________
Title

______________________________
Date
**EXHIBIT 2 – SAMPLE CONTRACT**

**CONSTRUCTION CONTRACT**

<table>
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<tr>
<th>Contract Number:</th>
<th>Project Name/Title</th>
<th>PPRTA Sidewalk Infill Project</th>
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</table>

**Vendor/Contractor**

<table>
<thead>
<tr>
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<th>Telephone:</th>
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<tr>
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<th>☐ Corporation ☐ Individual ☐ Partnership</th>
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<table>
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<tr>
<th>City Contracting Specialist</th>
<th>Alyssa Mendelsohn (719) 385-7629</th>
<th>City Dept Rep</th>
<th>Name &amp; Phone# &amp; Department Name</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Acct Code (5) Fund (3) Dept (4) Project (7)</td>
<td></td>
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<tr>
<td>Contract Type:</td>
<td>Fixed Unit Price</td>
<td>Period of Performance:</td>
<td>May 2020 – December 31, 2024</td>
</tr>
</tbody>
</table>

1. **INTRODUCTION**

THIS *Fixed Unit Price* CONTRACT (“Contract”) is made and entered into this ___ day of ____________, 2020 by and between the City of Colorado Springs, a Colorado municipal corporation and home rule city, in the County of El Paso, State of Colorado, (the "City"), and ________________________ (the "Contractor").

THE CITY AND THE CONTRACTOR HEREBY AGREE AS FOLLOWS:

The City has heretofore prepared the necessary Contract Documents for the following Activity: PPRTA Sidewalk Infill Project.

The Contractor did on the 1st day of April, 2020 submit to the City the Contractor’s written offer and proposal to do the work therein described under the terms and conditions therein set forth and furnish all materials, supplies, labor, services, transportation, tools, equipment, and parts for said work in strict conformity with the accompanying Contract Documents, which are attached hereto and incorporated herein by this reference, including the following:

1. This Contract
2. Appendix A – Additional Terms and Conditions
3. Appendix B – Contractor’s Proposal,
5. Schedule A – Proposal Price Sheet
6. Schedule B – General Construction Terms and Conditions
7. Schedule C – Special Construction Terms and Conditions
2. COMPENSATION/CONSIDERATION

THIS FIXED UNIT PRICE CONTRACT is established at the Not to Exceed amount of $xxxxxxxx.

Subject to the terms and conditions of the Contract Documents, Contractor agrees to furnish all materials and to perform all work as set forth in its proposal and as required by the Contract Documents.

All pricing is in accordance with the fixed unit prices found in Schedule A, as proposed by the Contractor. Payment made for actual quantities as set forth in Schedule B, General Construction Terms and Conditions. At no time shall the total obligation of the City exceed the not to exceed amount of this Contract.

3. TERM OF CONTRACT

Contractor will start work promptly after the Notice to Proceed and continue to work diligently until completed. The Contractor shall complete all work on an as ordered basis throughout the Contract period as per the specifications and drawings. The Contractor shall provide a two-year guarantee on all work performed under this Contract after the job has been completed and accepted.

The period of performance of this Contract is as follows:

Base Year:  May 2020 – December 31, 2020

The City may, at its sole discretion, award up to four additional one year option periods as follows:

Option Year 1:  January 1, 2021 – December 31, 2021
Option Year 2:  January 1, 2022 – December 31, 2022
Option Year 3:  January 1, 2023 – December 31, 2023
Option Year 4:  January 1, 2024 – December 31, 2024

4. INSURANCE
The Contractor shall provide and maintain acceptable Insurance Policy(s) consistent with the Minimum Insurance Requirements attached as Schedule F, which includes Property, Liability, and as otherwise listed in Schedule F. The City of Colorado Springs and the PPRTA shall be reflected as an additional insured on the Property and Liability policy(s).

Further, Contractor understands and agrees that Contractor shall have no right of coverage under any existing or future City comprehensive, self, or personal injury policies. Contractor shall provide insurance coverage for and on behalf of Contract that will sufficiently protect Contractor, or Contractor’s agents, employees, servants or other personnel, in connection with the services which are to be provided by Contractor pursuant to this Contract, including protection from claims for bodily injury, death, property damage, and lost income. Contractor shall provide worker's compensation insurance coverage for Contractor and all Contractor personnel. Contractor shall file applicable insurance certificates with the City and shall also provide additional insurance as indicated in this Contract. **A CURRENT CERTIFICATE OF INSURANCE IS REQUIRED PRIOR TO COMMENCEMENT OF SERVICES LISTING THE CITY AND THE PPRTA AS ADDITIONALLY INSURED.**

5. RESPONSIBILITY OF THE CONTRACTOR

A. The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all Scope of Work services furnished by the Contractor under this Contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in services provided under this Contract to the satisfaction of the City.

B. The City's review, approval of, acceptance of, or payment for the services required under this Contract shall not be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and the Contractor shall be and remain liable to the City for any and all damages to the City caused by the Contractor’s negligent performance of any of the services furnished under this Contract.

C. The rights and remedies of the City provided for under this Contract are in addition to any other rights and remedies provided by law.

D. If the Contractor is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

6. WORK OVERSIGHT

A. The extent and character of the work to be done by the Contractor shall be subject to the general approval of the City’s delegated Project Manager.

B. If any of the work or services being performed does not conform with Contract requirements, the City may require the Contractor to perform the work or services
again in conformity with Contract requirements, at no increase in Contract amount. When defects in work or services cannot be corrected by re-performance, the City may (1) require the Contractor to take necessary action to ensure that future performance conforms to Contract requirements and (2) reduce the Contract price to reflect the reduced value of the work or services performed.

C. If the Contractor fails to promptly perform the defective work or services again or to take the necessary action to ensure future performance is in conformity with Contract requirements, the City may (1) by Contract or otherwise, perform the services and charge to the Contractor any cost incurred by the City that is directly related to the performance of such work or service or (2) terminate the Contract for breach of contract.

7. SUBCONTRACTORS, ASSOCIATES, AND OTHER CONTRACTORS

A. Any subcontractor, outside associates, or other contractors used by the Contractor in connection with Contractor's work under this Contract shall be limited to individuals or firms that are specifically identified by the Contractor in the Contractor's proposal and agreed to by the City. The Contractor shall obtain the City’s Project Manager’s written consent before making any substitution of these subcontractors, associates, or other contractors.

B. The Contractor shall include a flow down clause in all of its subcontracts, agreements with outside associates, and agreements with other contractors. The flow down clause shall cause all of the terms and conditions of this Contract, including all of the applicable parts of the Contract Documents, to be incorporated into all subcontracts, agreements with outside associates, and agreements with other contractors. The flow down clause shall provide clearly that there is no privity of contract between the City and the Contractor's subcontractors, outside associates, and other contractors.

8. KEY PERSONNEL

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

9. START AND CONTINUANCE OF WORK

It is further agreed that the Contractor will start work promptly and continue to work diligently until this Contract is completed.

10. APPROPRIATION OF FUNDS
This Contract is expressly made subject to the limitations of the Colorado Constitution and Section 7-60 of the Charter of the City of Colorado Springs. Nothing herein shall constitute, nor be deemed to constitute, the creation of a debt or multi-year fiscal obligation or an obligation of future appropriations by the City Council of Colorado Springs, contrary to Article X, § 20, Colo. Const., or any other constitutional, statutory, or charter debt limitation. Notwithstanding any other provision of this Contract, with respect to any financial obligation of the City which may arise under this Agreement in any fiscal year after the year of execution, in the event the budget or other means of appropriation for any such year fails to provide funds in sufficient amounts to discharge such obligation, such failure (i) shall act to terminate this Contract at such time as the then-existing and available appropriations are depleted, and (ii) neither such failure nor termination shall constitute a default or breach of this Contract, including any sub-agreement, attachment, schedule, or exhibit thereto, by the City. As used herein, the term “appropriation” shall mean and include the due adoption of an appropriation ordinance and budget and the approval of a Budget Detail Report (Resource Allocations) which contains an allocation of sufficient funds for the performance of fiscal obligations arising under this Contract.

11. CHANGES

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 or unless such work is covered under a remedy-granting provision of this Contract. 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 costs, and, regardless of any remedy-granting provision included within this Contract, the Contractor shall not be entitled to any additional compensation for any change which increases or decreases the Contract completion date, or for any 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 is given a written change order describing the change in Contract completion date or the additional compensable work to be performed, and setting forth the amount of compensation to be paid, and such change order is signed by the authorized City representative, as defined below. The amount of compensation to be paid, if any, shall be deemed to cover any and all additional, direct, indirect or other cost or expense or profit of the Contractor whatsoever. 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.

No change, amendment, or modification to this Contract shall be valid unless duly approved and issued in writing by the City of Colorado Springs Procurement Services Division. The City shall not be liable for any costs incurred by the Contractor resulting
from work performed for changes not issued in writing by the City of Colorado Springs Procurement Services Division.

The following personnel are authorized to sign changes, amendments, or modifications to this Contract:

The Project Manager: Changes up to $14,999.99
The City of Colorado Springs Chief of Staff: Changes up to $499,999.99
The Mayor of the City of Colorado Springs: Unlimited

12. ASSIGNMENT

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 under the terms of this Contract. In addition to the usual recitals in assignment contracts, the following language must be included in the assignment:

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.

13. CHOICE OF 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 Colorado home rule city. Court venue and jurisdiction shall be exclusively in the Colorado District Court for El Paso County, Colorado. The Parties agree that the place of performance for this Contract is deemed to be in the City of Colorado Springs, El Paso County, State of Colorado. The Contractor shall ensure 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.

14. WORKERS’ COMPENSATION INSURANCE

Contractor shall take out and maintain during the Period of Performance, 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 subcontractor’s employees. Workers’ Compensation Insurance shall include occupational disease provisions covering any obligations of the Contractor in accord with the provisions of the Workers’ Compensation Act of Colorado.
15. 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, 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 caused by any willful or negligent error, omission or act or a failure to observe any applicable standard of care by the Contractor or any person employed by it or anyone for whose acts the Contractor is legally liable. In consideration of the award of this Contract, to the extent damages are covered by insurance, the Contractor agrees to waive all rights of subrogation against the City, its subsidiary, parent, associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers for losses arising from the work performed by the Contractor for the City. The indemnification obligation shall survive the expiration or termination of this Contract.

16. 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 City shall not provide any direction to the Contractor on the work necessary to complete the project. Contractor understands that it is an independent contractor responsible for knowing how to perform all work or tasks necessary to complete project. 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, except as otherwise stated within the Contract terms. 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.

17. APPLICABLE LAW AND LICENSES

In the conduct of the services or work contemplated in this Contract, the Contractor shall ensure that the Contractor and all subcontractors comply with all applicable state, federal and City and local law, rules and regulations, technical standards or specifications. The Contractor shall qualify for and obtain any required licenses prior to commencement of work.

18. PRIOR AGREEMENTS
This is a completely integrated Contract and contains the entire agreement between the parties. Any prior written or oral agreements or representations regarding this Contract shall be of no effect and shall not be binding on the City. This Contract may only be amended in writing, and executed by duly authorized representatives of the parties hereto.

19. INTELLECTUAL PROPERTY

The Parties hereby agree, and acknowledge, that all products, items writings, designs, models, examples, or other work product of the Contractor produced pursuant to this Contract are works made for hire, and that the City owns, has, and possesses any and all ownership rights and interests to any work products of the Contractor made under this Contract, including any and all copyright, trademark, or patent rights, and that compensation to the Contractor for Agreement and acknowledgment of this intellectual property right section of this Contract is included in any compensation or price whatsoever paid to the Contractor under this Contract. It is the intent of the parties that the City shall have full ownership and control of the Contractor's work products produced pursuant to this Contract, and the Contractor specifically waives and assigns to the City all rights which Contractor may have under the 1990 Visual Artists Rights Act, federal, and state law, as now written or later amended or provided. In the event any products, items writings, designs, models, examples, or other work product produced pursuant to this Contract is deemed by a court of competent jurisdiction not to be a work for hire under federal copyright laws, this intellectual property rights provision shall act as an irrevocable assignment to the City by the Contractor of any and all copyrights, trademark rights, or patent rights in the Contractor's products, items writings, designs, models, examples, or other work product produced pursuant to this Contract, including all rights in perpetuity. Under this irrevocable assignment, the Contractor hereby assigns to the City the sole and exclusive right, title, and interest in and to the Contractor's products, items writings, designs, models, examples, or other work product produced pursuant to this Contract, without further consideration, and agrees to assist the City in registering and from time to time enforcing all copyrights and other rights and protections relating to the Contractor's products, items writings, designs, models, examples, or other work product in any and all countries. It is the Contractor's specific intent to assign all right, title, and interest whatsoever in any and all copyright rights in the Contractor's products, items writings, designs, models, examples, or other work product produced pursuant to this Contract, in any media and for any purpose, including all rights of renewal and extension, to the City. To that end, the Contractor agrees to execute and deliver all necessary documents requested by the City in connection therewith and appoints the City as Contractor's agent and attorney-in-fact to act for and in Contractor's behalf and stead to execute, register, and file any such applications, and to do all other lawfully permitted acts to further the registration, prosecution, issuance, renewals, and extensions of copyrights or other protections with the same legal force and effect as if executed by the Contractor; further, the parties expressly agree that the provisions of this intellectual property rights section shall be binding upon the parties and their heirs, legal representatives, successors, and assigns.
20. WAIVERS

No waiver of default by the City of any of the terms, covenants, and conditions hereof to be performed, kept, and observed by the Contractor shall be construed, or shall operate, as a waiver of any subsequent default of any of the terms, covenants, or conditions herein contained to be performed, kept, and observed by the Contractor.

21. THIRD PARTIES

It is expressly understood and agreed that enforcement of the terms and conditions of this Contract, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties hereto, and nothing contained in this Contract shall give or allow any such claim or right of action by any other or third person or entity on such Contract. It is the express intention of the Parties hereto that any person or entity, other than the Parties to this Contract, receiving services or benefits under this Contract shall be deemed to be incidental beneficiaries only.

22. TERMINATION

A. Termination for Convenience.

By signing this Contract, Contractor represents that it is a sophisticated business and enters into the Contract voluntarily, has calculated all business risks associated with this Contract, and understands and assumes all risks of being terminated for convenience, whether such risks are known or not known. Contractor agrees that the City may terminate this Contract at any time for convenience of the City, upon written notice to the Contractor. Contractor expressly agrees to and assumes the risk that the City shall not be liable for any costs or fees of whatsoever kind and nature if termination for convenience occurs before Contractor begins any work or portion of the work. Contractor further expressly agrees and assumes the risks that the City shall not be liable for any unperformed work, anticipated profits, overhead, mobilizations costs, set-up, demobilization costs, relocation costs of employees, layoffs or severance costs, administrative costs, productivity costs, losses on disposal of equipment or materials, cost associated with the termination of subcontractors, costs associated with purchase orders or purchases, or any other costs or fees of any kind and nature, if Contractor has started or performed portions of the Contract prior to receiving notice from the City. The City shall be liable only for the portions of work Contractor actually satisfactorily completed up to the point of the issuance of the Notice of Termination for convenience. 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.

B. Termination for Cause: The occurrence of any one or more of the following events (“Event of Default”) will justify termination for cause:
1. Contractor’s failure to perform the work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule as adjusted from time to time.
2. Contractor’s disregard of the laws or regulations of any public body having jurisdiction.
3. Contractor’s disregard of the authority of Project Manager.
4. Contractor’s violation in any material provision of the Contract Documents.
5. Contractor’s failure to make prompt payments to its subcontractors, and suppliers of any tier, or laborers or any person working on the work by, through, or under the Contractor or any of them, any all of their employees, officers, servants, members, and agents.
6. Contractor files a petition commencing a voluntary case under the U.S. Bankruptcy Code, or for liquidation, reorganization, or an arrangement pursuant to any other U.S. or state bankruptcy Laws, or shall be adjudicated a debtor or be declared bankrupt or insolvent under the U.S. Bankruptcy Code, or any other federal or state laws relating to bankruptcy, insolvency, winding-up, or adjustment of debts, or makes a general assignment for the benefit of creditors, or admits in writing its inability to pay its debts generally as they become due, or if a petition commencing an involuntary case under the U.S. Bankruptcy Code or an answer proposing the adjudication of Contractor as a debtor or bankrupt or proposing its liquidation or reorganization pursuant to the Bankruptcy Code or any other U.S. federal or state bankruptcy laws is filed in any court and Contractor consents to or acquiesces in the filing of that pleading or the petition or answer is not discharged or denied within sixty (60) Calendar Days after it is filed.
7. A custodian, receiver, trustee or liquidator of Contractor, all or substantially all of the assets or business of Contractor, or of Contractor’s interest in the Work or the Contract, is appointed in any proceeding brought against Contractor and not discharged within sixty (60) Calendar Days after that appointment, or if Contractor shall consent to or acquiesces in that appointment.
8. Contractor fails to commence correction of defective work or fails to correct defective work within a reasonable period of time after written notice.

If one or more of the events identified in Paragraphs 1-8 above occur, City may give Contractor written notice of the event and direct the event be cured. Any such Notice to Cure will provide Contractor a minimum of ten (10) calendar days to prepare and submit to the Project Manager a plan to correct the Event of Default. If such plan to correct the Event of Default is not submitted to the Project Manager within ten (10) days after the date of the written notice or such plan is unacceptable to the City, the City may, give Contractor (and the Surety, if any) written notice that Contractor’s services are being terminated for cause. Upon delivery of the termination notice, City may terminate the services of Contractor in whole or in part, exclude Contractor from the site, and take possession of the work and of all Contractor’s tools, appliances, construction equipment, and machinery at the project site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass
or conversion), incorporate in the work all materials and equipment stored at the site or for which City has paid Contractor but which are stored elsewhere, and finish the work as City may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until Certificate of Completion of the work. In the event City terminates this Contract for Cause and the cost of completing the work exceeds the unpaid balance of the Contract price, Contractor shall pay City for any costs of completion which exceed the Contract price when combined with all amounts previously paid to Contractor. When exercising any rights or remedies under this paragraph City shall not be required to obtain the lowest price for the work performed. 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 the City nor any officer, agent or employee of the City shall be in any way liable or accountable to the Contractor or the Surety for the method by which the completion of the said work, or any portion thereof, may be accomplished or for the price paid.

Where Contractor’s services have been so terminated by City, the termination will not affect any rights or remedies of City against Contractor or Surety then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by City will not release Contractor from liability.

C. Termination Notice. Upon receipt of a termination notice, whether for convenience or cause, 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.

D. Removal of Equipment. Except as provided 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.

23. 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’s or Contractor’s offices, and without expense to the City.

24. ILLEGAL ALIENS

Illegal Aliens - Public Contracts for Services - Compliance with Title 8, Article 17.5, Colorado Revised Statutes: The Contractor acknowledges, understands, agrees, and certifies that: 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 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. The Contractor certifies in accord with Section 8-17.5-102(1) C.R.S. that, on the date the Contractor signs this Contract, the Contractor does not knowingly employ or contract with an illegal alien who will perform work under this Contract and that the Contractor shall participate in the e-verify program or Colorado Department of Labor and Employment program in order to confirm the employment eligibility of all employees who are newly hired for employment or to perform work under this Contract. The Contractor is expressly prohibited from using the e-verify program or Colorado Department of Labor and Employment program procedures to undertake pre-employment screening of job applicants while this Contract and any services under this Contract are being performed. If the Contractor obtains actual knowledge that a subcontractor performing work under this Contract for services knowingly employs or contracts with an illegal alien, the Contractor shall 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 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 the three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien. The Contractor shall comply with any request by the City, federal government, or the Colorado Department of Labor and Employment made in the course of an investigation. If the Contractor violates or fails to comply with any provision of C.R.S. 8-17.5-101 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.

25. COMPLIANCE WITH IMMIGRATION REFORM AND CONTROL ACT OF 1986

Contractor certifies that Contractor has complied with the United States Immigration Reform and Control Act of 1986. All persons employed by Contractor for performance of this Contract have completed and signed Form I-9 verifying their identities and authorization for employment.

26. LABOR
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 Project Manager shall have the authority to order the removal from the work of any person, including Contractor’s or any subcontractor’s employees, 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.

In accordance with the Keep Jobs in Colorado Act, codified at sections 8-17-101, et seq., C.R.S., 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 et seq.; provided however, that this paragraph shall not apply if the Project receives federal funding.

In no event shall the City be responsible for overtime pay.

27. GRATUITIES

A. This Contract may be terminated if the Mayor, the Mayor’s designee, and/or the Procurement Services Manager determine, in their sole discretion, that the Contractor or any officer, employee, agent, or other representative whatsoever, of the Contractor offered or gave a gift or hospitality to a City officer, employee, agent or Contractor for the purpose of influencing any decision to grant a City contract or to obtain favorable treatment under any City contract.

B. The terms "hospitality" and "gift" include, but are not limited to, any payment, subscription, advance, forbearance, acceptance, rendering or deposit of money, services, or anything of value given or offered, including but not limited to food, lodging, transportation, recreation or entertainment, token or award.

C. Contract termination under this provision shall constitute a breach of contract by the Contractor, and the Contractor shall be liable to the City for all costs of reletting the contract or completion of the project. Further, if the Contractor is terminated under this provision, or violates this provision but is not terminated, the Contractor shall be subject to debarment under the City's Procurement Regulations. The rights and remedies of the City provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

28. NON-DISCRIMINATION

A. In accordance with section 24-34-402, C.R.S., the Contractor will not discriminate against any employee or applicant for employment because of disability, race, creed, color, sexual orientation, religion, age, national origin, or ancestry. But, with regard to a disability, it is not a discriminatory or an unfair employment practice for an employer to take into consideration disability if there is no reasonable accommodation that the employer can make with regard to the disability, the disability actually disqualifies the
person from the job, and the disability has a significant impact on the job. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their disability, race, creed, color, sexual orientation, religion, age, national origin, or ancestry. 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.

B. 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.

C. 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 disability, race, creed, color, sexual orientation, religion, age, national origin, or ancestry.

D. Contractor will cooperate with the City in using Contractor’s best efforts to ensure that Disadvantaged Business Enterprises are afforded the maximum opportunity to compete for subcontracts or work under this Contract.

29. ORDER OF PRECEDENCE

Any inconsistency in this Contract shall be resolved by giving precedence in the following order:

A. This Contract document with its terms and conditions
B. Specific Construction Terms and Conditions
C. General Construction Terms and Conditions
D. The Statement of Work
E. Specific Specifications
F. General Specifications
G. Other Appendices, Attachments, Exhibits, or Schedules

30. HEADINGS

The section headings contained in this Contract are for reference purposes only and shall not affect the meaning or interpretation of this Contract.

31. DISPUTES

A. All administrative and contractual disputes arising from or related to this Contract other than those arising under Unanticipated Circumstances provisions (in section 107.27 of Schedule B General Construction Terms and Conditions) shall be addressed in the following manner:
1. If either Party disputes or disagrees with a Contract term or the other Party’s interpretation of a Contract term or has any other administrative or contractual dispute not addressed in the Unanticipated Circumstances provisions, such Party shall promptly give the other Party written notice of said dispute.

2. The Parties shall hold a meeting as soon as reasonably possible, but in no event later than thirty (30) calendar days from the initial written notice of the dispute, attended by persons with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute; provided, however, that no such meeting shall be deemed to vitiate or reduce the obligations and liabilities of the Parties or be deemed a waiver by a Party of any remedies to which such Party would otherwise be entitled unless otherwise agreed to by the Parties in writing.

3. If, within thirty (30) calendar days after such meeting, the Parties have not succeeded in negotiating a resolution of the dispute, they agree to submit the dispute to non-binding mediation and to bear equally the costs of the mediation.

4. The Parties will jointly appoint a mutually acceptable mediator. If they fail to do so within twenty (20) calendar days from the conclusion of the negotiation period, they shall each select a mediator. The two mediators will then appoint a third mediator who shall conduct mediation for the Parties as the sole mediator.

5. The Parties agree to participate in good faith in the mediation and negotiations for a period of thirty (30) calendar days. The substantive and procedural law of the State of Colorado shall apply to the proceedings. If the Parties are not successful in resolving the dispute through mediation, then the Parties shall be free to pursue any other remedy afforded by the laws of the State of Colorado.

6. Until final resolution of any dispute hereunder, the Contractor shall diligently proceed with the performance of this Contract as directed by the City. For purposes of this Contract, termination for convenience shall not be deemed a dispute. The City of Colorado Springs and the Contractor agree to notify each other in a timely manner of any claim, dispute, or cause of action arising from or related to this Contract, and to negotiate in good faith to resolve any such claim, dispute, or cause of action. To the extent that such negotiations fail, the City of Colorado Springs and the Contractor agree that any lawsuit or cause of action that arises from or is related to this Contract shall be filed with and litigated only by the Colorado District Court for El Paso County, CO.

32. DELIVERY

The City may cancel this Contract or any portion thereof if delivery is not made when and as specified, time being of the essence in this Contract. Contractor shall pay the City for any loss or damage sustained by the City because of failure to perform in accordance with this Contract.

33. PAYMENTS

All invoices shall be sent to the Project Manager identified in this Contract.
The City will pay the Contractor, upon submission of proper invoices, the prices stipulated in the Contract for services rendered and accepted, less any deductions provided in this Contract within 30 days (Net 30). The City will not pay late fees or interest. Any discount payment terms offered on the invoice may be taken by the City.

All payments for Construction will be made in accordance with the Payment provisions found in Schedule B – General Construction Terms and Conditions.

Each invoice must contain at least the following information:

Contract number, issued purchase order number, invoice number, invoice date, timeframe covered by invoice, type and amount of labor and materials used for that time period, dollar amount in unit price, extended price, and total value of invoice.

34. INSPECTION OF SERVICES

The Contractor is responsible for performing or having performed all inspections and tests necessary to substantiate that the services furnished under this Contract conform to Contract requirements, including any applicable technical requirements for specified manufacturers’ parts. This clause takes precedence over any City inspection and testing required in the Contract’s specifications, except for specialized inspections or tests specified to be performed solely by the City.

A. Definition of “services”, as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

B. The Contractor shall provide and maintain an inspection system acceptable to the City covering the services under this Contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the City during Contract performance and for as long afterwards as the Contract requires.

C. The City has the right to inspect and test all services called for by the Contract, to the extent practicable at all times and places during the term of the Contract. The City will perform inspections and tests in a manner that will not unduly delay the work.

D. If the City performs inspections or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in Contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

35. SECURITY

The City maintains security requirements regarding access to City buildings and other City workplaces and worksites on City property. All Contractor personnel accessing City buildings, workplaces, or worksites, may be required to produce a valid, Government issued picture identification. Contractor personnel lacking such identification may not be
allowed access to such sites. No costs incurred by the Contractor due to City security requirements shall be allowable or payable under this Contract.

36. TIME IS OF THE ESSENCE

In as much as the Contract concerns a needed or required service, the terms, conditions, and 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 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.

37. EMPLOYMENT OF LABOR

The Contractor shall comply with, and defend 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.

38. SALES TAX

The Contractor must have a tax-exemption certificate from the Colorado Department of Revenue for this project. The certificate does not apply to City of Colorado Springs Sales and Use Tax which shall be applicable. The tax exempt project number and the exemption certificate only applies to County, PPRTA (Pikes Peak Rural Transportation Authority), and State taxes when purchasing construction and building materials to be incorporated into this project.

Furthermore, the exemption does not include or apply to the purchase or rental of equipment, supplies or materials that do not become a part of the completed project or structure. Such purchases and rentals are subject to full applicable taxation.

All contracts with subcontractors must include the City of Colorado Springs Sales and Use Tax on the work covered by the Contract, and other taxes as applicable.

Note: For all equipment, materials and supplies incorporated into the work purchased from vendors or suppliers not licensed to collect City Sales Tax (i.e. out of state suppliers, etc.), 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, ST 16 forms 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 and may result in suspension of Contractor from bidding on City projects.
Forms and instructions can be downloaded at https://coloradosprings.gov/sales-tax/page/additional-sales-tax-forms?mlid=30771 Questions can be directed to the City Sales Tax Division at (719) 385-5903.

Our Registration Numbers are as follows:
City of Colorado Springs
Federal I.D.: 84-6000573
Federal Excise: A-138557
State Sales Tax: 98-03479

The Contractor's payment or exemption of State of Colorado, El Paso County and City Sales and Use Taxes shall be as specified herein.

39. SEVERABILITY

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

40. LIABILITY OF CITY EMPLOYEES

All authorized representatives of the City are acting solely as agents and representatives of the City when carrying out and exercising the power or authority granted to them under the Contract. There shall not be any liability on them either personally or as employees of the City.

41. USE OF CITY NAME OR LOGO

Except as otherwise provided in this Contract, the Contractor shall not refer to this Contract or the City of Colorado Springs in any advertising or promotions in such a manner as to state or imply that the product or service provided is endorsed or preferred by the City of Colorado Springs, its employees, or its Departments, or is considered by these entities to be superior to other products or services. Any use of the name or logo of the City of Colorado Springs in advertising or promotions must be approved in writing by the City of Colorado Springs Contracts Specialist assigned to the Contract prior to such use.

42. TRAVEL

If travel expenses are included as a line item in this Contract, all travel expenses incurred and billable by the Contractor are subject to City approval. Air travel shall be limited to the round trip "economy coach" fare. Travel from the Colorado Springs Airport is encouraged. Unless there are extenuating circumstances, the Contract should take advantage of lower airfares by purchasing tickets more than 14 days in advance of travel. In-state travel by air must be more economical than travel by private vehicle. Use of a private vehicle may be reimbursed per mile at the current rate published by the IRS.
annually. Short-term parking, long-term parking or cab fare associated with airport departure and arrival may be allowable expenses. Valet parking will not be allowed unless it is the least expensive or only option. Car rental rates may be reimbursed for car rentals no greater than the intermediate or standard classification. The City will not reimburse any other travel methods or expenses. The City will pay for lodging, meals, and miscellaneous expenses on a per diem basis only, in accordance with the current per diem rates published by the IRS annually. The City will not pay for Contractor expenses exceeding the per diem rates. Receipts for all reimbursable expenses must be provided with the Contractor’s invoice.

43. APPENDICES

The following Appendices are made a part of this Agreement:

1. Appendix A – Additional Terms and Conditions
2. Appendix B – Contractor’s Proposal,
4. Appendix D – Project Schedule
5. Appendix E – Exhibits from the RFP
   - Performance Bond (Exhibit 8 of the RFP)
   - Labor and Material Payment Bond (Exhibit 9 of the RFP)
   - Maintenance Bond (Exhibit 10 of the RFP)
   - Notification of Utilities (Exhibit 11 of the RFP)
6. Schedule A – Proposal Price Sheet
7. Schedule B – General Construction Terms and Conditions
8. Schedule C – Special Construction Terms and Conditions
9. Schedule D – General Specifications
10. Schedule E – Special Specifications
11. Schedule F – Insurance Requirements
The Contractor certifies in accord with Section 8-17.5-102(1) C.R.S. that, on the date the Contractor signs this Contract, the Contractor does not knowingly employ or Contract with an illegal alien who will perform work under this Contract and that the Contractor shall participate in the e-verify program or Colorado Department of Labor and Employment program in order to confirm the employment eligibility of all employees who are newly hired for employment or to perform work under this Contract. The Contractor is expressly prohibited from using the e-verify program or Colorado Department of Labor and Employment program procedures to undertake pre-employment screening of job applicants while this Contract and any services under this Contract are being performed.

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 one (1) original copy.

<table>
<thead>
<tr>
<th>THE CITY OF COLORADO SPRINGS, COLORADO:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND PARTY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE CONTRACT ONLY</td>
</tr>
<tr>
<td>Corporate Name</td>
</tr>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Title</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THE PIKES PEAK RURAL TRANSPORTATION AUTHORITY:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
EXHIBIT 3 – 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 Offerors are hereby advised that exceptions taken may be considered during the evaluation phase which may affect the final scoring of proposals. Offerors 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)

Authorized Signature: ____________________________________________

Date: __________________

Printed Name/Title: ____________________________________________

Return this form with your Proposal.
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.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Commercial General Liability for limits not less than $2,000,000 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include:</td>
</tr>
<tr>
<td></td>
<td>a. Premises and Operations</td>
</tr>
<tr>
<td></td>
<td>b. Personal/Advertising Injury</td>
</tr>
<tr>
<td></td>
<td>c. Products/Completed Operations</td>
</tr>
<tr>
<td></td>
<td>d. Liability assumed under an Insured Contract (including defense costs assumed under contact)</td>
</tr>
<tr>
<td>2.</td>
<td>Workers’ Compensation and Employers Liability as required by statute. Employers Liability coverage is to be carried for a minimum limit of $100,000.</td>
</tr>
<tr>
<td>3.</td>
<td>Automobile Liability covering any auto (including owned, hired, and non-owned autos) with a minimum of $1,000,000 each accident combined single limit.</td>
</tr>
<tr>
<td>4.</td>
<td>Professional Liability Insurance covering any damages caused by an error, omission or any negligent acts with limits of not less than $2,000,000 per occurrence and in the aggregate.</td>
</tr>
<tr>
<td></td>
<td>a. In the event that any professional liability insurance required by this Contract is written on a claims-made basis, Consultant warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning at the time work under this Contract is completed.</td>
</tr>
<tr>
<td></td>
<td>b. Policy shall contain a waiver of subrogation against the CITY.</td>
</tr>
</tbody>
</table>

Except for workers’ compensation and employer’s liability insurance, the **City of Colorado Springs and 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, non-renewal, or material changes to policies required under the contract.

All coverage furnished by contractor is primary, and any insurance held by the City of Colorado Springs is excess and non-contributory.

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)
EXHIBIT 5 – STATEMENT OF WORK FOR THE PPRTA SIDEWALK INFILL PROJECT

The work to be done by the Contractor shall consist of work associated with the installation of sidewalk where there is currently none. Sidewalks may vary in size from 10 linear feet to over 2500 linear feet, The City will determine the width and layout of each sidewalk. Each sidewalk installation is unique and may require additional work that may include but not necessarily be limited to removal and replacement of sidewalks, street crossspans, pedestrian ramps, curb and gutter, driveways, curb returns, bubblers, patterned concrete, drainage structures, and asphalt patching. This work shall include restoration of all areas disturbed by the construction activities to a condition equal to or better than the pre-construction condition, and the protection or replacement of fencing, retaining walls, landscaping, removal of obstructions, minor utility relocation and/or adjustment, grading, soil scarification, moisture control, backfill & compaction and plantings. This work shall also include the disposal of surplus or waste materials and traffic control/ barricading required for this work.

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.

Work required to construct items in this contract shall be performed in a safe, 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 Project Manager. 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.

Excavation shall not be paid for separately but shall be included in the unit price of the work unless otherwise noted in the specifications.
EXHIBIT 6 – QUALIFICATION STATEMENT

CITY OF COLORADO SPRINGS QUALIFICATION STATEMENT

This statement will provide information which will enable the City to evaluate the qualifications of your firm and staff with regard to the requirements of this Request for Proposal. Please complete this form in its entirety and submit it (in the number of copies requested) along with the other required proposal documents. If a request in the Qualification Statement is contained in the proposal, indicate the section in the proposal where that information can be found.

(PRINT)
FIRM NAME: __________________________________________
ADDRESS: ____________________________________________
CITY STATE ZIP: ______________________________________
AUTHORIZED REPRESENTATIVE: __________________________
TITLE: ______________________________________________
AUTHORIZED SIGNATURE: ______________________________
PHONE: ______________________ FAX: ____________________
E-MAIL ADDRESS: ______________________________________

1. TYPE OF BUSINESS
CORPORATION □  INDIVIDUAL □
PARTNERSHIP □  JOINT VENTURE □
OTHER: ______________________________________________________________________

2. TYPE OF LICENSE & LOCATION

3. TYPE OF SERVICE TO BE PROVIDED FOR RFP: ________________________________

4. NUMBER OF YEARS IN BUSINESS: ________________________________

5. ON A SEPARATE SHEET PROVIDE A BRIEF HISTORY OF YOUR FIRM, STAFF SIZE
AND EXPERIENCE. SUBMIT A RESUME FOR THE PROJECT MANAGER AND EACH
KEY PERSONNEL ASSIGNED TO THIS PROJECT.

6. WHAT OTHER NAME(S) HAS YOUR COMPANY OPERATED UNDER: _____________

7. HAVE YOU OR YOUR FIRM EVER FAILED TO COMPLETE ANY WORK AWARDED TO
YOU? YES □  NO □  IF “YES”, EXPLAIN:

8. HAS ANY OFFICER OR PARTNER OF YOUR ORGANIZATION EVER BEEN AN OFFICER
OR PARTNER OF ANOTHER ORGANIZATION THAT FAILED TO COMPLETE A
CONTRACT WITHIN THE LAST FIVE (5) YEARS? YES □  NO □
IF “YES”, EXPLAIN:
9. HAS YOUR FIRM OR ANY PARTNERS OR OFFICERS EVER BEEN INVOLVED IN ANY BANKRUPTCY ACTION? YES □ NO □ IF “YES”, EXPLAIN:
   ________________________________________________________________
   ________________________________________________________________

10. ARE YOU PRESENTLY INVOLVED IN ANY LITIGATION WITH ANY GOVERNMENT AGENCY? YES □ NO □ IF “YES”, EXPLAIN TYPE, KIND, PLAINTIFF, DEFENDANT, ETC., AND STATE THE CURRENT STATUS:
   ________________________________________________________________
   ________________________________________________________________

11. BANK REFERENCE: ___________________________________________
   ADDRESS: ______________________________________________________
   CONTACT: ___________________________ PHONE: _____________________

12. LIST THREE (3) SIMILAR PROJECTS (LOCAL OR STATE-WIDE) FROM LAST FIVE (5) YEARS INCLUDE LOCATION OF PROJECT, SIZE OF PROJECT (CONTRACT AMOUNT), CONTACT NAME, ADDRESS, TELEPHONE NUMBERS
   NOTE: DETAILED INFORMATION ON THESE PROJECTS MAY ALSO BE REQUESTED IN THE RFP PACKAGE.
   1. Location of Project: ___________________________
      Size of Project: ___________________________
      Contract Amount: ___________________________
      Contact Name and Title: ___________________________
      Contact Address: ___________________________
      Contact telephone and FAX Numbers: ___________________________
   2. Location of Project: ___________________________
      Size of Project: ___________________________
      Contract Amount: ___________________________
      Contact Name: ___________________________
      Contact Address: ___________________________
      Contact telephone and FAX Numbers: ___________________________
   3. Location of Project: ___________________________
      Size of Project: ___________________________
      Contract Amount: ___________________________
      Contact Name: ___________________________
      Contact Address: ___________________________
      Contact telephone and FAX Numbers: ___________________________

13. LIST CURRENT SIMILAR PROJECTS (LOCAL OR STATE-WIDE) UNDER CONTRACT-INCLUDE LOCATION OF PROJECT, SIZE OF PROJECT (CONTRACT AMOUNT) CONTACT NAME, ADDRESS, TELEPHONE NUMBERS.
   NOTE: DETAILED INFORMATION ON THESE PROJECTS MAY ALSO BE REQUESTED IN THE RFP PACKAGE.
   1. Location of Project: ___________________________
      Size of Project: ___________________________
      Contract Amount: ___________________________
<table>
<thead>
<tr>
<th>Contact Name and Title:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Address:</td>
<td></td>
</tr>
<tr>
<td>Contact telephone and FAX Numbers:</td>
<td></td>
</tr>
</tbody>
</table>

2. Location of Project:  
Size of Project:  
Contract Amount:  
Contact Name and Title:  
Contact Address:  
Contact telephone and FAX Numbers:  

3. Location of Project:  
Size of Project:  
Contract Amount:  
Contact Name and Title:  
Contact Address:  
Contact telephone and FAX Numbers:  

14. LIST OF SUB-CONTRACTORS TO BE USED FOR THIS PROJECT:  
(INCLUDE NAME, ADDRESS, TELEPHONE NUMBER, TYPE OF WORK)  

1. Name:  
Address:  
Telephone Number:  
Type of Work:  

2. Name:  
Address:  
Telephone Number:  
Type of Work:  

3. Name:  
Address:  
Telephone Number:  
Type of Work:  

IF ADDITIONAL INFORMATION IS PROVIDED ON A SEPARATE SHEET FOR ANY OF THE ITEMS, CLEARLY SPECIFY WHERE IT CAN BE LOCATED IN YOUR PROPOSAL PACKAGE.
EXHIBIT 7 – EVALUATION SCORESHEET

PROPOSAL EVALUATION SCORE SHEET

R19-T034AM PPRTA SIDEWALK INFILL PROJECT:

Proposer’s Name: ________________________________
Evaluator’s Name: ________________________________

<table>
<thead>
<tr>
<th>RFP EVALUATION CRITERIA DESCRIPTION</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. PRICE AREA</strong></td>
<td></td>
</tr>
<tr>
<td>In the Price Area, the Offeror should provide a detailed breakdown of the price for each year of performance. The price must be all-inclusive and include all unit costs for material, labor, other direct costs (e.g. travel), indirect costs (i.e. overhead and general and administrative costs), and profit/fee. Offers must include sufficient detail to allow insight into the fairness and reasonableness of the price. In addition, although price may not be the most important factor, it is still very important to the City of Colorado Springs. The Offeror’s pricing must be competitive as compared to the budget amount, market pricing in the industry, and the pricing of other Offerors. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions: 1. How does the price compare to the industry competition? 2. If low, is it unrealistically low? 3. If high, is there demonstrated added value for the additional cost? 4. Is the price itemized, so that it is clear how the cost was built? If so, do the costs look appropriate for the task? 5. Does the Offeror leave applicable costs out of the calculations? For instance, some will say travel is not included and will be an extra cost. This will be considered when comparing to other Offerors. 6. Are there additional costs not addressed that the City would incur if the Offeror were awarded the contract? COMMENTS:</td>
<td></td>
</tr>
<tr>
<td>5 – Exceptional</td>
<td></td>
</tr>
<tr>
<td>4 – Very Good</td>
<td></td>
</tr>
<tr>
<td>3 – Satisfactory</td>
<td></td>
</tr>
<tr>
<td>2 – Marginal</td>
<td></td>
</tr>
<tr>
<td>1 – Unacceptable</td>
<td></td>
</tr>
</tbody>
</table>

Rating: _____

Total Proposal Price Area (Insert number from Section 1 evaluation above, maximum score = 5):

Evaluation Factor: 0.35

Proposal Price Area Evaluation Score (Multiply the Total Proposal Price Area score by the evaluation factor):

**2. TECHNICAL AREA**

In this area, the Offeror should address each work area in sufficient detail to demonstrate a clear and full understanding of the work. The proposal should not merely parrot the requirements of the RFP. Further, the Offeror should provide evidence of sufficient planning to ensure the work is completed on schedule and within budget.

A. Understanding of and compliance with technical requirements
The Offeror must explain its overall solution, considering the scope of work or statement of work provided. The content must include, but not necessarily be limited to, the following information:

In this area, the Offeror should address each work area in sufficient detail to demonstrate a clear and full understanding of the work. The proposal should not merely parrot the requirements of the RFP. Further, the Offeror should provide evidence of sufficient planning to ensure the work is completed on schedule and within budget. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Does the proposal demonstrate a firm understanding of the requirements and goals of the Statement of Work, as well as industry standards and reasonable expectations for a company in the industry?
2. Does the proposal fully and completely address each requirement and goal of the Statement of Work?
3. Does the proposal provide solutions to indicate that requirements and goals will be met on schedule?
4. Does the technical solution seem realistic?
5. Does it generally appear that the Offeror knows and thoroughly understands the business and requirements?

**COMMENTS:**

**B. Project Approach**

In the Technical Area/Project Approach, the Offeror should clearly present proposed solutions and indicate that it has performed adequate planning to accomplish project tasks as defined in the Statement of Work. Innovations, efficiencies, and detailed specifics are all encouraged. The Offeror must at least address the following areas:

1. Construction phasing and traffic control for the project. Explain the phases, traffic control for each phase, and the logic in the construction phasing, including pedestrian traffic control.
2. Erosion and sediment control during all phases of construction as well as post construction efforts through permit closure.
3. Coordination with utilities. Discuss Offeror’s understanding of the key utility relocations required for this project and how Offeror will coordinate and phase construction to both facilitate and accommodate those relocations and the constraints that they impose.
4. Schedule Management. Discuss Offeror’s approach to schedule management including updating and reporting progress of the work.
5. Quality Control. Discuss Offeror’s quality control plan, processes and approach to ensure that the City receives a quality product. Offeror’s quality control plan should include, but not be limited to, concrete construction requirements, and protection of work in cold weather.
6. Safety. Discuss Offeror’s approach and commitment to safety for both construction workers and the public traveling through the construction site.
7. Potential issues that Offeror foresees with this project and how Offeror would make adjustments if encountered. Describe factors limiting construction phasing flexibility and potential remedies.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. Does the proposal include a complete plan to accomplish each requirement, including subcontracting (if applicable)?
2. Does the proposal demonstrate that appropriate and qualified personnel and equipment will be provided to carry out the requirement?
3. Is the proper level of effort directed toward each requirement? Does the level of effort look unrealistically low or unreasonably high?

| Rating: ______ |
| 5 – Exceptional |
| 4 – Very Good |
| 3 – Satisfactory |
| 2 – Marginal |
| 1 – Unacceptable |
### A. Program Management Controls

In this area, the Offeror should provide:
1. A plan of operation, to include management of personnel, workload, schedule and budget;
2. If the Offeror plans to subcontract more than 10% of the work, include information on how the Offeror plans to manage its subcontractors;
3. A detailed construction plan for the project, showing the key construction activities and how they will accommodate the field design nature of this project while also maximizing construction efficiency to provide the best value to the City and minimize impacts to the public.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Does the proposal address the issues above in sufficient detail to demonstrate a sophisticated and mature management control system?
2. Are program management controls consistent with the technical portion of the proposal, especially regarding schedule and level of effort?
3. Do the plan and controls indicate that the Offeror will obtain, keep, and efficiently utilize high-quality personnel?
4. Does the proposal explain how the Offeror will address corrective actions in case of delays (e.g. expediting materials, additional resources, etc.)?
5. Does the proposal explain how the Offeror will remain within schedule and budget?

### B. Past Performance/Relevant Experience

The Offeror should provide at least three references or contracts demonstrating that it successfully provided services/products that are the same or similar to those required in the RFP. The Offeror should also provide photo documentation of completed projects of at least three (3) examples of past projects demonstrating that it successfully provided services/products that are the same or similar to those required in the RFP. The proposal should adequately explain how the projects were completed on schedule, with minimal impact to adjacent properties, and within budget. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Does the proposal include at least three references or past performance citations?
2. Does the proposal include photo documentation of at least three examples of past performance?
3. Are the references or past performance citations relevant to the requirements of the Statement of Work of the RFP?
4. Does the Offeror explain how they were successful on the projects provided as past performance?
5. Does the Offeror apply the past performance to the City requirement in such a way as to demonstrate added value due to experience?

**COMMENTS:**

### C. Key Personnel

In the Key Personnel Area, résumés must be provided for all senior personnel considered key, as required by the RFP. Résumés do not count toward the page limit. The Offeror should also provide names of Foreman/Crew Leads that will be utilized on the project and examples of past similar projects that they worked on (full résumés not required). The Offeror should also provide names of Subcontractors (if any) that will be used for task such as Traffic Control, Landscape Restoration or Tree Removal.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Explain how the key personnel were related to the projects cited as relevant past performance.
2. Does the Offeror provide complete résumés, including education, experience, background information, accomplishments, and other pertinent information for all senior personnel?
3. Do the resumes demonstrate adequate professional, technical, and management levels to accomplish the work effectively and efficiently?
4. Does the Offeror provide information of Foreman/Crew Leads to demonstrate adequate work history and technical skills to accomplish the work effectively and efficiently?
5. Does the Offeror provide information for Subcontractors to demonstrate adequate work history and technical skills to accomplish the work effectively and efficiently?

| Total Expertise and Qualifications Area (Insert number from Section 2 evaluation above, maximum score = 15): |  
|  
| Evaluation Factor: | 0.30  
| Expertise and Qualifications Area Evaluation Score (Multiply the Total Expertise and Qualifications Area by the evaluation factor): |  

4. **PROPOSAL PRESENTATION**

Presentation is an important factor. Offerors should provide a highly professional product, which is complete, accurate, easily understood, and effectively presented.

**COMMENTS:**

| Total Proposal Presentation Area (Insert number from Section 3 evaluation above): |  
|  
| Evaluation Factor: | 0.10  
| Proposal Presentation Area Evaluation Score (Multiply the Total Proposal Presentation Area score by the evaluation factor): |  

### EXCEPTIONS PROPOSED

What (if any) exceptions (redlines to our terms and conditions) were proposed? Are they acceptable?

**COMMENTS:**

#### INSURANCE REQUIREMENTS

Does the Offeror meet all insurance requirements?

<table>
<thead>
<tr>
<th>5 – Exceptional</th>
<th>4 – Very Good</th>
<th>3 – Satisfactory</th>
<th>2 – Marginal</th>
<th>1 – Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating: _____</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**INSURANCE REQUIREMENTS**

Does the Offeror meet all insurance requirements?
TOTAL SCORE – Add Evaluation Scores from Sections 1-4. The sum is the total score.

Overall Proposal **Strengths:**

Overall Proposal **Weaknesses:**
SECTION VI

6.0 SCHEDULES

Schedule A  Price Sheet
Schedule B  General Construction Terms and Conditions
Schedule C  Special Construction Terms and Conditions
Schedule D  General Specifications
Schedule E  Measurement & Payment
Schedule F  Parks & Recreation Specifications
Schedule G  Google Earth Sidewalk Files
    G.1 Missing Sidewalk Program 2015-2019.kmz
    G.2 Missing Sidewalk Program 2020_Dist2.kmz
    G.3 Missing Sidewalk Program FUTURE.kmz
## SCHEDULE A – PRICE SHEET

<table>
<thead>
<tr>
<th>BID ITEM NO.</th>
<th>CONTRACT ITEM NO.</th>
<th>ITEM NAME</th>
<th>EST QTY</th>
<th>UNIT</th>
<th>Unit Price</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100-00000</td>
<td>MOBILIZATION</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>100-20000</td>
<td>CONSTRUCTION PHASING/MOTO</td>
<td>1</td>
<td>LS</td>
<td>$</td>
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TOTAL BID
SCHEDULE B – GENERAL CONSTRUCTION TERMS AND CONDITIONS

General Construction Terms and Conditions, Version 100316, are hereby incorporated by reference, with the same force and effect as if they were given in full text. Upon request, the City will make their full text available. Also, the full text of a clause may be accessed electronically at this address:

SPECIAL PROVISIONS

This section contains Special Provisions that are applicable on the subject project. In the event the 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 edition of General Provisions, the Special Provisions listed herein will take precedence.

Failure to comply with the following specifications will result in a no-cost, immediate work stoppage, with no additional time allowance granted. No work will take place until the work stoppage is lifted.

C.1 DESCRIPTION OF WORK
The work to be done by the Contractor shall consist of work associated with the installation of sidewalk where there is currently none. Sidewalks may vary in size from 10 linear feet to over 2500 linear feet, The City will determine the width and layout of each sidewalk. Each sidewalk installation is unique and may require additional work that may include but not necessarily be limited to removal and replacement of sidewalks, street crossspans, pedestrian ramps, curb and gutter, driveways, curb returns, bubblers, patterned concrete, drainage structures, and asphalt patching. This work shall include
restoration of all areas disturbed by the construction activities to a condition equal to or better than the pre-construction condition, and the protection or replacement of fencing, retaining walls, landscaping, removal of obstructions, minor utility relocation and/or adjustment, grading, soil scarification, moisture control, backfill & compaction and plantings. This work shall also include the disposal of surplus or waste materials and traffic control/ barricading required for this work.

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.

Work required to construct items in this contract shall be performed in a safe, 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 benchmarks 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 Project Manager. 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. Excavation shall not be paid for separately but shall be included in the unit price of the work unless otherwise noted in the specifications.

C.2 PROGRESS AND COMPLETION
The work shall commence after the issuance of the Notice to Proceed as agreed to by the Project Manager and the Contractor.
The Contractor may not have more than 5 sites or 1000 LF, whichever is less, under construction at one point in time. The intent of this restriction is to ensure that each site is completed in a prompt manner.

The Contractor shall provide a construction schedule bi-weekly to the Owner that shows the major work tasks to be required and the timing of those tasks to complete the project. The schedule should show the Project from the current week to project completion. A more detailed short-range schedule may also be required at the Owners request.

C.3 PROJECT LOCATIONS
Exhibit 13 contains a list of addresses approximately where the sidewalk is to be installed with this project.

C.4 PRECONSTRUCTION WALK THROUGH
Prior to beginning construction at a particular location, the Contractor shall request a preconstruction walk through with the City representative. The Contractor’s foreman who will be in charge of the site shall be present for this walk through.

C.5 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 Project Manager for raising grades and backfilling the new construction. Additional imported materials necessary for stabilization within the first 6-inches of depth below the new construction shall not be paid for separately but shall be included in the unit price of the work.

If additional import material is required for stabilization beyond 6 inches in depth, the Contractor shall notify the Engineer and obtain approval prior to proceeding with the additional excavation and backfill. This work will be paid for using contract unit prices for the approved material.

### C.6 CONTRACTOR SUBMITTALS

Submittals for design, testing and shop drawings shall be in conformance with Section 108.19 “Shop Drawings and Submittals” and 108.21 “Materials” of the work provisions and rules. Electronic copy of submittals (email) are to be provided to the Project Manager. The Project Manager shall have a minimum of seven working days to review shop drawings and submittals. Failure of the Contractor to deliver submittals in sufficient time for the Project Manager’s seven-day review shall not constitute a delay on the part of the City. Shop drawings and submittals shall be at a minimum of those items listed below, and any other additional submittals which may be required by the Project Manager:
1. Concrete and Asphalt Mix Designs
2. Joint Sealant Materials
3. Traffic Control Plan
4. Fencing Materials
5. Material Certificates (for items such as reinforcing steel, herbicide, expansion joints).
6. Topsoil mix
7. Seed mix
8. White Colored Concrete Curing Compound
9. Bubbler grate specification and drawings
10. Inlet Grates
11. Detectable Warning Devices (Truncated Domes)

### C.7 POTENTIAL PERMITS

The table below is a list of potential permits or submittals required for the project. The contractor shall be responsible to verify this list and add any additional permits needed to construct the project. Copies of any permits already obtained by the City of Colorado Springs are available for review by all proposers. Contractors are responsible for compliance with all permits obtained by others for this project.
The contractor shall be responsible to investigate and assess the requirements for all necessary environmental/drainage/construction permits. 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. Copies of permits obtained shall be submitted to the Project Manager. The Contractor shall comply with all conditions of the permits 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.

All water used shall be potable and free of dissolved ingredients that may prove harmful. If water is acquired from a City hydrant, the Contractor shall use a proper water meter equipped with a backflow preventer, as required by Colorado Springs Utilities (719) 668-7420. Contractor shall contact Colorado Springs Utilities Mesa Laboratory at (719) 668-4560 for direction and authorization of which fire hydrants can be used during construction to avoid damages to CSU waterlines and CSU customer lines and appliances. Contractor shall be responsible for any damages to CSU waterlines or CSU customer property related to waterlines. Water shall be included in the contract unit price and shall not be paid for separately.

The excavation permit may be obtained at:
Regional Development Center
2880 International Circle Suite 200-1
Colorado Springs, CO. 80910
Contact: Robin Tisdale
(719) 385-5052

C.8 UTILITIES
The Contractor shall be responsible for the location and protection of all utilities located within his working area. Contact Colorado Springs Utilities, and/or any other applicable utility companies, at least twenty-four hours prior to starting the project so that an Inspector can make contact on the job site. It is the responsibility of the Contractor to determine all applicable utility companies and organizations.
All replacement taps will have to be coordinated and notification must be given to Colorado Springs Utilities twenty-four hours prior to scheduling. All overtime costs for inspection by Colorado Springs Utilities (CSU) 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 be responsible for making his own investigations, including exploratory excavations, to determine the locations and type of existing mains and service laterals or appurtenances prior to starting excavation. These investigations shall not be paid for separately but shall be included in the unit price of the work. 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 must be protected and/or repaired at his own expense.

**City of Colorado Springs Utilities**

- Colorado Springs Utilities Electric (719) 448-4811
- Colorado Springs Utilities Water, Wastewater (719) 448-4200
- Traffic Department (719) 385-5908
- Colorado Springs Utilities Gas Emergencies (719) 520-0100
- Cable Television (719) 633-6616
- Telephone (800) 954-0211
- Parks and Recreation (719) 385-6551

**Miscellaneous Utility Services**

Utility Notification Center of Colorado (UNCC) (800) 922-1987 or 811 Engineering Division for Inquiries (719) 385-5918

At least forty-eight (48) hours prior to commencing excavation, the Contractor shall call UNCC at 1-800-922-1987 or 811 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. Tier II locates shall be contacted at least seventy-two (72) business hours prior to commencing excavation.

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 at: 1-800-922-1987 or 811
☐ Utilities marked and located on the ground
☐ Employees briefed and knowledgeable on marking and color codes
☐ Employees trained on excavation and safety procedures for Natural Gas Lines
☐ When excavation approaches gas lines, employees expose lines by careful probing and hand digging

Standard Utility Marking Color Code

<table>
<thead>
<tr>
<th>Natural Gas</th>
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<tr>
<td>Electric</td>
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<td>Water</td>
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<tr>
<td>Wastewater</td>
<td>Green</td>
</tr>
<tr>
<td>Communications</td>
<td>Orange</td>
</tr>
</tbody>
</table>

The CSU Gas Division is to be notified prior to any excavating around gas lines. The Gas Division Inspector is to be notified and be present on site prior to construction activities around gas lines. The CSU Gas Division will perform all repair and relocation work.

The Contractor shall protect the existing electric distribution lines and facilities from damage or displacement. The Contractor shall notify and coordinate the work with the CSU Electric Transmission and Distribution Division. The cost of protecting the electrical utility is considered incidental and is to be a part of the adjoining work. The CSU Electric Department will perform any repair or relocation work.

The Contractor shall coordinate with residences and businesses affected by any sanitary sewer, electric, gas, or water service shut downs at least 48 hours prior to shut down. If in the event a property or business is involved that cannot be without water, the Contractor will be responsible for keeping them in water while the shutdown is in effect.

If for any reason when water is restored after the shutdown that a property has no water and Colorado Springs Utilities is contacted to determine the problem, the Contractor will be responsible for digging, regardless of the time of day to restore service. Contractor must provide Colorado Springs Utilities with a name and telephone number of an after-hours contact in case of emergency.

All services which would be replaced will have to meet CSU water specifications and be approved by the CSU Inspector.

All materials pertaining to lowering or replacing water service lines, regardless of size, will be the responsibility of the Contractor unless otherwise specified.
All utility coordination activities required herein shall be considered incidental to the work and not paid for separately.

**C.9 TEMPORARY ASPHALT PATCHES**
Any and all asphalt patching material used shall be at a minimum temperature of 190 degrees Fahrenheit after the compaction process. Any asphalt patching materials below this temperature shall be removed and replaced at the Contractor’s expense. No payment will be made for this rejected material.

**C.10 REMOVAL AND DISPOSAL OF EXISTING ELEMENTS**
The Contractor shall remove from the project site all conflicting, or as otherwise directed, existing construction elements such as sidewalks, curb and gutter, asphalt pavement, concrete rubble, landscape timbers and elements, abandoned utilities, trees, fencing, stumps, unsuitable backfill material and other debris.

The Contractor shall use appropriately designed and sized equipment to remove and haul disposal materials, so as to maintain safe conditions for the general public and public and private property.

The disposal materials shall be hauled to a legal disposal site. The Contractor shall abide by all Federal, State, and local government requirements for hauling and disposal of materials.

The cost of all removal items shall include hauling and disposal and are not paid for separately but shall be included in the unit prices of work being performed.

**C.11 PROTECTING AND REMOVING PLANTINGS**
The Contractor shall protect all existing trees, shrubs and other plantings from above ground and from root structure damage during the construction activities. Unnecessary damage to plants or trees will subject the Contractor to full replacement of those plantings at the Contractor’s expense as determined by the Project Manager. Where plantings are in conflict with new work, as determined by the City Forester (plantings in the public right-of-way) or by the Engineer or owner (plantings on private property), the Contractor shall remove the planting using a locally licensed tree trimming service to perform this work as necessary. Prior to performing any trimming or removal operations the Contractor shall notify the City Forester’s office at (719) 385-5942.

In all cases, the proper planting season shall be observed to assure proper establishment and growth of the plantings.

Tree branches shall be trimmed back to the trunk, all around, to a minimum height of 8’ above the adjacent walkway.

Trimming or removal of vegetation and trees with trunk caliper smaller than 4-inches shall not be paid for separately but shall be included in the unit price of work being performed.
At the discretion of the Project Manager, the City will remove conflicting trees and plantings with trunk caliper 4-inches or larger prior to the Contractor beginning work in the area. The cost of these removals will be covered by the City and not the Contractor.

**C.12 REMOVAL AND REPLACEMENT OF SPRINKLER SYSTEM**

Where required by the construction activity, existing sprinkler heads and related fittings and tubing shall be removed and replaced as close as possible to the original locations. All sprinkler heads and fittings shall be salvaged and reused unless damaged. It is the Contractor’s responsibility to coordinate with the owner to determine the pre-construction condition of the system. Damaged items shall be replaced with the same type and quality, or better, as the original item. After assembly, the sprinkler system shall be tested for leakage and proper operation. The system shall be drained after testing if work is performed beyond the irrigation season. Sprinkler system removal and replacement that is determined by the Engineer to be required for the installation of the sidewalk will be paid as part of F/A Landscape Restoration. Sprinkler system removal and replacement that is determined by the Engineer to be required due to the carelessness of the Contractor while performing the work shall not be paid.

**C.13 COORDINATION WITH PROPERTY OWNERS**

The Contractor shall coordinate the relocation of fencing, landscaping, sprinklers, control boxes, utility services, street signs and mailboxes and the salvaging of any materials suitable for reuse with the Engineer and, if on private property, with the respective property owners.

Salvageable elements shall be carefully relocated per direction of the Inspector and protected from damage.

The Contractor shall make every effort to minimize the inconvenience to the traveling and pedestrian public. If a private citizen approaches the Contractor during operations, the Contractor shall be friendly and as informative as possible when speaking with the public.

**C.14 COORDINATION WITH ADJACENT PROJECTS**

The contractor shall coordinate with all concurrent projects in the vicinity of this project, including but not limited to projects managed by the City of Colorado Springs, Colorado Springs Utilities, and the Colorado Department of Transportation. Coordination shall include traffic control to minimize conflict and confusion between overlapping temporary traffic control zones. This coordination is incidental.

**C.15 POSTING AND NOTIFICATION**

The Contractor shall notify and coordinate the closing and construction of driveways, curb, gutter and sidewalks with the Engineer and the adjoining property owners in advance of work using the following methods:

a. The Contractor shall be required to place “No Parking” signs as specified by the Manual on Uniform Traffic Control Devices or the Project Manager a minimum of seventy-two (72) hours prior to the work commencing. These signs shall be preprinted at a sign shop. These signs shall have the City Code 10-11-104 clearly
and permanently marked. The specific date shall be clearly marked with lettering width of one-eighth (1/8) inch or larger such that the date is clearly legible from a distance greater than twenty-five (25) feet away or as approved by the Project Manager. Dates can be handwritten due to changing dates and times but must be clearly legible from over twenty-five (25) feet away! These signs shall be eighteen (18) inches tall by twelve (12) inches in width. The post to support the “No Parking” sign shall be a minimum of four (4) feet in height. The support may be wood or metal. The cost of the signs and posts, as well as the placement and removal, shall be included in the cost of work and shall be paid for per Schedule H.

b. The Contractor shall give written notification to the adjacent property owners with a letter notifying them of the process, any special instructions such as parking and watering restrictions and a proposed schedule shall be delivered to the adjacent property owners a minimum of seventy-two (72) hours prior to the work commencing. These letters shall have the appropriate CITY logo at the top of the letter. A CD will be provided to the Contractor with the “logo”, so as to allow the Contractor to incorporate this logo at the top of these notification letters. Required “No Parking” signs and letters to be distributed to the adjacent property owners are included in this solicitation.

c. The Contractor shall be required to keep a log on all postings of signage and letters given to adjacent property owners and towing of vehicles. The Contractor shall make every effort to contact the vehicle owner if a vehicle is parked on the street in a location that will conflict with the work. Only after every effort has been made to contact the vehicle owner will the Contractor be allowed to contact the City of Colorado Springs Police Department to have the vehicle towed. Prior to contacting Police Department for towing of vehicle, the Contractor shall contact the Engineer for verification of the parking violation. Should an Owner of a towed vehicle file a complaint and a court hearing is required, Contractor staff placing, and logging notifications signage shall attend court to testify regarding towing of vehicles.

d. The Contractor shall establish a local phone number with a (719) area code or toll free number that will be placed on all “No Parking” signs as well as on all “Notification Letters” issued as part of the Public Notification Process so the Public can call the Contractor direct with any questions or concerns. The cost of this local phone service shall not be paid for separately and shall be included in the unit price of the work being performed.

e. Every effort should be made to be accommodating to the public if there are special circumstances that conflict with the operations, including, but not limited to: wedding receptions, funeral gatherings, graduation parties, garage sales, etc.

All costs associated with posting and notification shall be included in the work. No separate payments shall be made for this work.

C.16 WORK AREA
The Contractor shall confine the work activities to the public right of way. 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 Project Manager with a copy of the written permission. The City will be held harmless of Contractor negligence in matters of trespassing.

The Contractor shall limit their work activities such that at no time shall any removal and/or construction activities occur simultaneously on opposite sides of a street in any given block unless explicitly approved by the Project Manager.

Upon completion of the work on a given street or sidewalk segment, the Contractor shall remove and completely dispose of all refuse materials, dirt, etc., so as to leave the street in a neat and clean condition.

The Contractor shall accomplish all incidental work essential to the completion of the project in a workmanlike manner, including cleanup and disposal of waste or surplus material without additional cost to the City. The cleanup and disposal of waste, trash or surplus material shall be performed every day in order to better maintain the safety and aesthetics of the construction area.

Site restoration including grading and native seeding up to two (2) feet outside the limits of work shall be incidental to the work. Restoration including sodding, replacing sprinkler lines and heads, and placing mulch or landscape rock shall be paid for per Schedule H.

**C.17 CONCRETE FORM INSPECTIONS**

The City requires a Concrete Form Inspection prior to placing concrete to help ensure proper line and grade of new work. This in no way relieves the Contractor of responsibility to construct work in accordance with the Contract Documents. It is the Contractor’s responsibility to complete required work and to schedule inspections during normal working hours Monday through Friday. Any work that is approved by the Project Manager to be performed on Saturdays, Sundays, or holidays, shall be requested at least 48 hours in advance. This work can only occur if an Engineer is available for those days requested. There is no guarantee that an inspector would be available.

The City will not entertain any requests for time extensions for delays caused by the Contractor’s failure to properly notify the Engineer of a required inspection or the Contractor’s failure to complete the required work by the time of the scheduled inspection.

It is the Contractor’s responsibility to adhere to the grade and line requirements set forth in the Contract Documents for all concrete installations. Inspection and approval of form work shall not relieve the Contractor from achieving these requirements. The Contractor shall be responsible to remove and replace any work installed not meeting required line, grade and specifications. There will be no additional payment for this removal and
replacement work. It is recommended that Contractor personnel should have a two (2) foot smart level onsite to verify grades of all work being performed.

**C.18 CONCRETE CONSTRUCTION REQUIREMENTS**
All concrete mix designs shall be approved in writing by the City Construction Manager prior to starting work for this City Program. Any other City-approved mix designs shall not be used without written approval of the Project Manager.

Any loads of concrete delivered without batch mix data printed on the delivery ticket shall be rejected and not paid for by the City.

All curb faces shall be constructed with forms and never hand-poured or hand-formed without formwork. All stakes shall be removed after completing the pour, including portions of the stakes that break off below the finished surface. All curb faces, top of curb and back of curb faces shall be straight and true. Any deviations in these alignments greater than three-eighths (3/8) inch in ten (10) feet will be removed and replaced at the Contractor’s expense.

All curb and gutter shall be poured separately (cold joint) from all sidewalks, pedestrian ramps, and driveways.

All truncated dome warning panels shall be pre-approved by the City Construction Manager prior to use. A current list of approved truncated dome warning panels can be found on the City’s web site: https://coloradosprings.gov/public-works/page/standard-specifications-manual. Cast iron truncated dome panels shall be required in the Greater Downtown Business Improvement District (BID) area unless otherwise approved by the City Construction Manager.

All concrete, prior to completion of the final punchlist for the segment, shall be protected from foreign markings or graffiti. Examples include, but are not limited to scrapes, writings, bike tires, foot traffic, and any heavy object that would create an imperfection. In the event of foreign markings or graffiti the replacement or repairs shall be made by the Contractor at no additional cost unless otherwise determined by the Project Manager.

Work that deviates from the Contract Document requirements will require removal and replacement of affected work, as determined by the Project Manager. No additional payment shall be made for this replacement work.

**C.19 PROTECTION OF SUBGRADE AND CONCRETE IN COLD WEATHER**
The Contractor is responsible for the strength and quality of the concrete placed during cold weather.

Cold Weather: Is defined by ACI 306 as a period of more than three successive days where the average daily outdoor temperature drops below 40 degrees F. The average daily temperature is determined by averaging the highest and lowest temperature during the day (midnight to midnight).
Subgrade shall be unfrozen (above 32 degrees F), free of snow, ice, and standing water before placement. Metal form work shall not be less the 35 degrees F.

Protection of concrete in cold weather shall meet the requirements of Section 500 of the City Standards.

Any and all cold weather protection required to perform work shall not be paid for separately but shall be included in the unit price of the work being performed.

**C.20 CONSTRUCTION TRAFFIC CONTROL**


No roads shall be closed by the Contractor except by expressed permission of the City Traffic Engineer and after notifying the Police, Fire Departments, and other affected stakeholders.

Proper barricading detours, warning signs and lights are the responsibility of the Contractor and shall be paid for per Schedule H. The Contractor shall provide, place and maintain the necessary signs, barricading, lights and detours of public street intersections and along the route in such a manner as to avoid undue inconvenience to the public.

**a. Traffic Control Plans and Permits**

All work areas shall require a Traffic Control Plan (TCP) to be submitted to the City Traffic Engineering Division for review and approval a minimum of ten (10) days prior to starting work to allow for a proper review period. No work shall proceed without an approved TCP. Traffic Control Plans not involving closures or major detours can be submitted a minimum of seventy-two (72) hours (three City business days) prior to implementation.

Fees for Traffic Control Permits shall be waived for the Contractor.

Traffic Control Plans shall include detailed signing, barricading, staging, pedestrian, and traffic detouring information for each phase or stage of construction including as a minimum: type and number of devices, taper length/widths, working hours, number and location of flaggers, uniformed traffic control (if necessary), access modifications, and time restrictions, if any.

When working in the vicinity of schools, meetings with school staff will be required to assure traffic control concerns of the school staff are met. Hours of work may be more restrictive and additional traffic control measures may be required. This additional work shall be included in the contract unit price. No additional payment will be made for this work.
The Contractor shall maintain a twenty-four (24) hour, seven (7) days a week (including weekends and holidays) emergency service to remove, install, relocate, and maintain warning devices. The Contractor shall furnish the Project Manager the name and telephone number of the Traffic Control Supervisor responsible for emergency service.

In the event the Traffic Control Supervisor does not respond within two (2) hours, or the City deems it necessary to call out other forces to accomplish emergency services, the Contractor will be held responsible for the cost of such emergency services, without reimbursement.

b. **Flagging**
All flaggers shall be certified by the ATSSA or approved equivalent. Each flagger shall carry their current flagging certification on the work site at all times. This certification shall be available at all times for review on the project site by any City employee or Inspector. If a flagger’s certification is not available or is inactive, all work shall stop and all equipment and materials shall be removed from the travelled way at the Contractor’s expense until a certified flagger can be placed.

Flagging against traffic lights shall not be permitted without the use of a Uniformed Traffic Officer. A TCS shall not be considered a Uniformed Traffic Officer. If a Uniformed Traffic Officer is utilized, this person shall be assisted by a TCS and flaggers as required at no additional cost.

c. **Access Requirements**
The Contractor shall provide for vehicular access to and from all residences abutting the project to the maximum extent possible throughout construction. When vehicular access cannot be maintained, the Contractor shall make all efforts to minimize the time that the access is closed. Phasing construction of driveways may be required shall be included in the cost of the work. No separate payments shall be made for this work.

The Contractor shall leave at least one (1) access open at all times to any non-residential properties affected by construction.

d. **Portable Message Sign Panel**
A Portable Message Sign Panel shall be placed on all arterial roadways in both directions of travel at least 96 hours in advance to notify the public of upcoming lane closures as directed by City Traffic Engineering Staff or the Engineer. Portable Message Sign Panels shall be paid for per Schedule E.

C.21 **CONSTRUCTION WORK HOURS**
Working hours on residential and arterial/collector streets shall be limited from 7:00 AM to 7:00 PM Monday thru Friday, or as otherwise approved by the Project Manager and City Traffic Engineering. Work will be allowed on Saturdays, Sundays and holidays only with written permission from the Project Manager.

C.22 **PEDESTRIAN TRAFFIC CONTROL**
The Contractor shall provide, install, and maintain pedestrian wayfinding signs as necessary to minimize jaywalking and confusion. It may be necessary to locate these signs far outside the project limits to be effective. The Contractor shall prepare and submit for approval a plan that shows proposed pedestrian routes and pedestrian signage for all phases of construction.

Signalized intersections shall be designed to accommodate pedestrian crossings from the designated pedestrian walkways at all times.

Temporary pedestrian walkways and signage shall be paid for per Schedule E.

C.23 WORK IN BAD WEATHER
The Project Manager shall have the authority to suspend the work wholly or in part that may be subject to damage in the Project Manager’s opinion due to climactic conditions, for such period as he may deem necessary. This shall not entitle the Contractor to additional compensation for down time or delay. The Project Manager will make every effort to provide as much notice as possible in anticipation of work stoppages due to climactic conditions.

C.24 DRAINAGE AND EROSION CONTROL
Illicit discharges to the MS4 (Municipal Separate Storm Sewer System) are prohibited unless permitted through the Colorado Discharge Permitting System. It is the Contractor’s responsibility to maintain necessary protective measures. Contractors must also maintain compliance with the City’s Drainage Criteria Manual, Volume II. This manual can be found in the following website: https://coloradosprings.gov/resident-services/public-works/city-engineering/reference-materials.

The Contractor shall provide for the drainage of storm water 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. Any damage done during storm flows or snow melt to temporary or partially completed work or resulting from the Contractor’s operations shall be repaired at the Contractor’s expense.

The Contractor shall prevent the pollution of drains and watercourses by sanitary waste, sediment, debris, or other substances resulting from this Work through the use of construction best management practices (BMPs) or other approved methods. Contractor shall clean up and isolate such materials on a continuing basis to prevent risk of washing into drainage ways. Contractor is also responsible for routine maintenance of all construction BMPs.

Contractor shall obtain a copy of and follow the stipulations of the City of Colorado Springs MS4 permit and all other state and local permits. Contractor shall be responsible for obtaining all state and local storm water discharge permits required for the Work.

Installation and maintenance of proper BMPs and work methods to ensure compliance with the City of Colorado Springs MS4 permit and the City of Colorado Springs Drainage Criteria Manual, Volume II shall be paid for per Schedule H. This shall include but not be
limited to concrete washouts (setup, maintenance, disposal, etc.), inlet protection, stockpile management, erosion control, and sweeping. If any work area is deemed to be in violation of the City’s MS4 permit, all work shall be stopped at the discretion of the Project Manager and the Contractor shall take all necessary measures to bring the site within compliance immediately at no additional cost to the City.

C.25 TESTING OF MATERIALS
The term “Quality Control” or “QC” refers to the tests that are conducted by and on behalf of the Contractor. QC staff is hired and paid by the Contractor or their supplier at their discretion. The term “Quality Assurance” or “QA” refers to the tests that are conducted by and on behalf of the owner, or City. QA staff is hired and paid by the City. The results of QA tests shall be used to determine whether the Contractor is in compliance with the plans and specifications.

On this project, QA tests will be conducted in general accordance with the City Standard Specifications.

The Contractor shall give the City two (2) working days’ notice before placing concrete and asphalt paving so the City may arrange for material tests. The City reserves the right to reject any request for placing concrete or asphalt without two (2) working days’ notice. The Contractor agrees to pay any minimum call-out charges or stand-by time for the tester due to his failure to pour or place on schedule for any reason except by the action of the City. The City shall pay for all materials tests taken with the exception of retesting as specified in the City General Provisions.

C.26 WORKPLACE VIOLENCE
If a representative or employee of the Contractor, or a subcontractor, commits an act of workplace violence on the project, he shall be sanctioned as provided by the Contractor’s employment policies and, where appropriate, shall be reported to law enforcement authorities. At the request of either the Contractor or the City, the City and the Contractor shall meet to discuss appropriate actions to be taken against the representative or employee. Appropriate action may include removing the representative or employee from the project. If removal is warranted and the Contractor fails to remove the representative or employee, the City may suspend the work by written notice until compliance is achieved.

C.27 SANITARY FACILITIES
A portable (mobile) toilet shall be supplied at each work site location for the duration of the project. This portable toilet shall be towed (relocated) as needed to remain as close as possible to the work crews. This toilet shall be maintained by a professional portable toilet vendor on a weekly basis at a minimum. This toilet will not be paid for separately but shall be included in the unit prices of the work being performed. If a portable toilet is not available on each project site, one may be provided by the City, from a professional portable toilet vendor. All changes incurred by the City for the rental of each toilet will be deducted from the Contractor’s monthly payment for work performed on this Contract.
The Contractor shall obtain and ensure compliance with the City’s Portable Toilet Details for Construction Sites. A copy has been attached to this Contract.

C.28 INVOICE PROCEDURES
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 items listed in the bid proposal 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. Field measurements by address or intersection of completed work items shall be done jointly by the Engineer and the Contractor on approved designated forms to ensure prompt agreement.

Quantities for work performed on any given street segment will be reviewed, approved, and signed off by both the Contractor and the Engineer.

Payment will only be made for that work directed by the Engineer. If additional quantities of concrete are removed (for any reason) without approval by the Engineer, no payment will be made for the removal or replacement of said concrete. This additional removal and replacement cost shall be borne by the Contractor. This includes any damaged concrete caused during the removal process.

Partial payments of work may be allowed within segments of work requiring phasing. Only completed work shall be considered for payment. Completed work is defined as concrete work that has forms stripped, backfill completed, cure applied and asphalt patching complete in place with a completed punchlist.

C.29 FORCE ACCOUNT / MINOR WORK REVISIONS
The Force Account will be used by the City to account for miscellaneous items, materials and labor not identified as incidental to the work or identified in Schedule E.

The City may require an itemized breakdown of the items to include Labor Rates/Hrs., actual material costs, transportation fees, and other fees included in the cost proposal. After review and approval by the City of the submitted cost proposal, a signed MCR will be delivered via email to the Contractor authorizing the Force Account work to commence.
PORTABLE TOILET DETAILS FOR CONSTRUCTION SITES

Revised: August 23, 2017

OVERVIEW:
The release of pollutants, sewage, and/or contaminated wash waters associated with the transport, cleaning, washing or flushing of portable toilets directly or indirectly to the storm drain system, storm water conveyances or waterways is a violation of federal, state and local laws, regulations and ordinances. The wastes and associated wash water from cleaning of portable toilets, their reservoirs or tank compartments, hoses, vacuum and pumping equipment, transfer tanks and transport tank trucks must be contained and discharged to a sanitary sewer or other appropriate sanitary wastewater treatment facility.

The discharge of waste, wastewater or contaminated wash water from any such portable toilet transporting, cleaning or maintenance operations to the City of Colorado Springs’ Municipal Separate Storm Sewer System (MS4) is prohibited. The City of Colorado Springs does not currently have a policy for placement of portable toilets on construction sites. The purpose of this document is to define the placement policy requirements.

Portable Toilet Protection Installation for Construction Sites

- Portable toilets shall be placed a minimum of 10 feet behind all curbs and/or sidewalks.
- Portable toilets shall be a minimum of 50 feet from stormwater inlet structures.
- Portable toilets shall be placed at least 100 feet from waterways.
- Portable toilets shall be placed on a flat surface.
- Portable toilets shall be grouped together whenever practicable.
- Portable toilets shall be securely anchored to the ground using u-shaped rebar stakes.
- U-shaped stakes shall be positioned on at least two diagonal corners of the structure.
- Portable toilets that have tipped over shall be placed upright immediately upon discovery. Any spilled waste shall be cleared up immediately and disposed of properly. Portable toilets shall be properly re-staked.

Portable Toilet Protection Installation for Roadway Construction

- When possible, portable toilets shall be placed out of the right-of-way at a minimum of 10 feet behind all curbs and/or sidewalks.
- If portable toilets must be in the right-of-way, it is best to place them on mobile trailers and must be anchored or weighted down.
- If portable toilets must be directly in the right-of-way, on pavement, they must be anchored or weighted down with BMPs completely around the base of the unit.
- Portable toilets shall ALWAYS be a minimum of 50 feet from protected stormwater inlet structures and the downstream inlet must have inlet protection in accordance with DCM standards and specifications.
- Portable toilets shall be placed at least 100 feet from waterways.

Portable Toilet Protection Inspection and Maintenance Notes

- The erosion control inspector shall inspect that the portable facility is staked down and the appropriate distance from the curb line each time they are in the area.
- Portable toilet protection shall be repaired immediately when any stakes are loose, damaged, or removed.
- Portable toilets shall be serviced at the necessary intervals to eliminate the possibility of overflow.
• When the portable toilets are removed, and disturbed areas associated with the installation, maintenance, and/or removal of the toilets shall be landscaped or roughened, seeded, mulched, and crimped per the specifications.

PORTABLE TOILET PROJECTION INSTALLATION NOISES
1. PORTABLE TOILETS SHALL BE PLACED A MINIMUM OF 10' BEHIND ALL CURBS, SIDEWALKS, AND OTHER IMPERVIOUS AREAS, 20' FROM STORM INLET, AND 100' FROM WATERWAYS.
2. ALL PORTABLE TOILETS MUST BE GROUPED TOGETHER.
3. PORTABLE TOILETS SHALL BE SECURELY ANCHORED TO THE GROUND USING U-SHAPED REBAR STAKES.
4. U-SHAPED REBAR STAKES, OR OTHER EFFECTIVE ANCHORING, SHALL BE POSITIONED ON AT LEAST 2 OPPOSING (DIAGONAL) CORNERS.

PORTABLE TOILET PROJECTION INSPECTION AND MAINTENANCE NOISES
1. THE SWMP ADMINISTRATOR SHALL REGULARLY INSPECT THE PORTABLE TOILET PROTECTION.
2. PORTABLE TOILETS SHALL BE SERVICED AT THE NECESSARY INTERVALS TO ELIMINATE THE POSSIBILITY OF OVERFLOW.
3. WHEN THE PORTABLE TOILETS ARE REMOVED, ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE TOILETS MAY NEED TO BE LANDSCAPED OR STABILIZED PER THE DCM REQUIREMENTS.
4. PORTABLE TOILETS THAT ARE NOT CONSISTENTLY MAINTAINED IN ACCORDANCE WITH THESE REQUIREMENTS MAY NEED TO BE CLUSTERED TOGETHER IN ONE CENTRALIZED LOCATION IN ORDER TO INCREASE COMPLIANCE AND REDUCE THE CHANCE OF A SPILL.

PORTABLE TOILET MANAGEMENT

DATE: 2/23/2017  STD. DRAWING NO. D-PTM
SCHEDULE D – GENERAL SPECIFICATIONS

This section contains the Standard Specifications and Revisions of Standard Specifications. Material & Construction Requirements, Measurement, and Payment for all bid items shall be in accordance with Schedule E – Special Conditions, and shall take precedence over the material & construction requirements, measurement, and payment sections of the Standard Specifications or Revisions of Standard Specifications.

STANDARD SPECIFICATIONS

The following are the Standard Specifications which apply to this project. In the event there are conflicting Standard Specifications, the order of precedence will be based upon the order in which the Standard Specifications are listed. Schedule H – Special Conditions describes which specific Standard Specification sections apply to each bid item.

All Contractors are required to have on the job site and utilize the current updated copy of the Standard Specifications applicable to the work.

CITY OF COLORADO SPRINGS

1. The “City of Colorado Springs Engineering Division Standard Specifications”, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project. This document is referenced as the “City 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 or at the following website: https://coloradosprings.gov/public-works/page/standard-specifications-manual

2. The “City of Colorado Springs Drainage Criteria Manual, Volume II”, May 2014, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project. This document is referenced as the “City Drainage Criteria Manual”.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following website: https://coloradosprings.gov/public-works/page/reference-materials

Per Section 9.0 of the City Drainage Criteria Manual, the “Construction BMP Fact Sheets” from the Urban Drainage Flood Control District Manual, Volume 3 are applicable. These Fact Sheets can be downloaded at the following website:
http://udfcd.org/volume-three

3. The “Pikes Peak Region Asphalt Paving Specifications”, Latest Edition, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following website: https://coloradosprings.gov/public-works/page/reference-materials

4. The “City of Colorado Springs Traffic Controls for Street Construction, Utility Work, and Maintenance Operations”, Latest Edition, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following website: https://coloradosprings.gov/public-works/page/standard-specifications-manual

5. The “City of Colorado Springs Traffic Engineering Signage and Pavement Markings Guidelines”, Latest Edition, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following website: https://coloradosprings.gov/public-works/page/standard-specifications-manual

6. The “Colorado Springs City Traffic Signal Installation and Parts Specifications for Contractors”, 9/2/2016 Edition, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following website: https://coloradosprings.gov/public-works/page/standard-specifications-manual

7. The following sections of the “City of Colorado Springs Parks and Recreation Specifications” (Schedule I), except as modified hereinafter,
which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Section 02231 Tree Protection and Pruning
Section 02810 Irrigation Systems
Section 02920 Seeding and Sodding
Section 02930 Exterior Plants

COLORADO SPINGS UTILITIES

1. The Standard Specifications for water line construction and protection shall be the “Colorado Springs Utilities Water 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.

Copies are available from the Colorado Springs Utilities' Development Services, 111 S. Cascade, Suite 105, Colorado Springs, CO 80903, during regular business hours or at the following website: https://www.csu.org/Pages/standards-bulletins.aspx

2. 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.

Copies are available from the Colorado Springs Utilities' Development Services, 111 S. Cascade, Suite 105, Colorado Springs, CO 80903, during regular business hours or at the following website: https://www.csu.org/Pages/standards-bulletins.aspx


Copies are available from the Colorado Springs Utilities' Development Services, 111 S. Cascade, Suite 105, Colorado Springs, CO 80903, during regular business hours or at the following website: https://www.csu.org/Pages/standards-bulletins.aspx

COLORADO DEPARTMENT OF TRANSPORTATION

1. The “Colorado Department of Transportation Standard Specifications for Road and Bridge Construction”, 2017 version, and all published
standard special provisions, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project. This document is referenced as the “CDOT Standard Specifications”.

The aforementioned revisions to the CDOT Standard Specifications are available from the following website:


2. The “Colorado Department of Transportation M&S Standard Plans”, latest version, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project. This document is reference as the “CDOT Standard Plans”.

CDOT provides regular updates to the CDOT Standard Plans. The versions of each plan as specified on the “Standard Plans List” in the project plans shall apply to this project. CDOT Standard Plans are available from the following website:

https://www.codot.gov/business/designsupport/standard-plans
SCHEDULE E – MEASUREMENT AND PAYMENT

The Measurement and Payment for all bid items shall be in accordance with this section and shall take precedence over the measurement and payment sections of the Standard Specifications or Revisions of Standard Specifications.

MEASUREMENT OF PAY QUANTITIES

A. The Contractor shall make all measurements, determine all quantities and the amounts of work done under the Contract subject to approval by the Inspector. At the time measurements are made for quantity determinations, the Inspector, or his authorized assistant, shall be present to verify such measurements.

B. No measurement will be made for:
   1. Work performed or materials placed outside of area indicated established by the Inspector.
   2. Materials wasted, used, or disposed of in a manner not called for under the contract.
   3. Materials on hand after completion of construction.
   4. 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).
   5. Hauling and disposing of rejected materials.
   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.

ESTIMATED QUANTITIES

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 unless noted otherwise in the specifications. 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.

ROUNDING

Quantities for final and interim payment shall be rounded according to the table below:

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<th>PAY UNIT</th>
<th>Rounding Criteria</th>
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<td>Cubic Yard</td>
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If the excess digit directly to the right of the place to be rounded to is 4 or less, round down, otherwise round up. A representative of the City (an inspector) may carry additional digits for individual measurements, but for interim payment these measurements shall be summed and then rounded. If the item is not measured and is equal to plan quantity, all interim measurements shall be rounded to the nearest whole unit. Quantities shown in the plans and contract quantities have been rounded to the nearest whole unit.

**PAYMENT FOR LUMP SUM ITEMS**

Measurement shall be for work actually completed.

**GENERAL PAYMENT**

Payment will be made only for items listed in the bid form, items added through Minor Work Revision, or work authorized for payment through Force Account. All other work and material required for completion of the project shall be considered incidental.

**BID ITEM DESCRIPTIONS**

**100-00000 MOBILIZATION**

a) **Material and Construction Requirements**
   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.

b) **Method of Measurement**
   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.

c) **Basis of Payment**
   Payment shall be made as a percentage of the unit bid price for the Bid Item. The percentage paid will be equivalent to the percentage of total contract value completed during said pay period and 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, 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. include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

**100-20000 CONSTRUCTION PHASING/MOT**

a) **Material and Construction Requirements**
   Construction Phasing/MOT shall be in accordance with Section 800 of the City Standard Specifications and the Manual of Uniform Traffic Control Devices Supplement for the City of Colorado Springs.

b) **Method of Measurement**
   The quantity of Construction Phasing/MOT to be paid for shall be lump sum. Construction Phasing/MOT will be paid based on the percentage of the contract that has been completed and accepted by the Engineer as complying with the plans.
c) Basis of Payment
Payment shall be made as a percentage of the unit bid price for the Bid Item. The percentage paid will be equivalent to the percentage of total contract value completed during said pay period and shall include full compensation for all labor, equipment, tools, materials necessary to complete the work that are not included in "Bid Item 100-20020 Lane Closure with Arrow Board (Single)" or "Bid Item 100-20030 Variable Message Board". Payment for Construction Phasing/MOT shall include (but not limited to) the traffic control plan/permit, Traffic Control Supervisor, barricades, pedestrian detour signs, trail closure and detour signs, no parking signs, etc., detour pavement placement and removal, advanced signs, 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.

100-20020 LANE CLOSURE WITH ARROW BOARD (SINGLE) (DAY)
a) Material and Construction Requirements
Lane Closure with Arrow Board (Single) shall be in accordance with Section 800 of the City Standard Specifications and the Manual of Uniform Traffic Control Devices Supplement for the City of Colorado Springs.
b) Method of Measurement
The quantity of Lane Closure with Arrow Board (Single) to be paid shall be determined by the measure of the number of actual days each lane closure is used on the project as approved by the Inspector.
c) Basis of 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 including but not limited to maintenance, storage, operation, relocation to different sites during the project, and all repairs and all other items of work involved in the Lane Closure with Arrow Board (Single).

100-20030 VARIABLE MESSAGE BOARD (DAY)
a) Material and Construction Requirements
Variable Message Board shall be in accordance with Section 800 of the City Standard Specifications and the Manual of Uniform Traffic Control Devices Supplement for the City of Colorado Springs.
b) Method of Measurement
The quantity of Variable Message Board to be paid shall be determined by the measure of the number of actual days each lane closure is used on the project as approved by the Inspector.
c) Basis of 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 including but not limited to maintenance, storage, operation, relocation to different sites during the project, and all repairs and all other items of work involved in the Variable Message Board.

100-30000 EROSION CONTROL (LS)
a) Material and Construction Requirements
Erosion Control shall include but not be limited to concrete washouts (setup, maintenance, disposal, etc.), inlet protection, stockpile management, erosion control, and sweeping. Erosion Control shall be in accordance with the City of Colorado Springs Drainage Criteria Manual, Volume II and the stipulations of the City of Colorado Springs MS4 permit and all other state and local permits.
b) Method of Measurement
The quantity of Erosion Control to be paid for shall be lump sum. This work consists of installing and maintaining erosion control measures during and after the time of construction.
c) Basis of Payment
Payment shall be made as a percentage of the unit bid price for the Bid Item. The percentage paid will be equivalent to the percentage of total contract value completed during said pay period and shall include full compensation for all labor, equipment, tools, modifications, permits, red-lines, revisions and materials necessary to complete the work.

202-00000 UNCLASSIFIED EXCAVATION (CY)

   a) Material and Construction Requirements
   Unclassified Excavation shall be in completed in accordance with Section 200 of the City Standard Specifications.

   b) Method of Measurement
   The quantity of Unclassified Excavation to be measured will be the actual cubic yardage of material excavated and removed from the project site. The Contractor shall utilize suitable excavated material for embankment purposes as approved by the Engineer for raising grades and backfilling the new construction. Extra excavated material shall be removed from the site and disposed of at an appropriate facility at the expense of the contractor. Unclassified Excavation shall not be paid for excavation that is included in other Bid Items.

   c) Basis of Payment
   Payment shall be made at the applicable contract unit price for the Bid Item and shall be include full compensation for all excavation, hauling, temporary stockpiling, moving, disposal of excess material, off-site disposal of unsuitable material, placing and compacting onsite material, labor, equipment, tools, and materials necessary to complete the work.

220-00180 REMOVAL OF CONCRETE FLATWORK (6 INCH) (SY)

   a) Material and Construction Requirements
   Removal of Concrete Flatwork (6-inch) shall meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures and Obstructions.

   b) Method of Measurement
   Removal of Concrete Flatwork (6-inch) to be paid for shall be determined by measurement of square yardage of material actually removed and accepted by the Inspector as meeting the project specifications.

   c) Basis of Payment
   Payment shall be made at the applicable contract unit price for the Bid Item and shall be include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all removed material, backfill and compaction of Aggregate Base Course (CDOT Class 6) to an elevation two (2) inches below adjacent surface, cleaning of debris from surfaces not removed, and all other items of work involved in Removal of Concrete Flatwork (6-inch)).

220-00181 REMOVAL OF CONCRETE FLATWORK (REINFORCED)(6 INCH) (SY)

   a) Material and Construction Requirements
   Removal of Concrete Flatwork (6-inch, Reinforced) shall meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures and Obstructions.

   b) Method of Measurement
   Removal of Concrete Flatwork (6-inch, Reinforced) to be paid for shall be determined by measurement of square yardage of material actually removed and accepted by the Inspector as meeting the project specifications.

   c) Basis of Payment
   Payment shall be made at the applicable contract unit price for the Bid Item and shall be include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all removed material, backfill and compaction of Aggregate Base Course (CDOT Class 6) to an elevation two (2) inches
below adjacent surface, cleaning of debris from surfaces not removed, and all other items of work involved in Removal of Concrete Flatwork (6-inch Reinforced).

220-00182 REMOVAL OF CONCRETE CROSSSPAN (8 INCH REINFORCED)  (SY)

a) Material and Construction Requirements
Remove Concrete Crossspan (8-inch, Reinforced) shall meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures and Obstructions.

b) Method of Measurement
Remove Concrete Crossspan (8-inch, Reinforced) to be paid for shall be determined by measurement of square yardage of material actually removed and accepted by the Inspector as meeting the project specifications. Remove Concrete Crossspan (8-inch, Reinforced) shall be used to quantify all removal of concrete that is 8-inches in thickness and reinforced regardless of location (i.e., driveway aprons, thickened sidewalk, etc.)

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all removed material, backfill and compaction of Aggregate Base Course (CDOT Class 6) to an elevation two (2) inches below adjacent surface, cleaning of debris from surfaces not removed, and all other items of work involved in Remove Concrete Crossspan (8-inch Reinforced).

220-00200 REMOVAL OF SIDEWALK (UP TO 4-INCH)  (SY)

a) Material and Construction Requirements
Removal of Sidewalk (up to 4-inch) shall meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures and Obstructions.

b) Method of Measurement
Removal of Sidewalk (up to 4-inch) to be paid for shall be determined by measurement of square yardage of material actually removed and accepted by the Inspector as meeting the project specifications.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all removed material, backfill and compaction of Aggregate Base Course (CDOT Class 6) to an elevation two (2) inches below adjacent surface, cleaning of debris from surfaces not removed, and all other items of work involved in Removal of Sidewalk (up to 4-inch).

220-00203 REMOVAL OF CURB AND GUTTER  (LF)

a) Material and Construction Requirements
Removal of Curb and Gutter shall include median curb and gutter and meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures and Obstructions.

b) Method of Measurement
Removal of Curb and Gutter to be paid for shall be determined by measurement of the number of linear feet of material actually removed and accepted by the Inspector as meeting the project specifications. Removal of Curb and Gutter shall be measured along the front face of curb within the flowline of gutter prior to removal.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all concrete and debris,
subsequent backfill of select fill for leveling to original grade if necessary, and all other items of work involved in Removal of Curb and Gutter.

220-00205 REMOVAL OF CURB AND GUTTER (REINFORCED) (LF)
   a) Material and Construction Requirements
      Removal of Curb and Gutter (Reinforced) shall include median curb and gutter and meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures and Obstructions.
   b) Method of Measurement
      Removal of Curb and Gutter (Reinforced) to be paid for shall be determined by measurement of the number of linear feet of material actually removed and accepted by the Inspector as meeting the project specifications. Removal of Curb and Gutter (Reinforced) shall be measured along the front face of curb within the flowline of gutter prior to removal.
   c) Basis of Payment
      Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all concrete and debris, subsequent backfill of select fill for leveling to original grade if necessary, and all other items of work involved in Removal of Curb and Gutter (Reinforced).

220-00220 REMOVAL OF ASPHALT MAT (UP TO 6-INCH) (SY)
   a) Material and Construction Requirements
      Removal of Asphalt Mat (up to 6-inch) shall meet the materials and construction requirements of Section 220 of the City Standard Specifications and the Revision to Section 220 – Removal of Structures.
   b) Method of Measurement
      Removal of Asphalt Mat (up to 6-inch) to be paid for shall be determined by measurement of square yardage of material actually removed and accepted by the Inspector as meeting the project specifications.
   c) Basis of Payment
      Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all asphalt and debris, backfill of select fill (Class 6 Aggregate Base Course) for leveling to original grade if necessary, and all other items of work involved in Removal of Asphalt Mat (up to 6-inch).

240-00810 RESET SIGN POST (EA)
   a) Material and Construction Requirements
      Reset Sign Post shall meet the materials and construction requirements of Section 220 of the City Standard Specifications; Revision to Section 220 – Removal of Structures and Obstructions, and the City Traffic Signage and Markings Manual.
   b) Method of Measurement
      Reset Sign Post to be paid for shall be determined by measurement of the number of each sign actually removed, relocated, and accepted by the Inspector as meeting the project specifications.
   c) Basis of Payment
      Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to removal, disposal of foundation or other material that cannot be reset, safe storage including damage and theft, reinstallation, new foundation including concrete and reinforcing steel for a complete foundation, and all other items of work involved in Reset Sign Post.

300-06000 AGGREGATE BASE COURSE (CLASS 6) (TON)
   a) Material and Construction Requirements
Aggregate Base Course (Class 6) shall meet the materials and construction requirements of Section 300 of the City Standard Specifications.

b) Method of Measurement
Aggregate Base Course (Class 6) to be paid for shall be determined by measurement of the number of tons actually constructed and accepted by the Inspector as meeting the project specifications.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to hauling, spreading, water, compaction, grading, proof-rolling, and all other items of work involved in Aggregate Base Course (Class 6). Excavation is not included.

400-70000 ASPHALT CONCRETE PAVEMENT (PATCHING) (TON)

a) Material and Construction Requirements
Asphalt Concrete Pavement (Patching) construction shall be in accordance with Section 400 of the City Standard Specifications, and the Pikes Peak Region Asphalt Paving Specifications.

b) Method of 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.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all materials, for preparation, mixing, transporting, placing and compaction of these materials, removal and disposal of unsuitable subgrade materials, replacement with suitable backfill as necessary, all labor, equipment, tools, and materials necessary to complete the work involved in Asphalt Concrete Pavement (Patching).

500-00500 CONCRETE CURB RAMP (6-INCHES) (SF)

a) Material and Construction Requirements
Concrete Curb Ramp (6-inch) shall meet the materials and construction requirements Section 500 of the City Standard Specifications.

b) Method of Measurement
Concrete Curb Ramp (6-inch) to be paid for shall be determined by measurement of square feet of material actually installed and accepted by the Inspector as meeting the project specifications. Curb Ramp (6-inch) shall be measured in the middle of the ramp.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to excavation, subgrade preparation, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, grade verification, subsequent backfill around formed concrete and all other items of work involved in Concrete Curb Ramp (6-inch).

500-00525 TRUNCATED DOMES (DETECTABLE WARNING) (SF)

c) Material and Construction Requirements
Truncated Domes (Detectable Warning) shall meet the materials and construction requirements Section 500 of the City Standard Specifications.

d) Method of Measurement
Truncated Domes (Detectable Warning) to be paid for shall be determined by measurement of square feet of material actually installed and accepted by the Inspector as meeting the project specifications. Truncated Domes (Detectable Warning) shall be measured in the middle of the Truncated Domes (Detectable Warning) area.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to Truncated Domes (Detectable Warning) areas including truncated domes, and all other items of work involved Truncated Domes (Detectable Warning).

500-01040 CONCRETE SIDEWALK (4 INCH) (SF)

a) **Material and Construction Requirements**
   Concrete Sidewalk (4-inch) shall be in accordance with Section 500 of the City Standard Specifications.

b) **Method of Measurement**
   The quantity of Concrete Sidewalk (4-inch) 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.

c) **Basis of Payment**
   Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in Concrete Sidewalk (4-inch).

500-01050 CONCRETE SIDEWALK (5 INCH)(W/ FIBER REINFORCEMENT) (SF)

a) **Material and Construction Requirements**
   Concrete Sidewalk (5-inch) (w/ Fiber Reinforcement) shall be in accordance with Section 500 of the City Standard Specifications.

b) **Method of Measurement**
   The quantity of Concrete Sidewalk (5-inch) (w/ Fiber Reinforcement) 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.

c) **Basis of Payment**
   Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in Concrete Sidewalk (5-inch) (w/ Fiber Reinforcement).

500-01060 CONCRETE SIDEWALK (6 INCH) (SF)

a) **Material and Construction Requirements**
   Concrete Sidewalk (6-inch) shall be in accordance with Section 500 of the City Standard Specifications.

b) **Method of Measurement**
   The quantity of Concrete Sidewalk (6-inch) 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.

c) **Basis of Payment**
   Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in Concrete Sidewalk (6-inch).
and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in Concrete Sidewalk (6-inch).

500-01080 CONCRETE SIDEWALK/DRIVEWAY (8 INCH REINFORCED) (SF)

a) **Material and Construction Requirements**
   Concrete Sidewalk/Driveway (8-inch Reinforced) shall be in accordance with Section 500 of the City Standard Specifications.

b) **Method of Measurement**
   The quantity of Concrete Sidewalk/Driveway (8-inch Reinforced) 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.

c) **Basis of Payment**
   Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, reinforcing steel, finishing, joint sealant, subsequent backfill around formed concrete and all other items of work involved in the Concrete Sidewalk/Driveway (8-inch Reinforced).

500-02000 CONCRETE CROSSPAN (8 INCH REINFORCED) (SF)

a) **Material and Construction Requirements**
   Concrete Crosspan (8-inch Reinforced) shall be in accordance with Section 500 of the City Standard Specifications.

b) **Method of Measurement**
   The quantity of Concrete Crosspan (8-inch Reinforced) 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.
   Squared Returns will be measured using the detail below and the formula for a spandrel or fillet.

   \[ A = \text{Square Return Edge Length} \]
   \[ B = \text{Square Return Edge Length} \]

   **Formula:** \((A \cdot B) \cdot 0.215\)
c) **Basis of Payment**
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, reinforcing steel, finishing, joint sealant, subsequent backfill around formed concrete and all other items of work involved in the Concrete Sidewalk/Driveway (8-inch Reinforced)

500-51000 CURB AND GUTTER TYPE 1

a) **Material and Construction Requirements**
Curb and Gutter Type 1 shall meet the materials and construction requirements of Section 500 of the City Standard Specifications.

b) **Method of Measurement**
Curb and Gutter Type 1 to be paid for shall be determined by measurement of the number of linear feet of material actually installed and accepted by the Inspector as meeting the project specifications. Curb and Gutter Type 1 shall be measured along the front face of curb within the flow line of the gutter.

Transitions between types of curb and gutter shall be measured for payment for both types of curb and gutter. Each type shall be measured to the midway point of the transition. Curb and gutter through concrete crosspans and square returns, around plowable end sections, and across openings for pedestrian ramps and driveways shall be included in the measurement for payment.

c) **Basis of Payment**
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, excavation necessary stabilization within the first 6-inches of depth below the new construction, subgrade preparation, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in the removal and replacement of the Curb and Gutter Type 1.

500-53000 CURB AND GUTTER TYPE 3

c) **Material and Construction Requirements**
Curb and Gutter Type 3 shall meet the materials and construction requirements of Section 500 of the City Standard Specifications.

d) **Method of Measurement**
Curb and Gutter Type 3 to be paid for shall be determined by measurement of the number of linear feet of material actually installed and accepted by the Inspector as meeting the project specifications. Curb and Gutter Type 3 shall be measured along the front face of curb within the flow line of the gutter.

Transitions between types of curb and gutter shall be measured for payment for both types of curb and gutter. Each type shall be measured to the midway point of the transition. Curb and gutter through concrete crosspans and square returns, around plowable end sections, and across openings for pedestrian ramps and driveways shall be included in the measurement for payment.

c) **Basis of Payment**
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, excavation necessary stabilization within the first 6-inches of depth below the new construction, subgrade preparation, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in the removal and replacement of the Curb and Gutter Type 3.

500-55000 CURB AND GUTTER TYPE 5

a) **Material and Construction Requirements**
Curb and Gutter Type 5 shall meet the materials and construction requirements of Section 500 of the City Standard Specifications.

b) Method of Measurement
Curb and Gutter Type 5 to be paid for shall be determined by measurement of the number of linear feet of material actually installed and accepted by the Inspector as meeting the project specifications. Curb and Gutter Type 5 shall be measured along the front face of curb within the flow line of the gutter.
Transitions between types of curb and gutter shall be measured for payment for both types of curb and gutter. Each type shall be measured to the midway point of the transition. Curb and gutter through concrete crosspans and square returns, around plowable end sections, and across openings for pedestrian ramps and driveways shall be included in the measurement for payment.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, excavation necessary stabilization within the first 6 inches of depth below the new construction, subgrade preparation, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in the removal and replacement of the Curb and Gutter Type 5.

500-58000 CURB AND GUTTER TYPE 1 (8-INCH REINFORCED) (LF)
a) Material and Construction Requirements
Curb and Gutter Type 1 (8-inch Reinforced) shall meet the materials and construction requirements of Section 500 of the City Standard Specifications. Curb and Gutter Type 1 (8-inch Reinforced) shall be constructed as follows:

- The gutter pan shall be 8" in thickness and reinforced using #4 rebar.
- All reinforcing shall be supported with wire chairs placed uniformly in the lower portion of the concrete mass at all time until the pour is complete.
- Rebar placed in the curb head will be suspended from the forms with wire during the pour.
- Lap splices of rebar shall be a minimum of 12"
- Rebar shall be placed per the following detail:

b) Method of Measurement
Curb and Gutter Type 1 (8-inch Reinforced) to be paid for shall be determined by measurement of the number of linear feet of material actually installed and accepted by the Inspector as meeting the project specifications. Curb and Gutter Type 1 (8-inch Reinforced) shall be measured along the front face of curb within the flow line of the gutter.
Curb radius with square returns shall be poured with eight (8) inches of reinforced concrete and measured as Curb and Gutter Type 1 (8-inch Reinforced).
Transitions between types of curb and gutter shall be measured for payment for both types of curb and gutter. Each type shall be measured to the midway point of the transition. Curb and
gutter through concrete crosstabs and square returns, around plowable end sections, and across openings for pedestrian ramps and driveways shall be included in the measurement for payment.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to saw cutting, removal and off-site disposal of all concrete and debris, excavation, necessary stabilization within the first 6-inches of depth below the new construction, subgrade preparation, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, reinforcing steel, finishing, subsequent backfill around formed concrete and all other items of work involved in the removal and replacement of the concrete curb and gutter Type 1 (24-inch Gutter Pan) (8-inch Reinforced).

500-59103 CHASE DRAIN (W) COVERED CHANNEL (SF)

a) Material and Construction Requirements
Chase Drain (w) Covered Channel shall meet the materials and construction requirements of Section 500 of the City Standard Specifications.

b) Method of Measurement
Chase Drain (w) Covered Channel to be paid for shall be determined by measurement of the number of square feet actually constructed and accepted by the Inspector as meeting the project specifications. Chase Drain (w) Covered Channel will be measured using the square footage of the steel plate.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to excavation, subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, reinforcing steel, steel plates, hardware, integral frames, finishing, subsequent backfill around formed concrete, and all other features of work involved in the Chase Drain (w) Covered Channel.

500-59105 CONCRETE CURB HEAD (0 TO 12-INCH) (LF)

a) Material and Construction Requirements
Concrete Curb Head (0 to 12-inch) shall meet the materials and construction requirements of Section 500 of the City Standard Specifications.

b) Method of Measurement
Concrete Curb Head (0 to 12-inch) to be paid for shall be determined by measurement of the number of linear feet of material actually installed and accepted by the Inspector as meeting the project specifications. Concrete Curb Head (0 to 12-inch) shall be measured along the centerline top of the curb head.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to subgrade preparation, excavation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, concrete, finishing, subsequent backfill around formed concrete and all other items of work involved in the construction of the Concrete Curb Head (0 to 12-inch).

500-60000 MEDIAN COVER MATERIAL (COLORED PATTERNED) (SF)

a) Material and Construction Requirements
Median Cover Material (Colored Patterned) shall meet the materials and construction requirements of Section 500 of the City Standard Specifications.

b) Method of Measurement
Median Cover Material (Colored Patterned) to be paid for shall be determined by measurement of square feet of material actually installed and accepted by the Inspector as meeting the project specifications.

c) **Basis of Payment**

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to subgrade preparation, necessary stabilization within the first 6-inches of depth below the new construction, compaction, placement of select fill for leveling and forming, forming, expansion joint material, membrane material, concrete (including integral color), stamping, finishing, subsequent backfill around formed concrete and all other items of work involved in the Median Cover Material (Colored Patterned).

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500-63000 CURB DRAIN BOX (NEENAH CURB BOX #R-3262 COMPLETE IN PLACE)  
(EA)

a) **Material and Construction Requirements**

Curb Drain Box (Neenah Curb Box #R-3262 Complete in Place) shall meet the materials and construction requirements of Section 600 of the City Standard Specifications.

b) **Method of Measurement**

Curb Drain Box (Neenah Curb Box #R-3262 Complete in Place) to be paid for shall be determined by measurement of the number of Neenah Curb Boxes actually installed and accepted by the Inspector as meeting the project specifications.

c) **Basis of Payment**

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to any necessary pipes and/or fittings to tie into curb box within ten (10) feet, saw cutting, excavation, removal and disposal of concrete and removed materials (including existing box if necessary), curb box, grout, subsequent backfill, compaction, and all other items of work involved in Curb Drain Box (Neenah Curb Box #R-3262 Complete in Place).

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501-00200 LANDSCAPE ROCK (TYPE B)  
(SF)

a) **Material and Construction Requirements**

Landscape Rock (Type B) shall meet the material requirements of Section 02930 of the City Parks Standard Specifications.

Aggregate for Landscape Rock (Type B) shall consist of clean crushed stone, crushed gravel, or natural gravel with average particle sizes between one-half inches (½”) to two inches (2”).

Examples of Landscape Rock (Type B) are:

- Royal Granite
- Colorado Granite
- Rocky Mountain Red
- Red Canyon
- Western White
- Arkansas Tan River Rock
- Rhyolite
- Red Sunrise
- Golden Sunset
- Indian Sunset/Summer/Spice

Rock types excluded from Landscape Rock (Type B):

- Any rock type larger than 2”
- Black/Denver Granite
- Speckled White River Rock
- Cripple Creek Gold (Gold Ore)
- Lava and Quartz Rock
- Wyoming Gold
- Western Sunset
- Purple Mountain
- New Mexico White
- Breeze/Roadbase
- Other non-standard (blue, black, rose, gold, purple etc.) color rock

b) **Method of Measurement**

Landscape Rock (Type B) to be paid for shall be measured by the square foot along the horizontal plane of a completed rock surface up to four inches deep in its final position. Contractor shall provide a uniformly graded surface upon which the weed barrier fabric and landscape rock is placed. Any additional rock placed thicker than four inches due to an uneven, unprepared surface or overrun of material ordered will not be measured for payment unless approved by the Inspector.

c) **Basis of 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 including but not limited to excavation, surface preparation, hauling, delivery, weed barrier fabric, placement, spreading, return or disposal offsite of unused material, and all other items of work involved in placing Landscape Rock (Type B).

501-00300 LANDSCAPE ROCK (TYPE C) (SF)

a) Material and Construction Requirements

Landscape Rock (Type C) shall meet the material requirements of Section 02930 of the City Parks Standard Specifications.

Aggregate for Landscape Rock (Type C) shall consist of clean crushed stone, crushed gravel, or natural gravel with average particle size greater than (2") up to eight inches (8").

Examples of Landscape Rock (Type C) are:
- Canyon Granite
- Arkansas Tan River Rock
- River Rock Gray/Tan/Blue/Brown
- Horizon
- River Rock (Washed)
- Rock types excluded from Landscape Rock (Type C):
  - Any rock type 2" or smaller
  - Any rock type larger than 8"
  - Any type of rip rap
  - Boulders
  - Rocky Mountain Red
  - Red Canyon
  - Black Granite
  - Cripple Creek Gold (Gold Ore)
  - Rockies Red
  - Denver Granite
  - Indian Sunset/Summer
  - Lava and Quartz Rock
  - New Mexico White
  - Speckled White River Rock
  - Purple Mountain
  - Breeze/Roadbase
  - Other non-standard (blue, black, rose, gold, purple etc.) color rock

b) Method of Measurement

Landscape Rock (Type C) to be paid for shall be measured by the square foot along the horizontal plane of a completed rock surface necessary to adequately provide complete ground coverage. Contractor shall provide a uniformly graded surface upon which the weed barrier fabric and landscape rock is placed. Any additional rock placed thicker than necessary due to an uneven, unprepared surface or overrun of material ordered will not be measured for payment unless approved by the Inspector.

c) Basis of 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 including but not limited to excavation, surface preparation, hauling, delivery, weed barrier fabric, placement, spreading, return or disposal offsite of unused material, and all other items of work involved in placing Landscape Rock (Type C).

813-00201 2 INCH CONDUIT (TRAFFIC) (LF)

a) Material and Construction Requirements

2-Inch Conduit shall meet the materials and construction requirements of the City Traffic Signal Installation & Parts Specifications.

b) Method of Measurement

2-Inch Conduit to be paid for shall be determined by measurement of the linear feet of conduit actually installed not including sweeps or conduit embedded within caissons and as accepted by the Inspector as meeting the project specifications.

c) Basis of Payment

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to utility locates, layout, trenching, backfill, and all other items of work involved in 2 Inch Conduit.
814-72860 PEDESTRIAN PUSH BUTTON  (EA)

a) Material and Construction Requirements
Pedestrian Push Button Caisson shall meet the materials and construction requirements of Section 600 of the City Standard Specifications and the City Traffic Signal Installation & Parts Specifications.

b) Method of Measurement
Pedestrian Push Button Caisson to be paid for shall be determined by measurement of the number of each pedestrian push button caissons actually constructed and accepted by the Inspector as meeting the project specifications.

c) Basis of Payment
Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work including, but not limited to utility locates, layout, potholing, excavation, dewatering, setting anchor bolt/rebar cage/ground rod, 2 inch conduit sweep/stubout, and all other items of work involved in Pedestrian Push Button Caisson. The City will provide pre-tied rebar cages, anchor bolt assemblies, and grounding rods (if necessary) to the Contractor at no additional cost. These City-provided materials can either have delivery coordinated or picked up from the City at 416 W. Fontanero Street. Contractor to coordinate with the Inspector regarding layout and location of caissons prior to beginning work at signalized intersections.

900-00205 TOPSOIL  (CY)

a) Material and Construction Requirements
Topsoil shall be in accordance with the City Standard Specifications.

b) Method of Measurement
Topsoil to be paid for will be measured by the actually cubic yardage installed and accepted by the Engineer as complying with the plans and specifications.

c) Basis of 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 including but not limited to excavation, surface preparation, hauling, delivery, placement, spreading, return or disposal offsite of unused material, and all other items of work involved in placing Topsoil.

902-00009 TURF SOD WITH SOIL PREPARATION  (SF)

a) Material and Construction Requirements
Turf Sod with Soil Preparation shall meet the material and construction requirements of Section 02920 of the City Parks Standard Specifications and the Revision of COS Parks Section 02920.

b) Method of Measurement
Sod shall be measured by the square foot along the horizontal plane of a completed surface.

c) Basis of Payment
Payment shall be made at the applicable unit price for the Bid Item and shall include full compensation for all labor and materials necessary to complete the sod including but not limited to surface preparation and topsoil. Irrigation water and system modifications will be paid for separately as needed.

990-70010 F/A MINOR CONTRACT REVISIONS  (FA)

a) Material and Construction Requirements
Minor Contract Revisions consists of work authorized and approved by the Project Manager which is not identified elsewhere in the contract documents and is necessary to accomplish the scope of work of the contract.

b) Method of Measurement
Minor Contract Revisions is a Force Account Item.

c) Basis of Payment
Payment will be made Minor Contract Revisions at the agreed upon price for the work completed and shall include full compensation for all labor, equipment, tools, materials and warranty necessary to complete the work.

990-70020 F/A LANDSCAPE RESTORATION (FA)

a) Material and Construction Requirements
F/A Landscape Restoration consists of landscape restoration work authorized and approved by the Project Manager which is not identified elsewhere in the contract documents and is necessary to accomplish the scope of work of the contract. F/A Landscape Restoration may be initiated by and at the sole discretion of the City. The intent of the F/A Landscape Restoration item is to provide a mechanism for payment of minor work required to complete property restoration not identified elsewhere. The contractor may not submit for payment of F/A Landscape Restoration without prior approval of the City.

b) Method of Measurement
F/A Landscape Restoration is a Force Account Item.

c) Basis of Payment
Payment will be made for F/A Landscape Restoration at the agreed upon price for the work completed and shall include full compensation for all labor, equipment, tools, materials and warranty necessary to complete the work.
SCHEDULE F – CITY OF COLORADO SPRINGS PARKS AND RECREATION SPECIFICATIONS

F.1 TECHNICAL SPECIFICATIONS
All Contractors on this project are required to have on the job site and utilize the current updated copy of the City of Colorado Springs Engineering Divisions Standard Specifications.

F.2 APPLICABLE SPECIFICATIONS:
02230 SITE CLEARING (REVISED 2013)
PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes the following:
   1. Examination of the site.
   2. Marshalling and access.
   3. Protecting existing trees and vegetation to remain.
   4. Removing trees and other vegetation.
   5. Clearing and grubbing.
   6. Topsoil stripping.
   7. Removing above-grade site improvements.
   8. Disconnecting, capping or sealing, and abandoning site utilities in place.
   9. Disconnecting, capping or sealing, and removing site utilities.

B. Related Sections include the following:
   1. Division 1 Section “Field Engineering” for verifying utility locations and for recording field measurements.
   2. Division 1 Section “Construction Facilities and Temporary Controls” for temporary utilities, temporary construction and support facilities, temporary security and protection facilities and environmental protection measures during site operations.
   3. Division 2 Section “Tree Protection and Trimming” for protecting trees remaining on-site that are affected by site operations.
   4. Division 2 Section “Earthwork” for soil materials, excavating, backfilling, and site grading.
   5. Division 2 Section “Landscaping” for finish grading, including placing and preparing topsoil for lawns and planting.

1.3 DEFINITIONS
A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than ¾ inches in diameter; and free of weeds, roots and other deleterious materials.

1.4 MATERIALS OWNERSHIP
A. Except for materials to be stockpiled or to remain Owner’s property, cleared materials shall become Contractor’s property and shall be removed from the site.

1.5 SUBMITTALS
A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing
B. Record drawings according to Division 1 Section “Contract Close-out.”
   1. Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.
C. An approved traffic control plan and all environmental permits as required by local and state agencies.

1.6 QUALITY ASSURANCE
A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section “Project Meetings”.

1.7 PROJECT CONDITIONS
A. The Contractor shall visit, inspect and thoroughly become familiar with the site and the scope of work. The Contractor will judge conditions that will exist when carrying out the contract. The Contractor shall meet with the Owner’s Representative to determine the point of access and marshaling area to be utilized to perform this work. No gasoline, oil concrete or other material shall be dumped anywhere on site.
B. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
   3. When working in the City Right of Way, submit an approved traffic control plan to Owner’s Representative.
C. Improvements on Adjoining Property: Authority for performing indicated removal and alteration work on property adjoining Owner’s property will be obtained by owner before award of Contract.
D. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner’s premises where indicated.
E. Notify utility locator service for area where Project is located before site clearing.

PART 2-PRODUCTS

2.1 SOIL MATERIALS
A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section “Earthwork.”
   1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3-EXECUTION

3.1 PREPARATION
A. Protect and maintain benchmarks and survey control points from disturbance during construction.
B. Submit a storm water control plan and fugitive dust permit as required by local and state agencies.
C. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
D. Locate and clearly flag trees and vegetation to remain or to be relocated.
E. Refer to City of Colorado Springs stormwater management manual.
F. Protect existing site improvements both in and outside of construction zone.
   1. Restore damaged improvements both on and off the site to their original condition, as acceptable to Owner.

3.2 TREE PROTECTION
A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
   1. Do not store construction materials, debris, or excavated material within drip line of remaining trees.
2. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.
B. Do not excavate within drip line of trees, unless otherwise indicated.
C. Refer to the related plans as indicated, and/or consult with the City Forester or the Designee assigned to the project.
D. Furnish all labor, material, tools, land equipment necessary to complete the work indicated on drawings and as required herein
E. Existing trees to remain shall be protected at all times during the Contract period, by using fencing (i.e., snow fencing, or chain link fencing with metal staking). Tree protection fencing shall be maintained by the Contractor during construction. The Protection area to be fenced two inches (2") outside the dripline of the tree unless otherwise required by the Owner's Representative. No equipment shall be parked, driven or material stockpiled within the dripline area of the existing trees to remain. No gasoline, oil, chemicals, concrete or other material shall be dumped anywhere on site. Where vehicle or equipment traffic if necessary in the protection area of a tree, the soil shall be protected from compaction by (6”-10") layer of wood chip mulch.
F. Any trees damaged during construction shall be promptly reported to the Owner's Representative, who shall contact the City Forester or the Designee for an assessment of damages. The contractor will be responsible for repair or replacement to the satisfaction of the City Forester or the Designee.
G. Tree roots are to be clean cut when necessary using proper equipment, i.e. loppers or concrete saw. The Contractor shall submit with the Bid the cost to implement proper boring under roots.
H. The City Forester or the Designee will be informed of all construction projects, especially when trees are involved.
I. The City Forester or the Designee will survey the site to set and determine what the contractor needs to do before construction begins. The Contractor shall set up tree protection devices.
J. The City Forester or the Designee shall be informed of:
   1. Soil grade changes adjacent to trees.
   2. Probable trenching through roots.
   3. Location of stored heavy equipment.
   4. Paths heavy equipment will take during construction project, to avoid root compaction and root breakage.
K. The City Forester or the Designee shall be notified during the project design phase, to aid in tree protection during the primary phase.
   1. When equipment must be used in close proximity of the trunk, the entire tree trunk shall be protected by banding large 2”x4” wooden boards to avoid direct contact. The soil shall be protected from compaction with a 6-10’ layer of wood chip mulch.
   2. The Forestry Division will conduct all pruning if limb elevation is needed to avoid equipment contact.
L. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
   1. Cover exposed roots with burlap and water regularly.
   2. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
   3. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.
M. Rehabilitate or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Architect.
   1. Employ a qualified arborist, as approved by the City Forester or the Designee, to submit details of proposed rehabilitation for the damage to trees and shrubs.
   2. The Contractor will replace trees that cannot be rehabilitated and restored to full-growth status, as determined by the qualified arborist and the City Forester or the Designee

3.3 UTILITIES
A. Contractor will coordinate for disconnecting and sealing indicated utilities that serve existing structures before site clearing with Owner’s Representative.
1. Verify that utilities have been disconnected and capped before proceeding with site clearing.

B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
   1. Owner will arrange to shut off indicated utilities when requested by Contractor.
   2. Arrange to shut off indicated utilities with utility companies.

C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or other unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicate.
   1. Notify Owner’s Representative not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Owner’s Representative written permission.

D. Excavate for and remove underground utilities indicated to be removed.

3.4 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
   1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
   2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
   3. Completely remove or grind stumps, roots, obstructions, and debris extending to a depth of 18 inches below exposed subgrade.
   4. Use only hand methods for grubbing within drip line of remaining trees.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
   1. Place fill material in horizontal layers not exceeding 8-inch loose depth, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
   1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil.
   Grade and shape stockpiles to drain surface water. Comply with fugitive dust permit.
   1. Do not stockpile topsoil within drip line of remaining trees.
   2. Dispose of excess topsoil as specified for waste material disposal.

3.6 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
   1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

3.7 DISPOSAL

A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner’s property.
   All associated costs and fees are the responsibility of the contractor.

END OF SECTION 02230 SITE CLEARING (REVISED 2013)

02231-TREE PROTECTION AND PRUNING (REVISED 2013)

PART 1-GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
A. This Section includes the protection and pruning of trees that interfere with, or are affected by, execution of the Work, whether temporary or new construction.
B. Related Sections include the following:
   1. Division 1 Section “Summary of Work” for limits placed on Contractor’s use of the site.
   2. Division 1 Section “Construction Facilities and temporary Controls” for temporary tree protection.
   3. Division 2 Section “Site Clearing” for removal limits of trees, shrubs, and other plantings affected by new construction.
   4. Division 2 Section “Landscaping: for tree and shrub planting and transplanting, tree support systems, and soil materials.
C. The Contractor shall visit, inspect and become thoroughly familiar with the site and the scope of work. The Contractor will judge the conditions that will exist when he carries out his contract.
D. The Contractor shall meet with the Owner’s Representative to determine the point of access and marshaling area to be utilized to perform this work.
E. Refer to the related guidelines as indicated, and/or consult with the City Forester or the Designee assigned to the project.
F. Furnish all labor, materials, tools, and equipment necessary to complete the work indicated on drawings and as required herein. This shall include:
   1. Proper root cutting.
   2. Erecting the required fencing when needed.
   3. Installing the correct and necessary tree barrier devices.
   4. Protecting the soil around trees from compaction.
G. The City Forester or the designee will be informed of all construction projects, especially when trees are involved.
H. The City Forester or the designee will survey the site to set up tree protection devices and determine what the Contractor needs to do, before construction begins.
I. The City Forester or the designee shall be informed of:
   1. Soil grade changes adjacent to trees.
   2. Probable trenching through roots.
   3. Location of stored heavy equipment.
J. Paths heavy equipment will take during construction project, to avoid root compaction and root breakage.
K. The City Forester shall be notified during the project design phase, to aid in tree protection during the primary phase.
L. When equipment must be used in close proximity of the trunk, the entire tree trunk shall be protected by banding large 2"x4" wooden boards to avoid direct contact. The soil shall be protected from compaction with a 6-10" layer of wood chip mulch.

1.3 SUBMITTALS
A. Maintenance Recommendations: From a qualified arborist for acre and protection of trees affected by construction during and after completing the Work.

1.4 QUALITY ASSURANCE
A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section “Project Meetings”
   1. Before starting tree protection and pruning, meet with representatives of authorities having jurisdiction, Owner, Architect, consultants, and other concerned entities. Review tree protection and pruning procedures and responsibilities. Notify participants at least three working days before convening conference. Record discussions and agreements and furnish a copy to each participant.

PART 2-PRODUCTS

2.1 MATERIALS
A. Drainage Fill: Selected crushed stone, or crushed or uncrushed gravel, washed, ASTM D 448, Size 24, with 90 to 100 percent passing a 2-1/2-inch sieve and not more than 10 percent passing a ¾-inch sieve.

B. Topsoil: Fertile, friable, surface soil, containing natural loam and complying with ASTM D 5268.

Provide topsoil, that is free of stones larger than 1 inch in any dimension and free of other extraneous or toxic matter harmful to plant growth. Obtain topsoil only from well-drained sites where soil occurs in depth of 4 inches or more; do not obtain from bogs or marshes.

C. Filter Fabric: Manufacturer’s standard, pervious, geotextile fabric of polypropylene, nylon, or polyester fibers.

D. Construction fence with T-posts.

PART 3-EXECUTION

3.1 PREPARATION

A. Temporary Fencing: Install temporary fencing located as indicated or outside the drip line of trees to protect remaining vegetation from construction damage.

1. Install construction fencing.

B. Protect tree root systems from damage due to noxious materials caused by runoff or spillage while mixing, placing, or storing construction materials. Protect root systems from flooding, eroding, or excessive wetting caused by de-watering operations.

C. Do not store construction materials, debris, or excavated material within the drip line of remaining trees. Do not permit vehicles or foot traffic within the drip line; prevent soil compaction over root systems.

D. Existing trees to remain shall be protected at all times during the Contract period, by using fencing (i.e., snow fencing, construction fencing with metal staking). Tree protection fencing shall be maintained by the Contractor during construction. The protection area to be fenced (2') outside the drip line of the tree unless otherwise required by the Owner’s Representative. No equipment shall be parked, driven or material stockpiled within the drip line area of the existing trees to remain. No gasoline, oil, chemicals, concrete or other material shall be dumped anywhere on site. Where vehicle or equipment traffic is necessary in the protection area of a tree, the soil shall be protected from compaction by (6”-10”) layer of wood chip mulch.

3.2 EXCAVATION

A. Install shoring or other protective support systems to minimize sloping or benching of excavations.

B. Do not excavate within drip line of trees, unless otherwise indicated.

C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems.

D. Where utility trenches are required within drip line of trees, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.

1. Root Pruning: Prior approval is needed from the City Forester or Designee to cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; i.e. chain saw, reciprocating saw or pruning saw. Stump grinding equipment allowed so long as the final cut is clean, not ragged. Do not break, chop, rip or otherwise mangle roots.

3.3 RE-GRADING

A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond drip line of trees. Maintain existing grades within drip line of trees.

3.4 TREE PRUNING

A. The Forestry Division will conduct all pruning if limb elevation is needed to avoid equipment contact.

3.5 TREE REPAIR AND REPLACEMENT
A. Aerate surface soil, compacted during construction, 10 feet beyond drip line and no closer than 36 inches to tree trunk. Drill 2-inch-diameter holes a minimum of 12 inches deep at 24 inches o.c. Backfill holes with an equal mix of augered soil and sand. Aeration of the surface soil may be required due to compaction during construction.

B. Any trees damaged during construction shall be promptly reported to the Owner’s Representative, who shall contact the City Forester or designee for an assessment of damages. The Contractor will be responsible for repair or replacement to the satisfaction of the City Forester or designee.

3.6 DISPOSAL OF WASTE MATERIALS
A. Disposal: Remove excess excavated material, displaced trees, and excess chips from Owner’s property. Burning is not permitted, dispose off site legally.

END OF SECTION 02231 – TREE PROTECTION AND PRUNING (REVISED 2013)

02920 – SEEDING AND SODDING (REVISED 2013)
PART 1 – GENERAL

1.1 Related Documents
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes the following:
   1. Seeding.
   2. Sodding.
   3. Plugging.
   4. Meadow grasses and wildflowers.
   5. Sod renovation.
B. Related Sections include the following:
   1. Division 2 Section “Site Clearing” for topsoil stripping and stockpiling.
   2. Division 2 Section “Earthwork” for excavation, filling and backfilling, and rough grading.
   3. Division 2 Section “Sub-drainage” for subsurface drainage.

1.3 DEFINITIONS
A. Finish Grade: Elevation of finished surface of planting soil.
B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.4 SUBMITTALS
A. Product Data: For each type of product indicated.
B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
   1. Certification of each seed mixture for turf grass sod, identifying source, including name and telephone number of supplier.
C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
D. Qualification Data: For landscape installer.
E. Material Test Reports: For existing surface soil and imported topsoil
F. Maintenance Instructions: Upon completion of all sodding operations, the Contractor shall notify the Owner’s Representative to inspect the work. Upon inspection, if all work is acceptable, the Owner’s Representative shall record that date and shall issue a “Conditional Acceptance” letter which shall state that the Contractor shall maintain all sodded areas as specified according to the following length of time. As indicated in section 1.8.

1.5 QUALITY ASSURANCE  
A. Installer Qualifications: All work specified herein shall be performed under the direct supervision of a Superintendent thoroughly familiar with the work of this section who shall be at the project site for the duration of the work in this section.  
1. Installer’s Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.  
B. Installer Qualifications: All work specified herein shall be performed under the direct supervision of a Superintendent thoroughly familiar with the work of this section who shall be at the project site for the duration of the work in this section.  
1. Installer’s Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.  
C. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.  
D. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of topsoil.  
1. Report suitability of topsoil for Sod growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.  
E. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section “Project Management and Coordination.”

1.6 DELIVER, STORAGE, AND HANDLING  
A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.  
B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI’s “Specifications for Turfgrass Sod Materials” and “Specifications for Turfgrass Sod Transplanting and Installation” in its “Guideline Specifications to Turfgrass Sodding.”

1.7 SCHEDULING  
A. Planting Restrictions: Plant during one of the following periods unless otherwise approved by Owner’s Representative. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.  
1. Sodding: April 15th - October 15th  
2. Seeding: March 1st - September 15th  
3. Irrigated Native Seeding: March 1st - September 15th  
B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit. No sodding shall take place when the site is wet or during freezing temperatures.

1.8 TURF MAINTENANCE  
A. Begin maintenance immediately after each area is planted and continue until acceptable Sod is established, but for not less than the following periods:  
1. Seeded Turf: 60 days from date of Substantial Completion.  
2. Native Seeding: 60 days from date of Substantial Completion.  
3. Sodded Turf: 30 days from date of Substantial Completion.  
B. A period of 30 calendar days minimum, which shall be referred to as the “Sod Maintenance Period.” At the end of this period, the sodded areas shall be given “Final Acceptance” if the sod
is in a healthy condition and of a normal green color, with no bare areas larger than six (6) square inches. Mowing of sod should occur (3) days before “Final Acceptance.” If sod is installed in late October, a “Final Acceptance” for sod will not be issued, until the following spring.

C. At the end of the maintenance period, the Owner’s Representative shall, within five (5) calendar days, inspect the work, and if the work is acceptable, he shall issue a Final Acceptance Sod Work” letter which shall relieve the Contractor from further obligations for Sod work only. Final acceptance of Sod work may be given independently of final acceptance of all work under this contract.

D. The maintenance period for this work shall begin immediately after each area is sodded and shall continue in accordance with the following requirements:
   1. Minor vandalism or other damage to the sodded areas shall be the responsibility of the Contractor until all work receives Final Acceptance by the Owner's Representative. Major vandalism or damage caused by others through no fault of the Contractor or his subcontractor shall be brought to the attention of the Owner’s Representative who will be the sole judge as to the extent of such damage. If such damage is deemed to be major by the Owner's Representative, any work necessary to repair the seeded or sodded area to an acceptable condition shall be paid for by the Owner under the provisions of “extra work” stated in the General Conditions, if such work is authorized by the Owner's Representative.
   2. Acts of God: Minor damage to the sodded areas shall be the responsibility of the Contractor until all work receives Final Acceptance by the Owner's Representative. Major damage caused by flood, hail, storm, wind, or large rain storm, and through no fault of the Contractor to protect his work, shall immediately be brought to the attention of the Owner's Representative who will be the sole judge as to the extent of such damage. Major damage shall be repaired by the Contractor and paid for by the Owner, if such work is authorized by the Owner's Representative.
      a. When full maintenance period has not elapsed before end of planting season, or is Sod is not fully established, continue maintenance during next planting season.

E. Maintain and establish Sod by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Rolls, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf.
   1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.

F. Watering: Provide and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep Sod uniformly moist.
   1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay our temporary watering system to avoid walking over muddy or newly planted areas.
   2. Water Sod at a minimum rate of 1 1/2” to 2” per week.

G. The Contractor shall be responsible for watering and mowing of the sodded areas only until Final Acceptance. The bluegrass sod shall be maintained at a height of three inches (3”) and of four inches (4”). If grass exceeds four inches (4”) in height before mowing, no more than (1/3) of top growth shall be cut off at anyone time. All clippings shall be removed from site. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowing to maintain consistent grass height. Sufficient water shall be applied during the maintenance period to maintain the sod in a healthy condition, allowing it to knit together and develop a deep root system. Care should be given to avoid standing surface water, or erosion from over watering. Failure of the irrigation system shall not relieve the Contractor from applying water required during this period.

1.9 NATIVE SEEDING MAINTENANCE

A. Begin maintenance immediately after each area is planted and continue until acceptable meadow is established, but for not less than 60 days from date of Substantial Completion. The maintenance period for this work shall begin immediately after all areas are seeded and shall continue in accordance with the following requirements:
   1. All seeded areas shall have suitable signs erected at important points, notifying the public to keep off.
B. Minor vandalism or other damage to the seeded areas shall be the responsibility of the Contractor until all work receives Final Acceptance by the Owner's Representative. Major vandalism or damage caused by others through no fault of the Contractor or his subcontractor shall be brought to the attention of the Owner's Representative who will be the sole judge as to the extent of such damage. If such damage is deemed to be major by the Owner's Representative, any work necessary to repair the seeded area to an acceptable condition shall be paid for by the Owner under the provision of “extra work” stated in the General Conditions, if such work is authorized by the Owner's Representative.

C. Acts of God: Minor damage to the seeded areas shall be the responsibility of the Contractor until all work receives Final Acceptance by the Owner's Representative. Major damage caused by flood, hail storm, wind or large rain storm, and through no fault of the Contractor to protect his work, shall immediately be brought to the attention of the Owner’s Representative who will be the site judge as to the extent of such damage. Major damage shall be repaired by the Contractor and paid for by the Owner under the provisions of City of Colorado Springs Engineering Division Standard Specifications Section 100.23 “Changed Conditions”, if such work is authorized by the Owner's Representative.

D. The Contractor shall be responsible for watering and mowing the seeded areas only until final Acceptance. Mowing shall be conducted at a maximum of six inches (6”), and mowed down to four inches (4”).

E. Upon completion of all seeding operations, the Contractor will notify the Owner’s Representative to inspect the work. Upon inspection, if all work is acceptable, the Owner’s Representative shall record that date and shall issue a “Conditional Acceptance” letter which shall state that the Contractor shall maintain all seeded areas as specified according to the following length of time.

F. Period of 60 calendar days minimum, which shall be referred to as the “Seeded Area Maintenance Period”. AT the end of this period, the seeded areas shall be given “Final Acceptance” if the seed has germinated and there are no bare areas larger than six (6) square inches in diameter shall be re-seeded. AT the end of the maintenance period, the Owner’s Representative shall, within five (5) calendar days, inspect the work, and if the work is acceptable, he shall relieve the Contractor from further obligations for seeding work only. Final acceptance of seeding work may be given independently of final acceptance of all work under this contract.

G. Maintain and establish meadow by watering, weeding, mowing, trimming, replanting, and other operations. Roll, regrade and replant bare or eroded areas and remulch.

H. Watering: Provide and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep meadow uniformly moist.
1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water meadow at a minimum rate of 1/2 inch per week for 8 weeks after planting

PART 2 – PRODUCTS

2.1 SEED
A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA’s “Journal of Seed Technology; Rules for Testing Seeds” for purity and germination tolerances.
B. Seed Species: State-certified seed of grass species, as follows:
C. Seed Species: As specified on drawings.

2.2 TURFGRASS SOD
A. Turfgrass Sod: Blended Kentucky Bluegrass.

2.3 NATIVE GRASSES AND WILDFLOWERS
A. Wildflower Seed: Fresh, clean, dry, new seed, mixed species as follows:
B. Native Grass Seed: Fresh, clean, dry, new seed, mixed species as follows:
C. Wildflower and Native Grass Seed: Fresh, clean, dry, new seed, mixed species as follows:
D. Seed Carrier: Inert material, sharp clean sand or perlite, mixed with seed at a ratio of not less than two parts seed carrier to one part seed.
2.4 **TOPSOIL**

A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4-percent organic material content; free of stones 3/4 inch or larger in any dimension and other extraneous materials harmful to plant growth.
   1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
   2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep. Do not obtain from agricultural land, bogs or marshes.
   3. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

2.5 **ORGANIC SOIL AMENDMENTS**

A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
   2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated compostable mixed solid waste.
B. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
C. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil or toxic materials.
   1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb. of ammonium nitrate or 0.25 lb. of ammonium sulfate per cubic foot of loose sawdust or ground bark.
E. Manure: Well-rotted, un-leached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.6 **PLANTING ACCESSORIES**

A. Selective herbicides: EPA registered and approved, of type recommended by manufacturer for application.

2.7 **FERTILIZER**

A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of ureaformaldehyde, phosphorous, and potassium in the following composition:
   1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
   2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 30 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
   1. Composition: 25 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

2.8 MULCHES
A. Straw Mulch: Provide air-dry, clean, mildew-and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
B. Peat Mulch: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
C. Peat Mulch: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
D. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not to exceeding 0.5 percent inert contaminants an free of substances toxic to plantings; and as follows:
   2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
E. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic; free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
F. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.
G. Asphalt Emulsion: ASTM D 977, Grade SS-1; nontoxic and free of plant-growth or germination inhibitors.

2.9 EROSION-CONTROL MATERIALS
A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer’s recommended steel wire staples, 6 inches long.
B. Erosion-Control Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, a minimum of 0.92 lb./sq. yd., with 50 to 65 percent open area. Include manufacturer’s recommended steel wire staples, 6 inches long.

2.10 PLANTING SOIL MIX
A. Planting Soil Mix: As specified on drawings.

PART 3 - EXECUTION

3.1 EXAMINATION
A. Examine areas to receive Turf and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION
A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations. Reference tree planting schematic for exclusion of sod within tree planting well.
   1. Protect adjacent and adjoining areas from hydroseeding overspray.
B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
C. Stop all sod at the edge of the tree well.

3.3 SOD PREPARATION
A. Limit Sod subgrade preparation to areas to be planted within forty eight hours. Installation of sod shall not be undertaken until adjacent site improvements and pavement is complete. No trucking or moving of equipment or materials will be permitted upon completed sod.

B. All irrigation heads, valve boxers, drain valves and quick couplers shall be flagged prior to sodding operations.

C. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than ¾ inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner’s property.
   1. Apply fertilizer directly to finish grade, prior to sodding.
   2. Thoroughly blend planting soil mix before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
      a. Delay mixing fertilizer with planting soil if planting will not proceed within three days.
   3. Spread planting soil mix to a depth of 4 inches, but not less than required to meet finish grades natural settlement. Do no spread if planting soil or subgrade is frozen, muddy, or excessively wet.
      a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade.
      Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.

D. Unchanged Subgrades: If Turf is to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
   1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
   2. Loosen surface soil to a depth of at least 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil.
   Till soil to a homogeneous mixture of fine texture.
      a. Apply fertilizer directly to finish grade, prior to sodding.
   3. Remove stones larger than ¾ inches in any dimension and sticks, roots, trash, and other extraneous matter.
   4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner’s property.

E. Finish Grading: Finished grading and preparation of the entire sodded or seeded bed areas shall be achieved by disc-harrow or other approved method to a depth of six-inches (6”), or determined by Owner’s Representative), fine ranking and/or light dragging until the surface is smooth, friable, and or uniform fine texture and compaction, having no lumps or stones over ¾” inch. No sod shall be laid on any area which has not been so prepared. Obtain the Owner’s Representative’s approval of prepared areas prior to sodding. A depth of one-inch (1”) shall be maintained along sidewalk, before sod is installed.

F. Finish grades shall be as indicated on the drawing, subject to minor adjustments, as may be directed by the Owner’s Representative. Tops and toes of slopes shall be rounded, and the necessary swales for the run-off of surface water shall be carefully maintained with sufficient slope.

G. Moisten prepared Sod areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

H. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

3.4 SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
   1. Do not use wet seed or seed that is moldy or otherwise damaged.

B. Sow seed at the rate: As specified on drawings.

C. Rake seed lightly into top 1/4 inch topsoil, roll lightly, and water with fine spray.

D. Protect seeded areas with slopes exceeding 3:1 or greater with erosion-control blankets installed and stapled according to manufacturer’s written instructions.

E. Protect seeded areas with slopes not exceeding 3:1 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
   1. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.
2. Bond straw mulch by spraying with asphalt emulsion at the rate of 10 to 13 gal./1000 sq. ft.

Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or strained areas.

3.5 HYDROSEEDING

A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
   1. Mix slurry with non-asphaltic tackifier.
   2. Apply slurry uniformly to all areas to be seeded in a one-step process. Apply mulch at a minimum rate of 1500-lb/acre dry weight but not less than the rate required to obtain specified seed-sowing rate.
   3. Apply slurry uniformly to all areas to be seeded in a two-step process. Apply first slurry application at a minimum rate of 500-lb/acre dry weight but not less than the rate required to obtain specified seed-sowing rate. Apply slurry cover coat of fiber mulch at a rate of 1000 lb./acre.

3.6 SODDING

A. Laying Sod: Lay sod within 24 hours of harvesting. Sod shall be laid on a firm moist bed with tight joints so that no voids occur under or between strips. All ends should be tucked and unrolled. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Any depressions or mounds occurring after sodding shall be corrected prior to acceptance of work. No sod shall be laid on a frozen bed or installed on Fridays. No sod shall be laid within the tree planting well.

B. Sod shall be blended Kentucky Bluegrass turf, approved by owner and supplied from a single approved source. Sod shall be one inch (1”) minimum thick dense and free of weeds and stones. All sod shall be inspected and approved by the Owner’s Representative at the time of delivery. Sod shall be sufficiently moist so that the soil will adhere to the roots when handled. Delivered sod shall contain no more than five (5) percent broken rolls. Sod that has become moldy, withered, or yellow from storage or drying, or does not meet minimum thickness requirements may be rejected at the time of planting. Sod out for more than 24 hours from the time of cutting shall not be used.

C. As soon as sod has been laid, it shall be watered and rolled using a Jackson Sod Roller, True Temper Model 12LR with 240# of water approved equals, so that the sod makes a tight bond to the sod bed. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
   2. Anchor sod on slopes exceeding 4:1 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.

D. Saturate sod with fine water spray within two hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.7 SOD RENOVATION

A. Renovate existing sod damaged by Contractor’s operations, such as storage of materials or equipment and movement of vehicles.
   1. Re-establish sod where settlement or washouts occur or where minor regrading is required.

B. Remove sod and vegetation from diseased or unsatisfactory sod areas: do not bury in soil.

C. Remove topsoil containing foreign materials resulting from Contractor’s operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.

D. Mow, dethatch, core aerate, and rake existing turf.
E. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
F. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner’s property.
G. Till ripped, bare and compacted areas thoroughly to a soil depth of 6 inches.
H. Apply soil amendments and initial fertilizers required for establishing new Turf and mix thoroughly into top 4 inches of existing soil. Provide new planting soil to fill low spots and meet finish grades.
I. Apply sod as required for new Turf.
J. Water newly planted areas and keep moist until new sod is established.

3.8 SATISFACTORY TURF
A. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities. The maintenance period for this work shall begin immediately after all areas are seeded and shall continue in accordance with the following requirements.
B. All seeded areas shall have suitable signs erected at important points, notifying the public to keep off. Minor vandalism or other damage to the seeded areas shall be the responsibility of the Contractor until all work receives Final Acceptance by the Owner’s Representative. Major vandalism or damage caused by others through no fault of the Contractor or his subcontractor shall be brought to the attention of the Owner’s Representative who will be the sole judge as to the extent of such damage. If such damage is deemed to be major by the Owner’s Representative, any work necessary to repair the seeded area to an acceptable condition shall be paid for by the Owner under the provision of “extra work” stated in the General Conditions, if such work is authorized by the Owner’s Representative.
C. Acts of God: Minor damage to the seeded areas shall be the responsibility of the Contractor until all work receives Final Acceptance by the Owner’s Representative. Major damage caused by flood, hail storm, wind or large rain storm, and through no fault of the Contractor to protect his work, shall immediately be brought to the attention of the Owner’s Representative who will be the sole judge as to the extent of such damage. Major damage shall be repaired by the Contractor and paid for by the Owner, if such work is authorized by the Owner’s Representative.
D. The Contractor shall be responsible for watering and mowing the seeded areas only until Final Acceptance. Mowing shall be maintained at a height of three inches (3") and mowed only by equipment with sharp blades. Sod shall be mowed before grass reaches a height of four inches (4"). If grass exceeds four inches (4") If grass exceeds four inches (4") in height before mowing, no more than (1/3) of top growth shall be cut off at any one time.
E. Upon completion of all seeding operations, the Contractor will notify the Owner’s Representative to inspect the work. Upon inspection, if all work is acceptable, the Owner’s Representative shall record that date and shall issue a “Conditional Acceptance” letter which shall state that the Contractor shall maintain all seeded areas as specified according to the following length of time.
F. Period of 60 calendar days minimum, which shall be referred to as the “Seeded Area Maintenance Period”. At the end of this period, the seeded areas shall be given “Final Acceptance” if the seed has germinated and there are no bare areas larger than six (6) square inches. All bare areas larger than (6) square inches in diameter shall be re-seeded.
1. At the end of the maintenance period, the Owner’s Representative shall, within five (5) calendar days, inspect the work, and if the work is acceptable, he shall relieve the Contract from further obligations for seeding work only. Final acceptance of seeding work may be given independently of final acceptance of all work under this contract.
G. Satisfactory Sodded Turf: At the end of maintenance period, a healthy, well-rooted, even-colored, viable Sod has been established, free of weeds, open joints, bare areas, and surface irregularities.
H. Re-establish Turf that does not comply with requirements and continue maintenance until Turf are satisfactory.

3.9 NATIVE SEEDING
A. Method of Application: Refer to Detail Supplement or drawings.
B. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
   1. Do not use wet seed or seed that is moldy or otherwise damaged.
C. Sowing rates vary with mix of species but are usually much lighter than turfgrass seed application rates. Revise to suit Project.
D. Sow seed at the net rate of 6 oz. /1000 sq. ft.
E. Brush seed into top 1/16 inch of topsoil, roll lightly, and water with fine spray.
F. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak and scatter uniformly to a depth of 3/16 inch and roll to a smooth surface.
G. Water newly planted areas and keep moist until meadow is established.

3.10 CLEANUP AND PROTECTION
A. Promptly remove soil and debris created by Sod work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
B. Erect barricades and warning signs as required to protect newly planted areas from traffic.
   Maintain barricades throughout maintenance period and remove after Sod is established. Remove Erosion-control measures after grass establishment period.

END OF SECTION 02920 – SEEDING AND SODDING (REVISED 2013)

02300 – EARTHWORK (REVISED 2013)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This section includes the following:
   1. Surveying and grade staking.
   2. Preparing subgrades for slabs-on-grade, walks, pavements, turfs, and plantings.
   3. Excavating and backfilling for building and structures.
   4. Drainage course of slabs-on-grade.
   5. Subbase course for concrete walks and pavements. If indicated on drawings.
   6. Base course for asphalt paving.
   7. Subsurface drainage backfill for walls and trenches.
   8. Excavating and backfilling trenches within building lines.
   9. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.
   10. Rough Grading
   11. Finish Grading
   12. Site clean up
   13. Specialty subgrade preparations for pond liners, artificial turf fields, and courts.
B. Related Sections include the following:
   1. Division 1 Section “Construction Facilities and Temporary Controls.”
   2. Division 2 Section “Site Clearing” for site stripping, grubbing, removing topsoil, and protecting trees to remain.
   3. Division 2 Section “Tree Protection and Trimming” for protecting and trimming trees to remain.
4. Division 2 Section “Landscaping” for finish grading, including placing and preparing topsoil for Turfs and plantings.

1.3 UNIT PRICES
A. Rock Measurement: Volume of rock actually removed, measured in original position, but not to exceed the following:
   1. 24 inches outside of concrete forms other than at footings.
   2. 12 inches outside of concrete forms at footings.
   3. 6 inches outside of minimum required dimensions of concrete cast against grade.
   4. Outside dimensions of concrete walls indicated to be cast against rock with out forms or exterior waterproofing treatments.
   5. 6 inches beneath bottom of concrete slabs on grade.
   6. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.
B. Unit prices for rock excavation include replacement with approved materials.

1.4 DEFINITIONS
A. Backfill: Soil materials used to fill and excavation.
   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.
B. Base Course: Layer placed between the subbase course and asphalt paving.
C. Bedding Course: Layer placed over the excavated subgrade in a trench before laying pipe.
D. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.
F. Excavation: Removal of material encountered above subgrade elevations.
   1. Additional Excavation: Excavation below subgrade elevations as directed by Owner’s Representative. Additional excavations and replacement material will be paid for according to Contract provisions for changes in the Work.
   2. Bulk Excavation: Excavations more than 10 feet in width and pits more than 30 feet in either length or width.
   3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated dimensions without direction by Owner’s Representative. Unauthorized excavation, as well as remedial work directed by Owner’s Representative, shall be with out additional compensation.
G. Fill: Soil materials used to raise existing grades.
H. Rock: Rock Material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material exceeding 1 cu. yd. for bulk excavation or ¾ cu. yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
   1. Excavation of Footing, Trenches, and Pits: Late-model, track-mounted hydraulic excavator, equipped with a 42-inch wide, short-tip-radius rock bucket; rated at not less than 120-hp flywheel power with bucket-curling force of not less than 25,000 lbf and stick-crowd force of not less than 18,700 lbf; measured according to SAE J-1179.
   2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 210-hp flywheel power and developing a minimum of 45,000-lbf breakout force; measured according to SAE J-732.
I. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material ¾ cu. yd. or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D 1586, exceeds a standard penetration resistance of 100 blows/2 inches.
J. Scarify: Preparation of an existing grade or subgrade by uniformly and mechanically breaking up the soils to a predetermined depth.

K. Structures: Buildings, footings, foundation, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, other man-made stationary features constructed above or below the ground surface.

L. Subbase Course: Layer placed between the subgrade and base course for asphalt paving, or layer placed between the subgrade and a concrete pavement or walk.

M. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

N. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.5 SUBMITTALS

A. Product Data: For the following:
   1. Each type of plastic warning tape.

B. Samples: For the following:
   4. 30-lb samples, sealed in airtight containers, of each proposed soil material from on-site or borrow sources.
   5. 12-by-12-inch sample of drainage fabric.

C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
   1. Classification according to ASTM D 2487 of each on-site or borrow soil material proposed for fill and backfill.
   2. Laboratory compaction curve according to ASTM D 698 for each on-site or borrow soil material proposed for fill and backfill.
   3. Laboratory compaction curve according to ASTM D 1557 for each on-site or borrow soil material proposed for fill and backfill.

D. Blasting plan approved by authorities having jurisdiction, for record purposes.

QUALITY ASSURANCE

A. Comply with applicable requirements of NFPA 495, “Explosive Materials Code.”

B. Seismic Survey Agency: An independent testing agency, acceptable to authorities having jurisdiction, experienced in seismic surveys and blasting procedures to perform the following services:
   1. Report types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
   2. Seismographic monitoring services during blasting operations.

C. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

D. Pre-excavation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section “Project Meetings.”

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Owner’s Representative and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Owner’s Representative not less than two working days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without written permission from Owner’s
Representative.
3. Contact utility-locator services for area where Project is located, at least 48 hours prior to commencing excavating. Call 1-800-922-1987 for all utility locations, including TV cable.
B. Demolish and completely remove from site existing underground utilities indicated to be removed.
Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS
A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
B. Satisfactory Soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
C. Unsatisfactory Soils: ASTM D 2487 soil classification groups, MH, CH, OL, OH, and PT, or a combination of these group symbols.
D. Backfill and Fill: Satisfactory soil materials.
E. Subbase: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
F. Base: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a ¾ inch sieve and not more than 8 percent passing a No. 200 sieve.
G. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
H. Bedding: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
I. Drainage Fill: Washed, uniformly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading Size 57: with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.
J. Filter Material: Uniformly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.

2.2 ACCESSORIES
A. Warning Tape: Acid-and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:
B. Detectable Warning Tape: Acid-and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6 inches wide and 4 mils thick continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.
C. Drainage Fabric: Nonwoven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides: and with the following minimum properties determined according to ASTM D4759 and referenced standard test methods:
1. Grab Tensile Strength: 120 lbf; ASTM D 4632.
2. Tear Strength: 50 lbf; ASTM D 4533
3. Puncture Resistance: 70 lbf; ASTM D4833
5. Apparent Opening Size: No. 70; ASTM D4751

D. Separation Fabric: Woven geotextile, specifically manufactured for use as a separation geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D4759 and referenced standard test methods.
1. Grab Tensile Strength: 200 lbf; ASTM D 4632
2. Tear Strength: 75 lbf; ASTM D 4533.
5. Apparent Opening Size: No. 30; ASTM D 4751.

PART 3 - EXECUTION

3.1 PREPARATION
A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
B. Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.2 DE-WATERING
A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
   1. Obtain de-watering permit if required.
   2. Reroute surface water runoff away from excavation areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
   3. Install a de-watering system to keep subgrades dry and convey ground water away from excavations. Maintain until de-watering is no longer required.

3.3 EXPLOSIVES
A. Explosives: Obtain written permission from authorities having jurisdiction before bringing explosives to Project site or using explosives on Project site.
   1. Do not damage adjacent structures, property, or site improvements or weaken the bearing capacity of rock subgrade when using explosives.

3.4 SURVEYING AND GRADE STAKING
A. Before earthwork operations are started, the site shall be completely staked out by the Contractor for the work of this section for the approval of the Owner’s Representative. Surveying and staking is to be done by a City approved licensed surveyor.
B. Grade stakes shall be set where spot elevations are shown on drawings as well as breaks in grade, along drainage swales and as otherwise required, to complete the work of this section to the elevations shown on the drawings or as modified in the field by the Owner’s Representative.
C. Maintain all benchmarks and other reference points; if disturbed or destroyed, notify the Owner’s Representative and replace as directed.
D. All surveys to consist of (50’) foot grids with spot elevations unless otherwise specified. E. Rough Grade: Refer to Section 3.17 Rough Grading.
F. Blue Tops: Refer to Section 3.19 Blue Topping.

3.5 **EXCAVATION, GENERAL**

A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, an obstructions.
   1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

B. Classified Excavation: Excavation to subgrade elevations classified as earth and rock. Rock excavation will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
   1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
      a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
   2. Rock excavation includes removal and disposal of rock.
      a. Do not excavate rock until it has been classified and cross-sectioned by Owner’s Representative.

C. Protection, Shoring and Bracing.
   1. In the event that existing utilities, structures, or underground water is encountered or exposed during the execution of this work, the Contractor shall notify the Owner’s Representative immediately for procedures to follow.
   2. Install and maintain shoring, bracing and safety fencing or safety tape as required to keep structures, sidewalks, drives and streets safe to life, limb and property at all time. Provide shoring and bracing as required to stabilize earth slopes.
   3. Provide necessary decking, guards, fences, or planking to maintain safe pedestrian and vehicular traffic on and adjacent to the site.
   4. Keep public streets and existing paved areas clean at all times.

3.6 **EXCAVATION FOR STRUCTURES**

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. Extend excavations a sufficient distance form structures for placing and removing concrete form work, for installing services and other construction, and for inspections.
   1. Excavations for footing and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
   2. Pile Foundations: Stop excavations from 6 to 12 inches above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
   3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended for bearing surface.
   4. Compliance with City of Colorado Springs grading and erosion control plan as per drainage criteria manual, (manual can be obtained from the City of Colorado Springs Engineering Division).

3.7 **EXCAVATION FOR POND LINERS, COURTS, ARTIFICIAL TURF FIELDS, WALKS AND PAVEMENTS**

A. Excavate surfaces under pond liners, courts, artificial turf fields, walks and pavements to indicated cross sections, elevations, and grades.

3.8 **EXCAVATION FOR UTILITY TRENCHES**
A. Excavate trenches to indicated gradients, lines, depths, and elevations.
   1. Beyond building perimeter, excavate trenches to allow installation of tops of pipe
      in accordance with local requirements.

B. Excavate trenches to uniform widths to provide a working clearance on each side of pipe or
   conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of
   pipe or conduit, unless otherwise indicated.
   1. Clearance: 12 inches on each side of pipe or conduit.
   2. Clearance: As indicated.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of
   pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels
   of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp
   objects along trench subgrade.
   1. For pipes and conduit less than 6 inches in nominal diameter and flat-bottomed, multiple-
      duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an
      undisturbed subgrade.
   2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to
      support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand
      backfill.
   3. Excavate trenches 6 inches deeper than elevation required in rock or other
      unyielding bearing material to allow for bedding course.

D. Trench Bottoms: Excavate trenches 4 inches deeper than bottom of pipe elevation to allow
   for bedding course. Hand excavate for bell of pipe.
   1. Excavate trenches 6 inches deeper than elevation required in rock or other
      unyielding bearing material to allow for bedding course.

3.9 APPROVAL OF SUBGRADE
A. Notify Owner's Representative when excavations have reached required subgrade.
B. If Owner's Representative determines that unsatisfactory soil is present, continue excavation
   and replace with compacted backfill or fill material as directed.
   1. Additional excavation and replacement material will be paid for according to
      Contract provisions for changes in the Work.
C. Proof roll subgrade with heavy pneumatic-tired equipment to identify soft pockets and areas
   of excess yielding. Do not proof roll wet or saturated subgrades.
D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulator water,
   or construction activities, as directed by Owner's Representative.

3.10 UNAUTHORIZED EXCAVATION
A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation
   of concrete foundation or footings by extending bottom, without altering top elevation. Lean
   concrete fill may be used when approved by Owner's Representative.
   1. Fill unauthorized excavations under other construction or utility pipe as directed by Owner’s
      Representative.

3.11 STORAGE OF SOIL MATERIALS
A. Stockpile borrow materials and satisfactory excavated soil materials. Stockpile soil
   materials without intermixing. Place, grade, and shape stockpiles to drain surface water.
   Conform to fugitive dust permit.
   1. Stockpile soil materials away from edge of excavations. Do not store within drip line
      of remaining trees.

3.12 BACKFILL
A. Place and compact backfill excavations promptly, but not before completing the following:
   1. Construction below finish grade including, where applicable, damproofing,
      waterproofing, and perimeter insulation.
   2. Surveying locations of underground utilities for record documents.
   3. Inspecting and testing underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

3.13 UTILITY TRENCH BACKFILL
A. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
B. Backfill trenches excavated under footings and within 18 inches of bottom of footings; fill with concrete to elevation of bottom of footings.
C. Place compact initial backfill of subbase material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe or conduit.
   1. Carefully compact material under pipe haunches and bring backfill evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of utility system.
D. Coordinate backfilling with utilities testing.
E. Fill voids with approved backfill materials while shoring and bracing, and as sheeting is removed. F. Place and compact final backfill of satisfactory soil material to final subgrade.
G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.14 FILL
A. Preparation: In areas requiring fill, all stripping operations shall be completed before backfilling has begun. Place fill and backfill on reasonably dry soil. No fill shall be placed on wet ground.
   Fill shall be laced in eight inch (8") lifts in compacted depth under pavements or concrete and ten inch (10") lifts compacted depth under planted, turfed or other areas. Each layer shall be compacted to a firm surface by sheeptfoot rollers or pneumatic rollers. Fill and backfill shall be compacted to 85% density under areas to be turned or planted and 95% density under all pavements and improvements. Density tests shall be modified Proctor Test taken at optimum moisture content.
B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
C. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material, in no more than 10" lifts.
   2. Under walks and pavements, use satisfactory soil material, in no more than 8" lifts.
   3. Under steps and ramps, use engineered fill.
   4. Under building slabs, use engineered fill.
   5. Under footing and foundations, use engineered fill.
D. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

3.15 MOISTURE CONTROL
A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill of fill material on surfaces that are muddy, frozen, or contain frost or ice.
   2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percents and is too wet to compact to specified dry unit weight.

3.16 COMPACTION OF BACKFILLS AND FILLS
A. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
C. Compact soil to not less than the following percentages of maximum dry unit weight according ASTM D 1557:

D. Compact soil to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
   1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill material at 95 percent.
   2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill material at 92 percent.
   3. Under Turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill material at 85 percent.

3.17 ROUGH GRADING
A. General: Uniformly grade all areas covered by the project, including excavated and fill sections. The finished surface shall be smooth, within a 1/10 of a foot compacted and free form irregular surface changes. The degree of finish shall be that ordinarily obtainable form blade grade operations. The final surface shall be not more than (.1) feet above or below the established grade or approved cross section.
   1. Provide a smooth transition between adjacent existing grades and new grades.
   2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
   1. Turf or Unpaved Areas: Plus or minus 1/10 of an inch.
   2. Walks: Plus or minus 1/10 of an inch.
   3. Pavements: Plus or minus 1/8 inch.
C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.
D. Contractor to provide survey to verify grades, to include swales, to satisfaction of Owner's Representative.
E. The Owner's Representative shall approve final rough grade, prior to Contractor proceeding with any permanent site improvements.

3.18 FINISH GRADING
A. Upon completion of construction, all areas which have been excavated, filled, or otherwise disturbed shall be covered with earth to a depth required to bring finished grade to the elevation indicated on drawings. This shall include the depth of topsoil.
B. Topsoil shall be placed to provide a minimum depth of four inches (4") in all areas to receive, sod or as otherwise indicated.
C. Topsoil shall be graded and dragged to prevent irregularities and depressions in which water will be retained.

3.19 BLUE TOPPING
A. Provide blue top staking at 50 foot grids in all disturbed areas to receive imported topsoil and sodded turfgrass, to be done for all areas 5% or less, as well as under all areas to receive asphalt pavement.

3.20 SUBSURFACE DRAINAGE
A. Drainage Piping: Drainage pipe is specified in Division 2 Section “Foundation Drainage Systems.” B.Subsurface Drain: Place a layer of drainage fabric around perimeter of drainage trench as indicated. Place a 6-inch course of filter material on drainage fabric to support drainage pipe.
Encase drainage pipe in a minimum of 12 inches of filter material and wrap in drainage fabric, overlapping sides and ends at least 6 inches.

1. Compact each course of filter material to 95 percent of maximum dry unit weight according to ASTM D 698.

C. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches of final subgrade. Overlay drainage backfill with one layer of drainage fabric, overlapping sides and ends at least 6 inches.

1. Compact each course of filter material to 95 percent of maximum dry density according to ASTM D 698.
2. Place and compact impervious fill material over drainage backfill to final subgrade.

3.21 SUBBASE AND BASE COURSES

A. Under pavements and walks, place subbase course on prepared subgrade and as follows: If indicated on drawings.

1. Place base course material over subbase.
2. Compact sub base and base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
3. Shape subbase and base to required crown elevations and cross-slope grades.
4. When thickness of compacted subbase or base course is 6 inches or less, place materials in a single layer.
5. When thickness of compacted subbase or base course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches thick or less than 3 inches thick when compacted.

B. Pavement Shoulders: Place shoulders along edges of subbase and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.22 DRAINAGE COURSE

A. Under slabs-on-grade, place drainage course on prepared subgrade and as follows:

1. Compact drainage course to required cross sections and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.
2. When compacted thickness of drainage course is 6 inches or less, place materials in a single layer.
3. When compacted thickness of drainage course exceeds 6 inches, place materials in equal layers, with no layer more that 6 inches thick or less than 3 inches thick when compacted.

3.23 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing. A sufficient number of density tests of the backfill and subgrade may be ordered by the Owner’s Representative to determine that the backfill and subgrade complies with the appropriate Subsection of this Section.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Owner’s Representative.

D. Testing agency with test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2992, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sp. ft. or less of paved area or building slab, but in no case fewer than three tests.
2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for each 100 feet or less of wall length, but no fewer than two tests.
3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 150 feet or less of trench length, but no fewer than two tests.
E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; re-compact and retest until specified compaction is obtained. These tests shall be made by an approved testing laboratory and paid for by the City on a first time basis only.
F. Owner's Representative shall approve final rough grade.

3.24 PROTECTION
A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
1. Scarify or remove and replace soil material to depth as directed by Owner's Representative; reshape and re-compact.
C. Where settling occurs before contract period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.25 DISPOSAL OF SURPLUS AND WASTE MATERIALS
A. Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property. All associated costs and fees will be the responsibility of the contractor.
B. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Owner's Representative.

3.26 SCARIFY EXISTING GRADE AND SUBGRADE
A. Prepare an existing grade or subgrade by uniformly and mechanically breaking up the soils to the depth shown on the construction plans, geotechnical report, or as directed by the owner's representative.
B. Testing of the subgrade moisture content will be at the discretion and direction of the owner's representative. The moisture content will be adjusted to 2% of the optimum prior to final grade and compaction.
C. The subgrade will be compacted to compliance with the recommendations of the geotechnical report, construction plans, and City of Colorado Springs Engineering Standards.
D. Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property. All associated costs and fees will be the responsibility of the contractor.
E. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Owner's Representative.

END OF SECTION 02300 EARTHWORK
02751 CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes exterior cement concrete pavement for the following;
   1. Driveways and roadways.
   2. Parking lots.
   3. Curbs and gutters.
   4. Walkways and all other flatwork.
B. Related Sections include the following;
   1. Division 2 Section “Earthwork” for subgrade preparation, grading, and subbase course.
   2. Division 2 Section “Pavement for Joint Sealants” for joint sealants within concrete pavement and at isolation joints of concrete pavement with adjacent construction.

1.3 DEFINITIONS
A. Cementitious Materials: Portland Cement shall conform to the specifications for Portland Cement 9A (ASTM C-150) and specifications for air-entrained Portland Cement (ASTM C-175 or C-595) and shall be Type II A (Air-Entraining) cement, unless sulfate conditions allow otherwise. Table 2.2.3 in Chapter 2.2 of ACI 201 presents cement recommendations for sulfate resistances. In addition to the standard chemical requirements for Portland cement in ASTM C-150, the maximum percent of alkalies shall be as specified in Table 2 of ASTM C-150 for low alkali cement. Other types of cement or admixtures are only to be used upon approval by the Owner’s Representative.

1.4 SUBMITTALS
A. Product Data: For each type of manufactured material and product indicated.
B. Design Mixes: For each concrete pavement mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
C. Samples: 10-lb sample of exposed aggregate.
D. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:
E. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:
   1. Cementitious materials and aggregates.
   2. Steel reinforcement and reinforcement accessories.
   3. Fiber reinforcement.
   4. Admixtures.
   5. Curing Compounds.
   7. Bonding agent or adhesive.
   8. Joint fillers.
F. Minutes of pre-installation conference submitted by Contractor.

1.5 QUALITY ASSURANCE
A. Installer Qualifications: an experienced installer who has completed pavement work similar in materials, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
B. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment.
   1. Manufacturer must be certified according to the National Ready Mix Concrete Association’s Plant Certification Program.
C. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.

D. Source Limitations: Obtain each type or class of cementitious Material of the same brand from the same manufacturer’s plant and each aggregate from one source.

E. ACI Publications: Comply with ACI 301, “Specification for Structural Concrete,” unless modified by the requirements of the Contract Documents.

F. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixes.

G. Mockups: Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.
   1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Owner’s Representative.
   2. Notify Owner’s Representative three days in advance of dates and times when mockups will be constructed.
   3. Obtain Owner’s Representative approval of mockups before starting construction.
   4. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.
   5. Demolish and remove approved mockups from the site when directed by Owner’s Representative.
   6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division I Section “Project Meetings.”
   1. Before submitting design mixes, review concrete pavement mix design and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with concrete pavement to attend, including the following:
      a. Contractor’s superintendent.
      b. Ready-mix concrete producer.
      c. Concrete subcontractor.

1.6 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 – PRODUCTS

2.1 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.
   1. Use flexible or curved forms for curves of a radius 100 feet or less.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

C. Forms for concrete shall be used for all vertical surfaces, mortar type, true to required lines and grades, and of sufficient strength to maintain shape during the placing of the concrete and the mechanical finishing without springing or settling. Wood forms shall be two inch (2") (nominal) surfaced plant; metal forms shall be approved section and shall have a flat surface on the top of not less than one and three-quarter inches (1-3/4”). Forms shall be thoroughly cleaned of all dirt, mortar, and foreign matter before being used. Unit lengths of forms shall be jointed in advance of the point of placing concrete. Flexible, curbed or wood forms of the proper radii shall be used for curbs having a radius of less than One hundred feet (100’). All forms shall have dimensions of the City of Colorado Springs specified curb and gutter sections.

D. Forms shall be equipped with not less than three (3) staking points per each ten feet (10’) of length with means for securely locking the form to each stake. Flange braces and staking pockets shall extend outward on the base not less than two-thirds (2/3) of the height of
the form. Forms that are bent, twisted, warped, broken, or forms that have battered or splintered top faces shall be removed from the job. Repaired forms shall not be used until they have been inspected and approved by the owner’s Representative. The top and face of a form shall not vary from a true plane by more than one-fourth inch (1/4") in ten feet (10’). Forms shall be cleaned and oiled before concrete is placed against them. The alignment and grade of forms shall be checked and approved immediately before placing the concrete.

2.2 STEEL REINFORCEMENT
A. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
D. Reinforcement Bars: ASTM A 615/A 615M, Grade 60, deformed.
E. Epoxy-Coated Reinforcement Bars: ASTM A 775/A 775/M; with ASTM A 615/A 615M, Grade 60, deformed bars.
F. Steel Bar Mats: ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60, deformed bars; assembled with clips.
G. Plain Steel Wire: ASTM A 82, as drawn.
I. Joint Dowel Bars: Plain steel bars, ASTM A 615/A 615M, Grade 60. Cut bars true to length with ends square and free of burrs.
J. Epoxy-Coated Joint Dowel Bars: ASTM A 775/A 775M; with ASTM A 615/A 615M, Grade 60, plain steel bars.
K. Tie Bars: ASTM A 615/A 615M, Grade 60, deformed.
L. Hook Bolts: ASTM A 307, Grade A, internally and externally threaded. Design hook-bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.
M. Bar Supports: Bolsters, chairs spacers, and other devices for spacing, supporting, and fastening reinforcement bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI’s “Manual of Standard Practice” from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:
1. Equip wire bar supports with sand plates or horizontal runners where base materials will not support chair legs.
2. For epoxy-coated reinforcement, sue epoxy-coated or other dielectric-polymer coated wire bar supports.
N. Epoxy Repair Coating: Liquid two-part epoxy repair coating, compatible with epoxy coating on reinforcement.

2.3 CONCRETE MATERIALS
A. The amounts and proportions of fine and coarse aggregates shall be such as to produce a plastic, workable mix which can be readily placed into the corners and angles of the forms and around reinforcement and other embedded fixtures without undue accumulation of water or laitance on the surface, and such that there will be no honeycombing in the structure. Proportions of fine and coarse aggregates shall be such that the ratio of the coarse to the fine aggregate shall not be less than one (1) nor more than two (2).
B. If in the judgment of the Owner’s Representative, based on laboratory tests, concrete aggregates from a given source are detrimentally reactive with alkalis in Portland Cement, they shall be used in concrete in combination with low-alkali cement only.
C. Concrete aggregates shall consist of sand-gravel, gravel, crushed stone, or limestone; the particles shall be clean, hard, tough, durable, of uniform quality, free of any soft, thin, or elongated pieces, disintegrated stone, dirt, organic or other injurious materials occurring either free or as a coating. All aggregate must be supplied from a source approved by the Owner’s Representative. Aggregate shall be made of the following sub sections:
D. Fine Aggregate: Fine aggregate shall conform to ASTM C-33. Fine aggregate shall consist of sand or other inert materials, or combinations thereof approved by the Owner’s Representative, and having hard, strong, durable particles, free from adherent coating. Fine
aggregate shall be thoroughly washed to remove shale, coal, mica, clay, loam, alkali, organic matter or other deleterious matter.

1. Deleterious Substances. The amount of deleterious substances in the washed aggregate shall not exceed the following values:
   a. Clay Lumps & Friable Particles, % by weight 3.0 MAX.
   b. Coal & Lignite, % by weight 1.0 MAX.
   c. Friable Particles, % by weight 1.0 MAX.
   d. Sand Equivalent 75 MIN.
   e. Fineness Modulus 2.3-3.1 MAX.
   f. Sodium Sulfate Soundness, % by weight 10 MAX.

2. Grading. Fine aggregate shall be regularly graded from coarse to fine in two (2) sizes and when tested by means of the U.S. Standard, sieves shall conform to the following requirements expressed as percentages by weight:

<table>
<thead>
<tr>
<th>Sieve Size or Test Procedure</th>
<th>Percent Passing or Test Requirement *(Concrete Sand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>100</td>
</tr>
<tr>
<td>No. 4</td>
<td>95-00</td>
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<tr>
<td>No. 8</td>
<td>80-00</td>
</tr>
<tr>
<td>No. 16</td>
<td>50-85</td>
</tr>
<tr>
<td>No. 30</td>
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<tr>
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<td>5-30</td>
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<tr>
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<td>0-10</td>
</tr>
<tr>
<td>No. 200</td>
<td>**0-3</td>
</tr>
</tbody>
</table>

**The fine aggregate shall have not more than 45% passing any sieve and retained on the next consecutive sieve.

E. Coarse Aggregate. Gravel and crushed stone shall conform to ASTM C-33. Coarse aggregate shall consist of gravel, crushed stone, or other inert material or combinations thereof approved by the Owner’s Representative, and having hard, strong, durable pieces free from adherent coating. Coarse aggregate shall be thoroughly washed of clay, loam, bark, sticks, alkali, organic matter, shale, coal, mica, or other deleterious material.

1. Deleterious Substances. The amount of deleterious substances shall not exceed the following values:
   a. Clay Lumps & Friable Particles, % by weight 3.0 MAX
   b. Coal & Lignites, % by weight .5 MAX
   c. Sum of Clay Lumps, Friable Particles and Chert, % by weight 5.0 MAX
   d. Chert, % by weight 50 MAX
   e. Abrasion, % by weight 50 MAX
   f. Sodium Sulfate Soundness, % by weight 12 MAX

Wood waste is defined as all material which, after drying to constant weight, has a specific gravity less than 1.0.

2. Grading. Coarse aggregate, when tested in conformity with ASTM C-136 shall conform to one or more of the following gradings as called for elsewhere in the specifications, special provisions or on the plans.

<table>
<thead>
<tr>
<th>Sieve size or Test Procedure</th>
<th>Percent Passing or Test Requirement</th>
</tr>
</thead>
<tbody>
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<td>No. 357</td>
</tr>
<tr>
<td>2&quot;</td>
<td>No. 467</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>No. 57</td>
</tr>
<tr>
<td>1&quot;</td>
<td>No. 357</td>
</tr>
</tbody>
</table>

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### 2.4 ADMIXTURES

**A.** General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures. Calcium Chloride shall not be used as an antifreeze agent. Calcium Chloride as an accelerating agent in amounts not to exceed 1.5% by weight of cement may be used upon the approval of the Owner’s Representative.


**C.** Water-Reducing Admixture: ASTM C 494, Type A.

**D.** High-Range, Water-Reducing Admixture: ASTM C 494, Type F.

**E.** Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.

**E. F.** Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

### 2.5 FIBER REINFORCEMENT

**A.** Synthetic Fiber: Fibrillated polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C 1116, Type III ½ to 1-1/2 inches long.

**B.** Synthetic Fiber: Fibrillated or monofilament polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C 1116, Type III, ½ to 1-1/2 inches long.

**C.** Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

1. **Fibrillated Fibers:**
   a. Fibrasol F; Axim Concrete Technologies.
   b. Fibermesh; Fibermesh, Div. Of Synthetic Technologies.
   c. Forta; Forta Corporation

2. **Monofilament Fibers:**
   a. Fibrasol IIP; Axim Concrete Technologies.
   b. Fiberstrand 100; Euelid Chemical Co.
   c. Fibermix Stealth; Fibermesh, Div. Of Synthetic Industries.
d. Forta Mono; Forta Corporation.
f. Polystrand 1000; Metalcrete Industries.

2.6 CURING MATERIALS
A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. Dry.
B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
C. Clear Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
D. White Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B.

2.7 RELATED MATERIALS
B. Coloring Agent: ASTM C979, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, nonfading, and resistant to lime and other alkalis.
   1. Color: As indicated by manufacturer’s designation.
   3. Color: As selected by Architect from manufacturer’s full range.
   1. Color: As indicated.
   2. Color: Blue for handicapped requirements, white elsewhere.
   3. Color: Blue for handicapped requirements, yellow for fire lanes, white elsewhere.
D. Wheel Stops: Precast, air-entrained concrete; 2500-psi minimum compressive strength; approximately 6 inches high, 9 inches wide, and 84 inches long. Provide chamfered corners and drainage slots on underside, and provide holes for dowel-anchoring to substrate.
   1. Dowels: #4 rebar steel, minimum length 24 inches.
E. Slip-Resistant Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery with emery aggregate containing not less than 50 percent aluminum oxide and not less than 25 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.
F. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
G. Chemical Surface Retarder: Water-soluble, liquid set retarder with color dye, for horizontal concrete surface application, capable of temporarily delaying final hardening of concrete to a depth of 1/8 to 1/4 inch.

2.8 CONCRETE MIXES
A. Prepare design mixes, proportioned according to ACI211.1 and ACI301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.
B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the trial batch method.
   1. Do not use Owner’s field quality-control testing agency as the independent testing agency.
C. Proportion mixes to provide concrete with the following properties:
   1. Compressive Strength (28 days): 4000 psi.
   2. Maximum Water-Cementitious Materials Ratio: 0.45.
D. Add air-entraining admixture at manufacturer’s prescribed rate to result in concrete at a point of placement having an air content of 4 to 6 percent.
E. Add air-entraining admixture at manufacturer’s prescribed rate to result in concrete at point of placement having an air content as follows within a tolerance of plus or minus 1.5 percent:
F. Synthetic Fiber: Uniformly disperse in concrete mix at manufacturer’s recommended rate, but not less than 1.5 lb./cu. Yd.
G. Coloring Agent: Add coloring agent to mix according to manufacturer’s written instructions.
2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Comply with requirements and with ASTM C94.
   Specified Compressive
   Strength at 28 Days
   4000 psi
   Minimum Cement Content per Cubic
   Yard of Concrete
   564 lbs.
   Maximum Water/Cement
   Ratio by Weight
   0.45
   The proportioning of aggregate to cement shall be such as to produce a good workable mix and
   the slump shall be a maximum of four inches (4”) as per ASTM C-143. The equipment
   for batching of the aggregates, cement, water, and air-entraining agent shall be such that
   accurate control can be held over the various constituents.

B. Ready-mixed concrete shall comply with ASTM C-94 for ready-mixed concrete and the following
   specifications:

C. Time of Haul: Concrete transportation in truck mixers or truck agitators shall be delivered to the
   site of work and completely discharged within a period of ninety (90) minutes after the cement
   comes in contact with the mixing water or with the combined aggregates when the combined
   aggregates contain free moisture in excess of 2% by weight. If hot weather exists causing
   the temperature of the concrete to rise above 90 degrees Fahrenheit, then the time of haul shall
   be within a period of sixty (60) minutes.

D. Production and Delivery: The production and the delivery of ready-mixed concrete shall be such
   that placing and finishing shall be continuous in so far as the operations require.

E. Testing of Concrete: Samples for test cylinders should be taken not less than once each day
   or not less than each 50 cubic yards of concrete placed. This requirement applies to both
   reinforced and reinforced concrete work unless otherwise directed by the Owner’s
   Representative. For structural elements, the Owner’s Representative may call for additional
   samples for strength testing.

F. A minimum of four cylinders shall be prepared for each sample of concrete. Once cylinder shall
   be strength tested after 7 days of curing time. Two cylinders shall be strength tested after
   28 days of curing time.

G. In the event the initial 28 day cylinder should fail, the remaining two cylinders should be strength
   tested after 45 days of curing time.

H. Samples for slump and air-content testing should be taken for each truck delivery or not less than
   each 12 cubic yards where site batching is performed. The Owner’s Representative may vary
   the frequency of sampling and testing depending on site conditions. The preparation, handling,
   storage and testing procedures of all samples shall be in conformance with the applicable ASTM
   and AASHTO standards.
   1. Provide batch ticket for each batch discharged and used in the Work, indicating Project
      identification name and number, date, mix type, mix time, quantity, and amount of water
      added.

PART 3 – EXECUTION

3.1 PREPARATION

A. Proof-roll prepared subbase surface to check for unstable areas and verify need for additional
   compaction. Proceed with pavement only after nonconforming conditions have been corrected
   and subgrade is ready to receive pavement.

B. Remove loose material from compacted subbase subbase surface immediately before placing
   concrete.

C. Before any concrete is placed, all equipment for mixing and transporting the concrete shall
   be cleaned. All debris and ice shall be removed from the places to be occupied by the
concrete. Forms shall be thoroughly oiled. Water shall be removed from the place of deposit before concrete is placed. Newly placed concrete shall be protected from any water damage. The top six (6) inches of the bedding or subgrade shall be graded and compacted to a minimum density of 90% ASTM D-1557 prior to placement of the concrete.

D. When concrete placed on earth surfaces is necessary, the surfaces shall be free from frost, ice, mud and water. Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or loss of materials. Concrete shall not be free dropped from more than four (4) feet.

E. Equipment for tremming, chuting, pumping, and pneumatically conveying concrete shall be of such size and design as to insure a practically continuous flow of concrete at the delivery end without separation of materials.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

A. General: Comply with CRSI’s “Manual of Standard Practice” for fabricating reinforcement and with recommendations in CRSI’s “Placing Reinforcing Bars” for placing and supporting reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

D. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap to adjacent mats.

3.4 JOINTS

A. General: Construct construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.

1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour, unless pavement terminates at isolation joints.

1. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.

2. Provide tie bars at sides of pavement strips where indicated.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.

1. Locate expansion joints at intervals of 50 feet, unless otherwise indicated.

2. Extend joint fillers full width and depth of joint.

3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.

4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

D. Install dowel bars and support assemblies at joints where indicated. Use 5/8 inch cardboard tube or PVC. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

E. Contraction Control Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one fourth of the concrete thickness, as follows:
   1. Grooved Joints: Form contraction joints after floating by grooving and finishing each edge of joint with groover tool to the following radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
      a. Radius: 1/2 inch
   2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8 inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks. Within 24 hours of initial pour.

F. Edging: Tool edges of pavement, gutters, curbs and joints in concrete after initial floating with an edging tool to the following radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.
   1. Radius: 1/2 inch

3.5 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcement steel, and items to be embedded or cast in. Notify other trades to permit installation of their work. Owner's Representative needs to be notified 24 hours to inspect forms prior to pouring concrete.
B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.
C. Moisten subbase to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.
D. Comply with requirements and with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.
E. Do not add water to concrete during delivery, at Project site, or during placement.
F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
G. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI309R.
   1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
H. Expansion joints shall be 1/2 inch premolded felt expansion joint material and shall be placed every 50 feet both ways unless otherwise indicated on drawings.
I. Control joints shall 1 1/2” in depth and shall be placed every five feet (5’) each way unless otherwise indicated on drawings.
J. Base course is to be placed if indicated on drawings and is to be 3/8 +/- crushe waste or gravel to Standard Class 6.
K. All sleeving under concrete surfaces shall be stamped into surfaced with an “S” on each end of the sleeve.
L. Screed pavement surfaces with a straightedge and strike off. Commence initial floating using bull floats or darbies to form an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading dry-shake surfaces treatments.
M. Curbs and Gutters. When automatic machine placement is used for curb and gutter placement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not approved, remove and replace with formed concrete.

N. Slip-Form Pavers: When automatic machine placement is used for pavement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce pavement to required thickness, lines, grades, finishes, and jointing as required for formed pavement.
   1. Compact subbase and prepare subgrade of sufficient width to prevent displacement of paver machine during operations.

O. When adjoining pavement lanes are placed in separate pours, do not operate equipment on concrete until pavement has attained 85 percent of its 28-day compressive strength.

P. Cold-Weather Placement: Comply with ACI306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
   1. Concrete shall not be placed in cold weather unless the ambient temperature has reached 40 degrees Fahrenheit at 9:00 a.m., and the temperature is rising. Cold weather protection blankets, etc. will be required for five days after concrete has been placed. Uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 deg F at point of placement.
   2. Do not use frozen materials or materials containing ice or snow.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

Q. Hot-Weather Placement: Place concrete according to recommendations in ACI305R and as follows when hot-weather conditions exist:
   1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor’s option.
   2. Cover reinforcement steel with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
   3. Fog-spray forms, reinforcement steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.6 CONCRETE FINISHING

A. General: Wetting of concrete surfaces during screeding, initial floating, or finishing operations is prohibited.

B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and the concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots, and fill low spots. Refloat surface immediately to uniform granular texture.
   1. Medium-to-Fine-Textured Broom Finish: Draw a soft bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture. Or as otherwise indicated on drawings.

3.7 SPECIAL FINISHES

A. Monolithic Exposed Aggregate Finish: Expose coarse aggregate to pavement surfaces as follows:
   1. Immediately after floating, spray-apply chemical surface retarder to pavement according to manufacturer’s written instructions.
   2. Cover with plastic sheeting, scaling laps with tape, and remove when ready to continue finishing operations.
   3. Without dislodging aggregate, remove excess mortar by lightly brushing surface with a stiff, nylon bristle broom.
4. Fine-spray surface with water and brush. Repeat water flushing and brushing cycle until cement film is removed from aggregate surfaces to depth required.

B. Slip-Resistant Aggregate Finish: Before final floating, apply slip-resistant aggregate finish to pavement surfaces according to manufacturer's written instructions and as follows:
   1. Uniformly spread 25 lb/100 sq. ft. of dampened non slip aggregate over the surface. Tamp aggregate flush with surface using a steel trowel, but do not force below surface.
   2. After curing, lightly work surface with a steel wire brush or an abrasive stone, and water to expose non slip aggregate.

C. Colored Dry-Shake Hardener Finish: After initial floating, apply colored dry-shake materials to pavement surfaces according to manufacturer's written instructions and as follows:
   1. Uniformly apply colored dry-shake materials at a rate of 100 lb/100 sq. ft. unless greater amount is recommended by manufacturer to match pavement color required.
   2. Uniformly distribute approximately two-thirds of colored dry-shake material over the concrete surface with mechanical spreader, and embed by power floating. Follow power floating with a second shake application, uniformly distributing remainder of dry-shake material to ensure uniform color, and embed by power floating.
   3. After final floating, apply a hand-trowel finish followed by a broom finish to concrete. Cure concrete with curing compound recommended by dry-shake material manufacturer. Apply curing compound immediately after final finishing.

3.8 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI306.1 for cold-weather protection and follow recommendations in ACI305R for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb./sq. ft x h before and during finishing operations. Apply according to manufacturer’s written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.

D. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination to these as follows:
   1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
      a. Water.
      b. Continuous water-fog spray.
      c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

   2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

   3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer’s written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.9 PAVEMENT TOLERANCES

A. Comply with tolerances of ACI 117 and as follows:
   1. Elevation: 1/4 inch
   3. Surface: Gap below 10-foot-long, unleveled straightedge not to exceed 1/4 inch.
   4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
   5. Vertical Alignment of Tie-Bars and Dowels: 1/4 inch.
   6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
8. Joint Spacing: 3 inches.

3.10 PAVEMENT MARKING
A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Owner’s Representative.
B. Allow concrete pavement to cure for 28 days and be dry before starting pavement marking.
C. Sweep and clean surface to eliminate loose material and dust.
D. Apply paint with mechanical equipment to produce pavement markings of dimensions indicated with uniform, straight edges. Apply at manufacturer’s recommended rates to provide a minimum wet film thickness of 15 mils.

3.11 WHEEL STOPS
A. Securely attach wheel stops into pavement with #4 rebar steel, minimum length 24 inches.

3.12 FIELD QUALITY CONTROL
A. Testing Agency: Owner will engage a qualified testing and inspection agency to sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control may include those specified in this Article.
B. Testing Services: Testing shall be performed according to the following requirements:
   1. Sampling Fresh Concrete: Representative samples of fresh concrete shall be obtained according to ASTM C172, except modified for slump to comply with ASTM C94.
   2. Slump: ASTM C 143; one test at point of placement for each compressive-strength test, but not less than one test for each day’s pour of each type of concrete. Additional tests will be required when concrete consistency changes.
   3. Air Content: ASTM C231, pressure method; one test for each compressive-strength test, but not less than one test for each day’s pour of each type of air-entrained concrete.
   4. Concrete Temperature: ASTM C1064; one test hourly when air temperature is 40 degrees F and below and 80 degrees F and above, and one test for each set of compressive-strength specimens.
   5. Compression Test Specimens: ASTM C31/C 31M; one set of four standard cylinders for each compressive-strength test, unless otherwise indicated. Cylinders shall be molded and stored for laboratory-cured test specimens unless field-cured test specimens are required.
   6. Compressive-Strength Tests: ASTM C39; one set for each day’s pour of each concrete class exceeding 5 cu. Yd, but less than 25 cu. Yd., plus one set for each additional 50 cu. Yd. One specimen shall be tested at 7 days and two specimens at 28 days; one specimen shall be retained in reserve for later testing if required.
   7. When frequency of testing will provide fewer than five compressive-strength tests for a given class of concrete, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
   8. When total quantity of a given class of concrete is less than 50 cu. yd. Owner’s Representative may waive compressive-strength testing if adequate evidence of satisfactory strength is provided.
   9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, current operations shall be evaluated and corrective procedures shall be provided for protecting and curing in-place concrete.
   10. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive compressive-strength test results equal or exceed specified compressive strength and no individual compressive-strength test result falls below specified compressive- strength by more than 500 psi.
C. Test results shall be reported in writing to Owner’s Representative, concrete manufacturer, and Contractor within 24 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing agency, concrete type and class, location of concrete batch in pavement, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7- and 14- day tests.

D. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Owner’s Representative but will not be used as the sole basis for approval or rejection.

E. Additional Tests: Testing agency shall make additional tests of the concrete when test results indicate slump, air entrainment, concrete strengths, or other requirements have not been met, as directed by Owner’s Representative. Testing agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.

3.13 REPAIRS AND PROTECTION
A. Remove and replace concrete pavement that is broken, damaged, or defective, or does not meet requirements in this Section. Contractor is required to repair or replace any defects that occur during the contract period as set forth in the contract documents. To include but not limited to the following:

B. Work showing, a patch, chips or other cracking appearance or other finish blemishes or apparent “lap” marks of improper troweling will be rejected, removed and replaced at the Contractor’s expense.

C. The Contractor shall erect barricades, snow fencing, or take appropriate measures to totally protect concrete until it has thoroughly hardened. Any area marked or defaced in any manner shall be removed to the nearest expansion or contraction joint and be replaced at no additional costs to the Owner.

D. No patched or cover materials will be accepted on a new pour, to hide any defects in original surface. Only with prior approval from Owner’s Representative.
   1. Spauling.
   2. Cracking over 1/8” wide.
   3. Any settling greater than 3/4”, that would cause uneven surfaces will be replaced.

E. Drill test cores where directed by Owner’s Representative when necessary to determine magnitude of cracks of defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy adhesive.

F. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

G. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751 – CEMENT CONCRETE PAVEMENT (REVISED 2013)
SCHEDULE G – GOOGLE EARTH FILES

G.1  Missing Sidewalk program 2015-2019.KMZ
G.2  Missing Sidewalk Program 2020_Dist2.KMZ
G.3  Missing Sidewalk Program FUTURE.KMZ