



REQUEST FOR PROPOSAL

Construction

R23-032CA

Date issued: March 9, 2023

ANTLERS PARK DOG PARK CONSTRUCTION, FENCING & TURF

THE CITY OF COLORADO SPRINGS

Contact:
Crystal Abeyta
Contracting Specialist
City of Colorado Springs
Procurement Services
crystal.abeyta@coloradosprings.gov

The City of Colorado Springs requests Fixed Unit Price proposals, as detailed in this Request for Proposal (RFP), for (3) Components of a Dog Park at Antlers Park: 1. Construction of Site, 2. Fencing and 3.Turf.

The project has three separate Price Sheets. **Offerors are welcome to submit a proposal and pricing for one, two or all three components of the dog park.** Identify all sub-contractors in your proposal.

The City may select to award multiple contracts from this RFP solicitation. The City may award all or some of the line items on the price sheets dependent upon successful negotiations.

SUBMITTALS FOR THIS PROJECT WILL ONLY BE ACCEPTED ON THE ROCKY MOUNTAIN E-PURCHASING BIDNET DIRECT PLATFORM.

Please login to the following website to register (Free Registration) to submit a bid for this project. All required documents will be uploaded to the website.

<https://www.bidnetdirect.com/>

BIDNET Support

800-835-4603

Total Estimated Order of Magnitude: \$400,000 - \$475,000

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SECTION I – PROPOSAL INFORMATION

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 upcoming schedule of events is as follows:

| <u>Event</u> | <u>Date</u> |
|---|--|
| Issue Request for Proposal | March 9, 2023 |
| Pre-Proposal Conference & Site Visit | March 15, 2023 at 2:00PM <u>OR</u> March 22, 2023 at 2:00PM |

(2) **Pre-proposal and Site Visits** will be held in person at Antlers Park at 5 S Sierra Madre Street, Colorado Springs, CO 80903 (SE Corner of Sierra Madre Street and W. Pikes Peak Ave) on the dates listed above.

In case of inclement weather, the meeting will take place 1401 Recreation Way, Colorado Springs, CO 80905.

The pre-proposal site visit is not mandatory and attendance at one date only: same information given at both meetings. Offerors are encouraged to attend.

Cut Off Date for Questions March 28, 2023 by 3:00PM

Questions about the RFP must be submitted online via Bidnet Direct (www.bidnetdirect.com). For technical assistance you may contact Crystal Abeyta, City of Colorado Springs at crystal.abeyta@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 date and time listed above.

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

The only acceptable method of submitting questions is by submitting online via Bidnet Direct.

| | |
|----------------------------|--------------------------|
| Proposal Due Date | April 7, 2023 by 3:00 PM |
| Interviews (if applicable) | April 2023 |
| Award of Contract | Estimated April 2023 |
| Notice to Proceed | Estimated April 2023 |

1.2 SUBMISSION OF PROPOSAL

Proposals are to be submitted electronically online at Rocky Mountain E-Purchasing System (www.bidnetdirect.com). Please review the submission requirements well in advance of submission date and time; and allow for ample time to upload each required document.

It is recommended that Offerors begin the submission process at least one (1) day in advance of the proposal deadline.

Offerors are solely responsible to ensure their bid documents are uploaded and submitted correctly, and that a confirmation number is obtained upon successful submission.

Customer Support Team for www.bidnetdirect.com can be reached 1-800-835-4603.

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

Date/Time: Proposals shall be received on or before 3:00 pm MST, Friday, April 7, 2023.

1.3 NUMBER OF COPIES

Proposals are to be submitted electronically online on the Rocky Mountain e-Purchasing system at www.bidnetdirect.com.

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 Antlers Park Dog Park Construction, Fencing & Turf.

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 or multiple awards 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 for the project detailed in this RFP will be established as 5 months from the issuance of a Notice to Proceed, estimated to be May 1, 2023 to September 30, 2023.

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 4 – 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 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
 - 1. Detailed Plans
 - 2. Standard DrawingsCalculated dimensions will govern over scaled dimensions.
- (f) Special Specifications
- (g) Standard Specifications

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/sales-tax/page/construction-contractors>. Questions can be directed to the City Sales Tax Division at (719) 385-5903 or Construction_SalesTax@coloradosprings.gov.

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 |
| Exhibit 4 | Qualification Statement |
| Schedule E | Minimum Insurance Requirements |
| Acknowledged Addenda, if issued | |

AT LEAST ONE OF THE FOLLOWING PRICE SHEETS (A.1/A.2/A.3 TO BE SUBMITTED

| | |
|--------------|---------------------------------------|
| Schedule A.1 | Price Sheet for Dog Park Construction |
| Schedule A.2 | Price Sheet for Fencing |
| Schedule A.3 | Price Sheet for Turf |

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 financial stability (annual public reports or private financial statements shall be included in an appendix or under separate cover; private financial information will be kept confidential by the City).

2.5 PROPOSAL NARRATIVE/TECHNICAL AND MANAGEMENT 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.

2.5.1 MANAGEMENT AREA

The Offeror must explain its method of managing the work to be performed. The content must include, but no necessarily be limited to, the following information.

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 schedule for the project showing the key construction activities and how they will meet or improve the City's timeframe and maximize construction efficiency to provide the best value to the City and minimize impacts to the public. The schedule shall be based on the Offeror's understanding and approach to the work as addressed above. Schedules should address controls to ensure the project will remain on schedule and on budget. Schedules submitted for this project shall assume a start date of May 2023.

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. Does the proposal explain how the Offeror will address corrective actions in case of delays (e.g. expediting materials, additional resources, etc.)?
3. Does the proposal explain how the Offeror will remain within schedule and budget?

B. Past Performance/Relevant Experience and Key Personnel

In the Management Area, 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 proposal should adequately explain how the projects were 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 include at least three references or past performance citations?
2. Do the references or past performance citations demonstrate 5 years relevant experience?
3. Does the Offeror explain how they were successful on the projects provided as past performance?
4. Does the Offeror apply the past performance to the City requirement in such a way as to demonstrate added value due to experience?

Key Personnel

In the Management Area, resumes must be provided for all personnel considered key, as required by the RFP. Resumes do not count toward the page limit. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions. Explain how the key personnel were related to the projects cited as relevant past performance.

1. Does the Offeror provide complete resumes, including education, experience, background information, accomplishments, and other pertinent information?
2. Does the Offeror provide resumes for all key personnel, as required by the RFP?
3. Do the resumes demonstrate adequate professional, technical, and management levels to accomplish the work effectively and efficiently?

2.6 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 should 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? If so, include those costs when comparing to the budget amount and the competition.

2.7 PROPOSAL PRESENTATION

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

2.8 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.

2.9 INSURANCE REQUIREMENTS

All Offerors must complete Schedule E, 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 MANAGEMENT AREA -- PROGRAM MANAGEMENT CONTROLS

See Section II - Item 2.5.1A

3.1.2 MANAGEMENT AREA -- PAST PERFORMANCE/RELEVANT EXPERIENCE/KEY PERSONNEL

See Section II – Item 2.5.1B

3.1.3 PRICE/COST AREA -- PRICE/COST

See Section II – Item 2.6

3.1.4 PROPOSAL PRESENTATION AREA – PROPOSAL PRESENTATION

See Section II – Item 2.7

3.1.5 EXCEPTIONS AND INSURANCE

See Section II – Items 2.8 and 2.9

3.2 RANKING

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

First: Price/Cost Area

Second: Management Area

Third: Proposal Presentation Area

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 Management 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.

D. Area Scoring

The score for each area will be determined by adding the total scores of the

criteria in each area. The total available points are 100 and allocated as follows:

Price/Cost Area: 70

Management Area: 25

Proposal Presentation Area: 5

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.

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.

SECTION V – EXHIBITS

3.4 EXHIBITS

| | |
|-----------|---|
| Exhibit 1 | Proposal Certification |
| Exhibit 2 | Sample Contract |
| Exhibit 3 | Exceptions |
| Exhibit 4 | Qualification Statement |
| Exhibit 5 | Evaluation Scoresheet |
| Exhibit 6 | Construction Drawings for All (3) Components of the Antlers Park Dog Park |

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 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.

(Name of Company)

(Signature)

(Address)

Date

(City, State and Zip)

(Telephone Number)

(Name typed/Printed)

(Title)

(E-Mail Address)

FEDERAL TAX ID # _____

This Company Is: Corporation____ Individual____ Partnership____
LLC_____

Offeror hereby acknowledges receipt of the following amendments, if applicable
Offeror agrees that it is bound by all Amendments identified herein.

AMENDMENT #1_____ DATED:_____

AMENDMENT #2_____ DATED:_____

AMENDMENT #3_____ DATED:_____

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

REPRESENTATIONS AND CERTIFICATIONS

Exhibit 1 Continued

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.
- c) 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.
- d) 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.
- e) 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.
- f) 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.
- g) 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
- ☐ Black Owned Business
- ☐ Disadvantaged Business Owner
- ☐ Hispanic Owned Business
- ☐ Native American Owned Business

_____ Woman Owned Business

_____ Veteran Owned Business

_____ Other

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 7

8. CONTRACTOR PERSONNEL

- a) 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.
- b) 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 8

9. OFFEROR’S CERTIFICATION

The undersigned hereby affirms that:

- a) He/She is a duly authorized agent of the Offeror;
- b) He/She has read and agrees to the City’s standard terms and conditions attached.
- c) 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.

d) 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.

e) 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.

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 (i) 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 relation to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, 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.

Initials for 11

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:

<https://coloradosprings.gov/finance/page/procurement-regulations-and-documents>

Initials for 12

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, are available within a reasonable time and at a reasonable cost. The Offeror hereby acknowledges review of this policy by initialing below.

<https://coloradosprings.gov/finance/page/procurement-regulations-and-documents>

Initials for 13

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 385-2387 (ADTR). Written correspondence can be mailed to:

City Auditor
P.O. Box 2241
Colorado Springs CO 80901

Or via email FraudHotline@coloradosprings.gov. Any of these mechanisms allow for anonymous reporting. For more information, please go to the website <https://coloradosprings.gov/cityfraud>.

Initials for 14

Name of Company:

Federal Tax ID Number:

DUNS Number:

Principle Place of Business:

Signature of Authorized Representative

Printed Name:

Title:

Date:

EXHIBIT 2 SAMPLE CONTRACT

CONSTRUCTION CONTRACT

| | | | |
|--------------------------------|---------------|------------------------|---|
| Contract Number: | | Project Name/Title | |
| | | | |
| Vendor/Contractor | | | |
| Contact Name: | | Telephone: | |
| Email Address: | | | |
| Address: | | | |
| Federal Tax ID # | | Please check one: | <input type="checkbox"/> Corporation <input type="checkbox"/> Individual <input type="checkbox"/> Partnership |
| | | | |
| City Contracting Specialist | Name & Phone# | City Dept Rep | Name & Phone# & Department Name |
| NOT TO EXCEED Contract Amount: | | City Account # | Acct Code (5) Fund (3) Dept (4) Project (7) |
| Contract Type: | | Period of Performance: | |

1. INTRODUCTION

THIS TYPE CONTRACT ("Contract") is made and entered into this ____ day of _____, 202x 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: XXXXXXXX.

The Contractor did on the ____ day of _____, 202x 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. Schedule A – Price Proposal
3. Schedule B – General Construction Terms and Conditions
4. Schedule C – Statement of Work/Contractor's Proposal
5. Schedule D – Construction Specifications
6. Schedule E – Minimum Insurance Requirements
7. Schedule F – Notification of Utilities

2. COMPENSATION/CONSIDERATION

THIS FIRM FIXED PRICE CONTRACT is established at firm fixed amount of \$xxxxxxx.

Subject to the terms and conditions of the Contract Documents, Contractor shall provide all materials, supplies, labor, services, transportation, tools, equipment, and parts to perform _____ services for the City of Colorado Springs in a good and workmanlike manner to the satisfaction of the City for the total contract amount designated above and in the Notice of Award, to be paid by the City to the Contractor.

All pricing is in accordance with the fixed unit prices found in Schedule A and A.1, 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 which is **May 1, 2023 – September 30, 2023** ("Period of Performance") 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.

4. INSURANCE

The Contractor shall provide and maintain acceptable Insurance Policy(s) consistent with the Minimum Insurance Requirements attached as Schedule E, which includes Property, Liability, and as otherwise listed in Schedule E. The City of Colorado Springs 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 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, whether it is of a direct or indirect nature. Further in that regard, it is expressly understood and agreed that for such purposes neither the Contractor nor the Contractor's employees, agents, servants or other personnel shall be entitled to any City payroll, insurance, unemployment, worker's compensation, retirement or any other benefits whatsoever.

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:

- i. 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.
- ii. Contractor's disregard of the laws or regulations of any public body having jurisdiction.

- iii. Contractor's disregard of the authority of Project Manager.
- iv. Contractor's violation in any material provision of the Contract Documents.
- v. 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.
- vi. 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.
- vii. 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.
- viii. 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 i-viii 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 accord 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 accord 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 steps 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:
- i. 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.
 - ii. 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.
 - iii. 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.
 - iv. 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.
 - v. 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.
 - vi. 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/construction-contractors>. Questions can be directed to the City Sales Tax Division at (719) 385-5903 or Construction_SalesTax@coloradosprings.gov.

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. ELECTRONIC SIGNATURES

This Agreement and all other documents contemplated hereunder may be executed using electronic signatures with delivery via facsimile transmission, by scanning and transmission of electronic files in Portable Document Format (PDF) or other readily available file format, or by copy transmitted via email, or by other electronic means and in one or more counterparts, each of which shall be (i) an original, and all of which taken together shall constitute one and the same agreement, (ii) a valid and binding agreement and fully admissible under state and federal rules of evidence and (iii) enforceable in accordance with its terms.

44. APPENDICES

The following Appendices are made a part of this Agreement:

1. Schedule A – Price Proposal
2. Schedule B – General Construction Terms and Conditions
3. Schedule C – Statement of Work/Contractor's Proposal
4. Schedule D – Construction Specifications
5. Schedule E – Minimum Insurance Requirements
6. Schedule G – Notification of Utilities

CONTRACT SIGNATURE PAGE

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.

**THE CITY OF COLORADO SPRINGS,
COLORADO:**

SECOND PARTY:

SAMPLE CONTRACT ONLY

Corporate Name

Signature

Date

Title

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.

EXHIBIT 4 – 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: _____
Contract Address: _____
Contact telephone and FAX Numbers: _____
2. Location of Project: _____
Size of Project: _____
Contract Amount: _____
Contact Name: _____
Contract Address: _____
Contact telephone and FAX Numbers: _____
3. Location of Project: _____
Size of Project: _____
Contract Amount: _____
Contact Name: _____
Contract 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: _____

| | |
|-----|---|
| | Contact Name and Title: |
| | Contact Address: |
| | Contact telephone and FAX Numbers: |
| 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 5 – EVALUATION SCORESHEET

PROPOSAL EVALUATION SCORE SHEET

SOLICITATION NUMBER AND TITLE: R23-032CA ANTLERS PARK DOG PARK CONSTRUCTION

Proposer's Name: _____

Evaluator's Name: _____

| RFP EVALUATION CRITERIA DESCRIPTION | SCORE |
|--|---|
| 1. MANAGEMENT AREA (TOTAL POINTS AVAILABLE: 25) The Offeror must explain its method of managing the work to be performed. The content must include, but no necessarily be limited to, the following information. | |
| A. Program Management Controls | |
| <p>In the Management Area, the Offeror should provide a plan of operation, to include management of personnel, workload, schedule, and budget. If the Offeror plans to subcontract more than 10% of the work, include information on how the Offeror plans to manage its subcontractors.</p> <p>The Offeror shall provide a detailed construction schedule for the project showing the key construction activities and how they will meet or better the County's timeframe and maximize construction efficiency to provide the best value to the City and minimize impacts to the public. The schedule shall be based on the Offeror's understanding and approach to the work as addressed above. Schedules submitted for this proposal shall assume a start date of May 2023.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none">1. Does the proposal address the issues above in sufficient detail to demonstrate a sophisticated and mature management control system?2. Does the offer address corrective actions in case of delays?3. Does the proposal explain how the Offeror will remain within schedule and budget? <p>COMMENTS:</p> | <p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p> |
| B. Past Performance/Relevant Experience and Key Personnel | |

| | |
|---|---|
| <p>In the Management Area, the Offeror should provide at least three references or contracts demonstrating that it successfully provided services/products same or similar to those required in the RFP. The proposal should adequately explain how the projects were completed on schedule and within budget.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal include at least three references or past performance citations? 2. Are the references or past performance citations demonstrate 5 years relevant experience? 3. Does the Offeror explain how they were successful on the projects provided as past performance? 4. Does the Offeror apply the past performance to the City requirement in such a way as to demonstrate added value due to experience? <p>In the Management Area, resumes must be provided for all personnel considered key, as required by the RFP. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions. Resumes do not count toward the page limitation. Explain how the key personnel were related to the projects cited as relevant past performance.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the Offeror provide complete resumes, including education, experience, background information, accomplishments, and other pertinent information? 2. Does the Offeror provide resumes for all key personnel, as required by the RFP? 3. Do the resumes demonstrate adequate professional, technical, and management levels to accomplish the work effectively and efficiently? <p>COMMENTS:</p> | <p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p> |
| <p>Sum of Ratings in Management Area (Add numbers in Sections 1.A. and 1.B.)</p> | |
| <p>2. PRICE/COST AREA (TOTAL POINTS AVAILABLE: 70)</p> | |
| | <p>5 – Exceptional 4 – Very Good 3 – Satisfactory</p> |

| | |
|--|---|
| <p>In the Price Area, the Offeror should provide a detailed breakdown of the price for each year of performance. The price must be fully loaded/all-inclusive and include unit cost 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 T&M, labor categories, labor rates, separated profit, and estimated material costs must be included in detail.</p> <p>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 the other Offerors.</p> <p>Consider the following questions:</p> <ol style="list-style-type: none"> 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. Can you see how the price 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 should 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? If so, include those costs when comparing to the budget amount and the competition. <p>COMMENTS:</p> | <p>2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p> |
| <p>Total Price/Cost Area (Insert number from Section 3 evaluation above):</p> | |
| <p>3. PROPOSAL PRESENTATION (TOTAL POINTS AVAILABLE: 5)</p> | |
| <p>Presentation is an important factor. Offerors should provide a highly professional product, which is complete, accurate, easily understood, and effectively presented.</p> <p>COMMENTS:</p> | <p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p> |
| <p>Total Proposal Presentation Area (Insert number from Section 4 evaluation above):</p> | |

| | |
|--|------------------|
| LOCATION BONUS (IF APPLICABLE) | |
| Total Bonus Points for location: | N/A |
| EXCEPTIONS PROPOSED | |
| What (if any) exceptions (redlines to our terms and conditions) were proposed? Are they acceptable? COMMENTS: | Pass/Fail |
| TOTAL SCORE – Add Evaluation Scores from Sections 1-4 and location bonus (if applicable). The sum is the total score. | Total Score: |

Overall Proposal **Strengths:**

Overall Proposal **Weaknesses:**

EXHIBIT 6 – CONSTRUCTION DRAWINGS FOR ANTLERS PARK DOG PARK

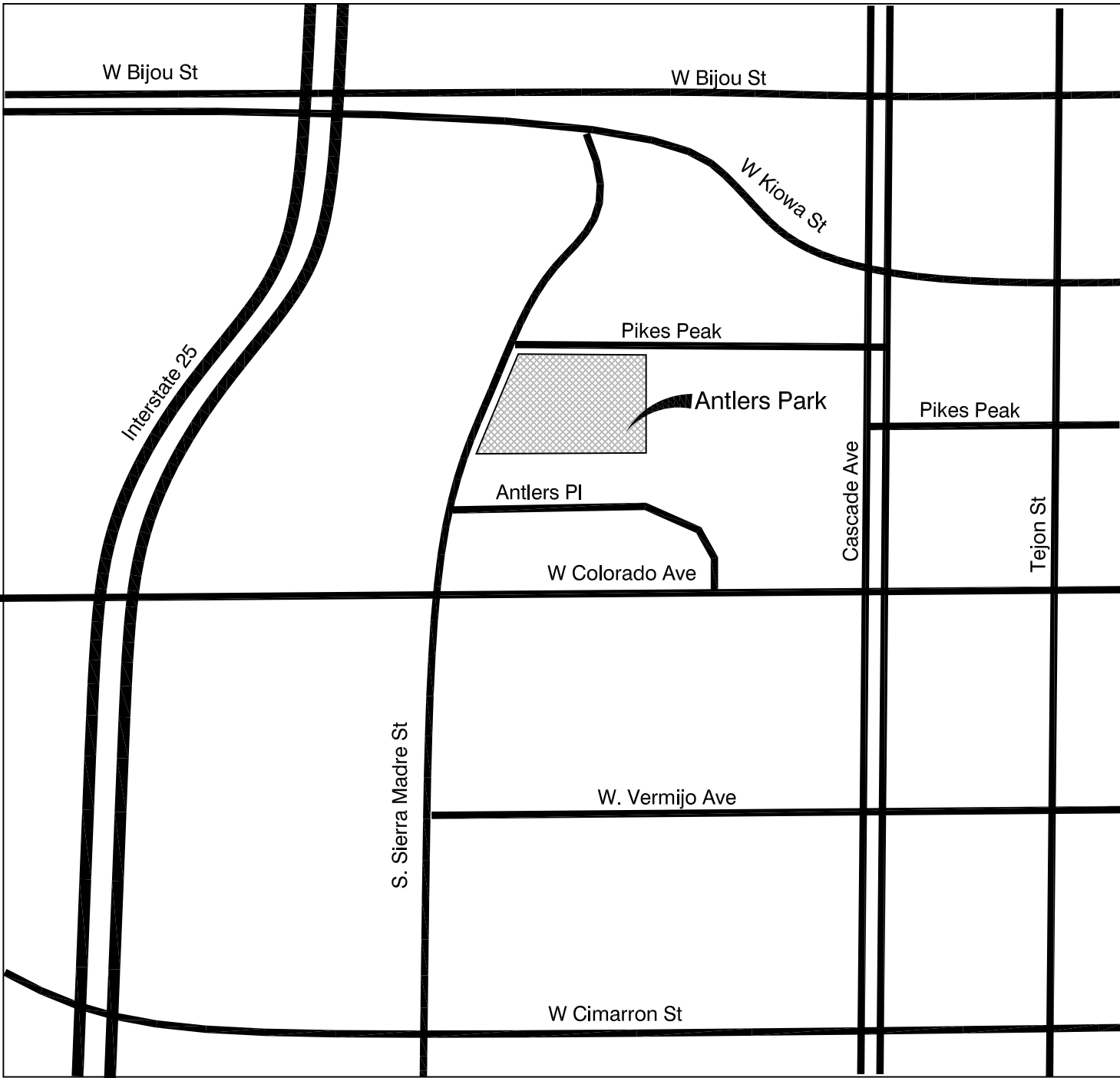
(Follows on Next Page)

ANTLERS PARK

DOG PARK IMPROVEMENTS

FOR BID CONSTRUCTION DRAWINGS - FEB 17, 2023
31 W. Pikes Peak Ave, Colorado Springs, CO 80903

VICINITY MAP



GENERAL NOTES

1. THE CONTRACTOR SHALL HAVE IN THEIR POSSESSION AT ALL TIME ONE (1) SIGNED COPY OF THE PLANS AND SPECIFICATIONS WHICH HAVE BEEN APPROVED BY THE CITY OF COLORADO SPRINGS.
2. THE CONTRACTOR SHALL COORDINATE INSPECTIONS FOR THE FOLLOWING: PLAZA LAYOUT AND RESTROOM FOUNDATION STAKING, ROUGH GRADING, FINE GRADING, FORMING & REINFORCEMENT, CONCRETE PLACEMENT, BOULDER WALL PLACEMENT, FEATURE BOULDERS PLACEMENT AND FINAL INSPECTION. A MINIMUM OF 24 HOURS OF NOTICE TO THE OWNER'S REPRESENTATIVE, AND DESIGNATED PARTIES IS REQUIRED PRIOR TO COMMENCEMENT OF WORK.
3. THE CONTRACTOR SHALL SUBMIT A PROJECT SCHEDULE TO THE OWNER'S REPRESENTATIVE PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL SUBMIT WEEKLY UPDATED SCHEDULES DURING THE PROJECT UNTIL COMPLETION. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF VALUES TO THE OWNER'S REPRESENTATIVE PRIOR TO THE PRE-CONSTRUCTION MEETING.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BMPs (Straw Wattle, Concrete Wash Out) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL REMOVE ALL TEMPORARY BMPs FROM SITE UPON PROJECT COMPLETION. SITE BMPs SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRUBBING AND GRADING ACTIVITIES.
5. ALL SURVEY AND LAYOUT NEEDED TO PERFORM THE SCOPE OF WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND AT THE CONTRACTOR'S EXPENSE. THE PROJECT MAY BE FIELD FIT FOLLOWING THE DIRECTIONS AND INTENT OF THE CONSTRUCTION DRAWINGS.
6. REMOVE AND LEGALLY DISPOSE OF DEBRIS TO AN OFFSITE LOCATION AS NEEDED TO COMPLETE THE PROJECT. EARTHWORK REQUIRED TO COMPLETE ALL CONTRACT WORK ITEMS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: EXPORT EXCESS MATERIALS OFF-SITE, BACKFILL, COMPACTION, ROUGH GRADING AND FINAL GRADING, THESE ARE AN INCIDENTAL COSTS TO BE PAID BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL ACQUIRE AND MANAGE ALL PERMITS NECESSARY TO PERFORM PROJECT. THE CONTRACTOR SHALL ALSO CALL FOR UTILITY LOCATES AND SUPPLY THE OWNER'S REPRESENTATIVE A COPY OF THE LOCATE SHEETS 72 HOURS PRIOR TO ANY EARTHWORK ACTIVITY.
8. THE CONTRACTOR SHALL CLEAR AND GRUB VEGETATION AS NECESSARY TO CONDUCT WORK AND DISPOSE OF THE DEBRIS LEGALLY OFFSITE.
9. ALL NEW CONCRETE SHALL INCLUDE WITH FIBERMESH, WITH THE EXPECTATION OF THE SEAT WALLS.
10. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED AREAS DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO CONCRETE, ASPHALT, REVEGETATION, TREES, OR WALKS.
11. SUBGRADE UNDER WALKS AND DOG PARK SHALL BE RECOMPACTED TO 95% STANDARD PROCTOR IN ACCORDANCE WITH SECTION 304 OF THE COLORADO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS
12. FENCING AND SYNTHETIC TURF WILL BE INCLUDED AS ANOTHER PROJECT RFP. COORDINATE WITH CITY STAFF FOR FUTURE WORK BY OTHERS

SHEET INDEX

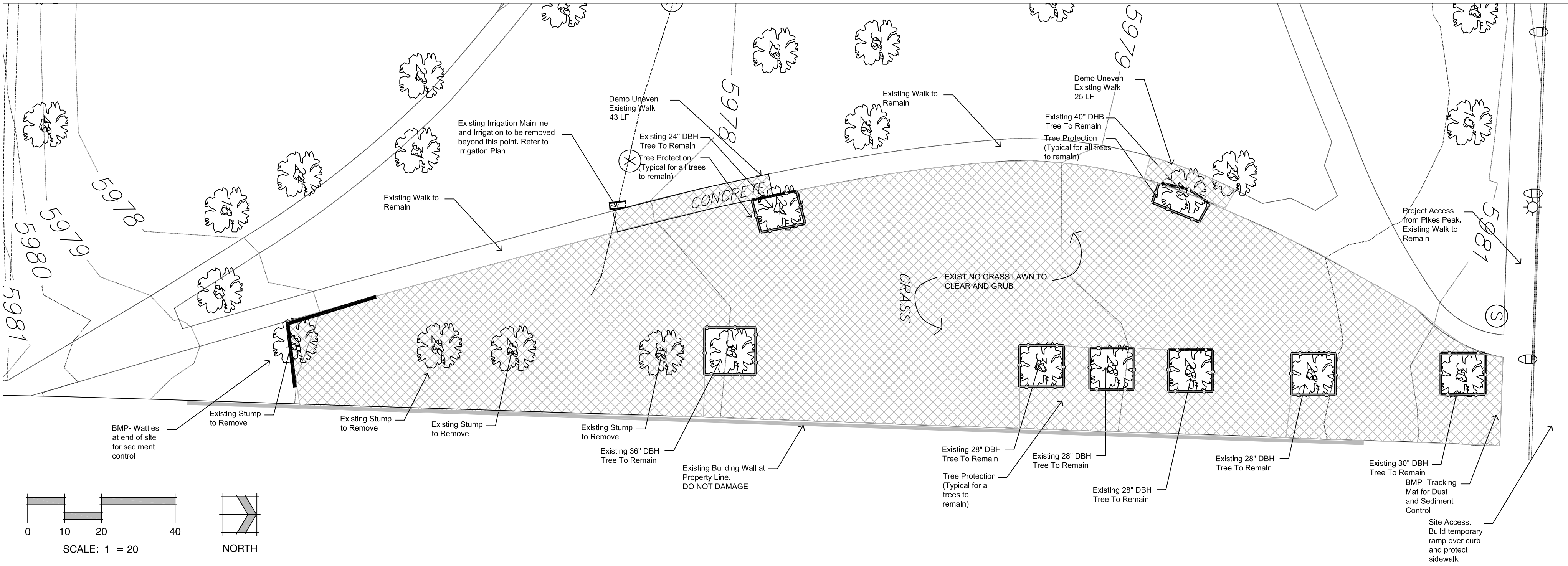
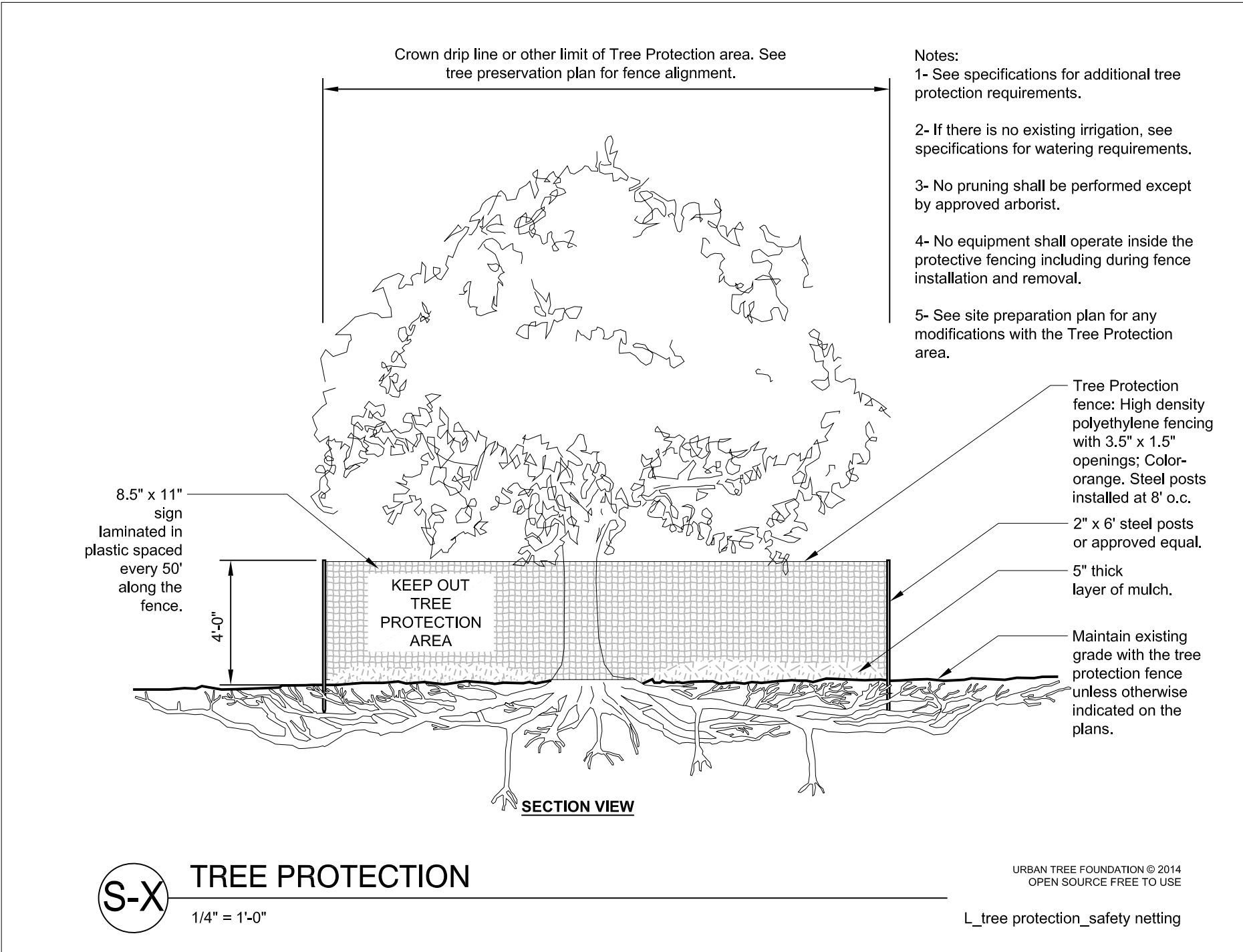
- | | |
|---|--|
| 1 | COVER SHEET/DEMOLITION PLAN/TREE PRESERVATION PLAN |
| 2 | SITE PLAN |
| 3 | LAYOUT PLAN |
| 4 | GRADING PLAN |
| 5 | IRRIGATION PLAN |
| 6 | ELECTRICAL PLAN |
| 7 | CONSTRUCTION DETAILS |

ARTIST RENDERING

*For Information Only - Subject to Change



DEMOLITION PLAN AND TREE PROTECTION PLAN



DEMOLITION PLAN NOTES:

1. ALL MATERIALS TO BE DEMOLISHED, GRUBBED AND REMOVED SHALL BE DISPOSED OF IN A LEGAL MANNER
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED WHILE ACCESSING THE SITE AND CONDUCTING THE WORK.
3. EXISTING IRRIGATION ZONES NOT BEING REUSED TO BE CAPPED AND SHALL BE COORDINATED WITH THE PARKS MAINTENANCE SUPERVISOR.
4. ADDITIONAL PROTECTIVE MEASURES SHALL BE UTILIZED WHEN WORKING ALONGSIDE THE EXISTING BUILDING TO THE EAST.
5. ADDITIONAL PROTECTIVE MEASURES SHALL BE UTILIZED TO THE PROTECT OF EXISTING TREES TO REMAIN. SEE TREE PROTECTION DETAILS AND SPECIFICATIONS. TREE TRUNK AND BARK PROTECTION DETAIL WILL BE ACCEPTABLE.
6. REFER TO THE ELECTRICAL PLANS FOR SPECIFIC DEMOLITION RELATED TO ELECTRICAL PLANS
7. REFER TO THE IRRIGATION PLAN FOR IRRIGATION DEMOLITION INFORMATION.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE SITE FOR THE DURATION OF THE PROJECT. CONSTRUCTION FENCING OR OTHER MEASURES WILL MAY BE UTILIZED AND COSTS ARE CONSIDERED INCIDENTAL TO THE PROJECT.
9. CONTRACTOR TO INCORPORATE BMP'S FOR SEDIMENT CONTROL, CONSTRUCTION DEBRIS, CONCRETE WASHOUT AND SANITARY SERVICES FOR CONSTRUCTION CREW.

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DRAWN BY: D. DEITEMEYER
DATE: FEB 17, 2023
SCALE: 1" = 20'
REVISIONS: _____



1401 RECREATION WAY
COLORADO SPRING CO 80905
(719) 385-5940



ANTLERS PARK
DOG PARK
COVER PAGE AND DEMOLITION PLAN

TITLE:

SHEET

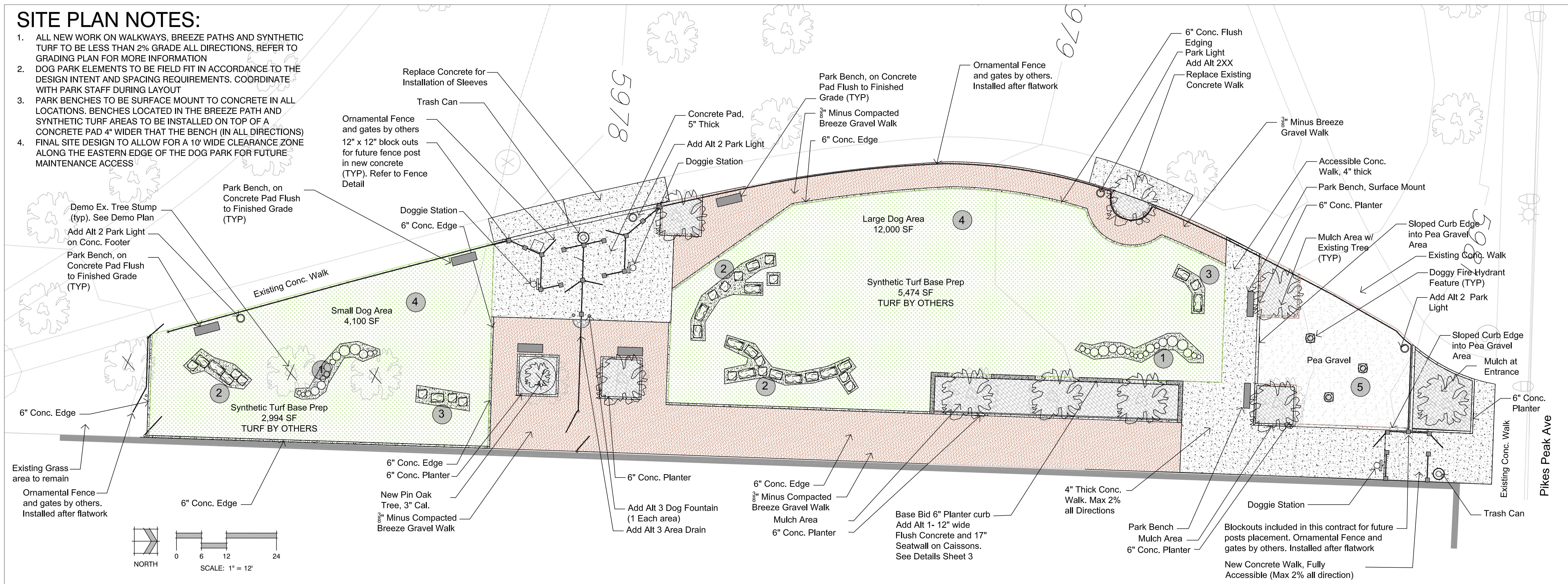
1

OF 7 SHEETS

FILE NUMBER:

SITE PLAN NOTES:

1. ALL NEW WORK ON WALKWAYS, BREEZE PATHS AND SYNTHETIC TURF TO BE LESS THAN 2% GRADE ALL DIRECTIONS. REFER TO GRADING PLAN FOR MORE INFORMATION
2. DOG PARK ELEMENTS TO BE FIELD FIT IN ACCORDANCE TO THE DESIGN INTENT AND SPACING REQUIREMENTS. COORDINATE WITH PARK STAFF DURING LAYOUT
3. PARK BENCHES TO BE SURFACE MOUNT TO CONCRETE IN ALL LOCATIONS. BENCHES LOCATED IN THE BREEZE PATH AND SYNTHETIC TURF AREAS TO BE INSTALLED ON TOP OF A CONCRETE PAD 4" WIDER THAT THE BENCH (IN ALL DIRECTIONS)
4. FINAL SITE DESIGN TO ALLOW FOR A 10' WIDE CLEARANCE ZONE ALONG THE EASTERN EDGE OF THE DOG PARK FOR FUTURE MAINTENANCE ACCESS



Type of Feature

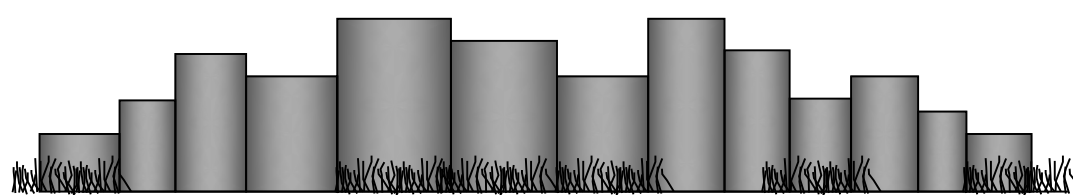
1 Serpentine Balancing Course with Timber Steepers

Purpose: Semi-regularly spaced and height logs for agile jumping and balancing play
Timbers: TIMBERFORM Full Rounds Steepers Model 1501 or equal
(Available from Columbia Cascade Company)

Spacing: Steepers to abut each other, creating a serpentine design
Height: 4" Min, 20" Max in Large Dog Area
Height: 6" Min to, 24" Max in Small Dog Area

Log heights and diameters in each course to be equally distributed (frequency of use)

See Details sheet for installation detail

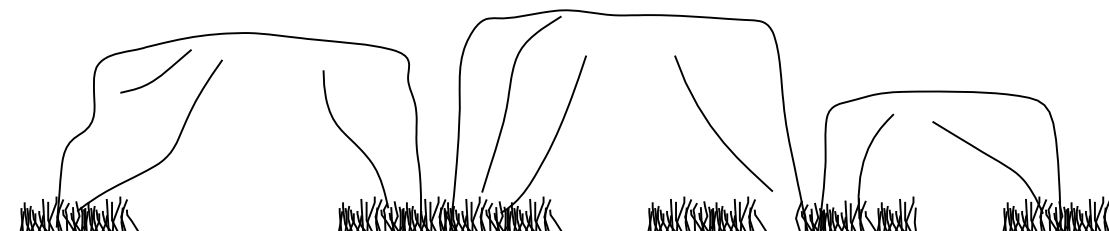


2 Boulder Clusters at verifying heights

Purpose: Semi-regularly spaced, but closer together and different height boulders for agile jumping and balancing play
Boulders: See Installation Detail

Spacing: 6" Min/Max in Large Dog Area
Spacing: 4" Min/Max in Small Dog Area
Height: 12" Min, 32" Max in Large Dog Area
Height: 6" Min to, 20" Max in Small Dog Area
See Details sheet for installation detail

Quantity Breakdown
2'x2' boulders: 13
2'x3' boulders: 9
2'x4' boulders: 7

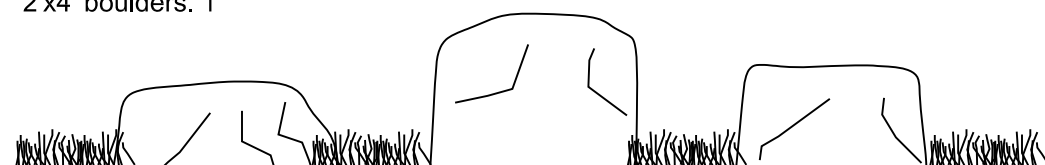


3 Boulder Jump Course

Purpose: Semi-regularly spaced and height boulders for jumping and balancing play
Boulders: See Installation Detail

Spacing: 12" Min, 24" Max
Height: 8" Min, 24" Max
See Details sheet for installation detail

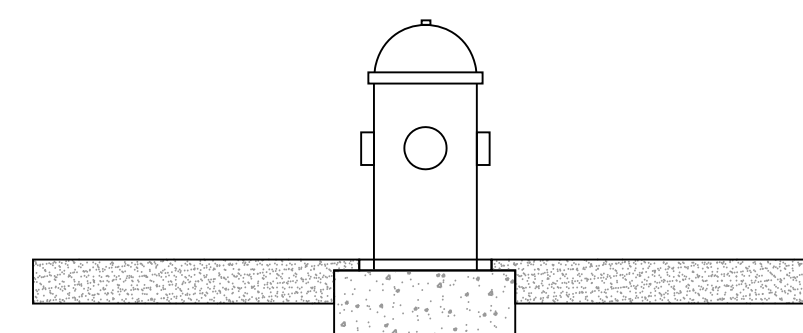
Quantity Breakdown
2'x2' boulders: 4
2'x3' boulders: 2
2'x4' boulders: 1



7 Open Grass Area for Running



8 Ornamental Fire Hydrant (non-functioning) In Pea Gravel Area



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DATE: Feb 17, 2023
SCALE: 1" = 12'
REVISIONS: Addendum 1



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ANTLERS PARK
DOG PARK
SITE PLAN

TITLE:

SHEET 2

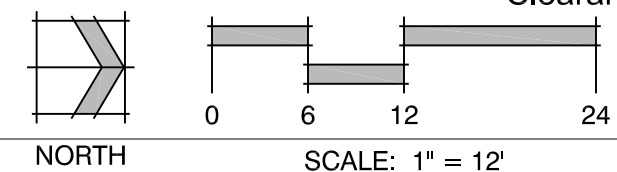
OF 7 SHEETS

FILE NUMBER:

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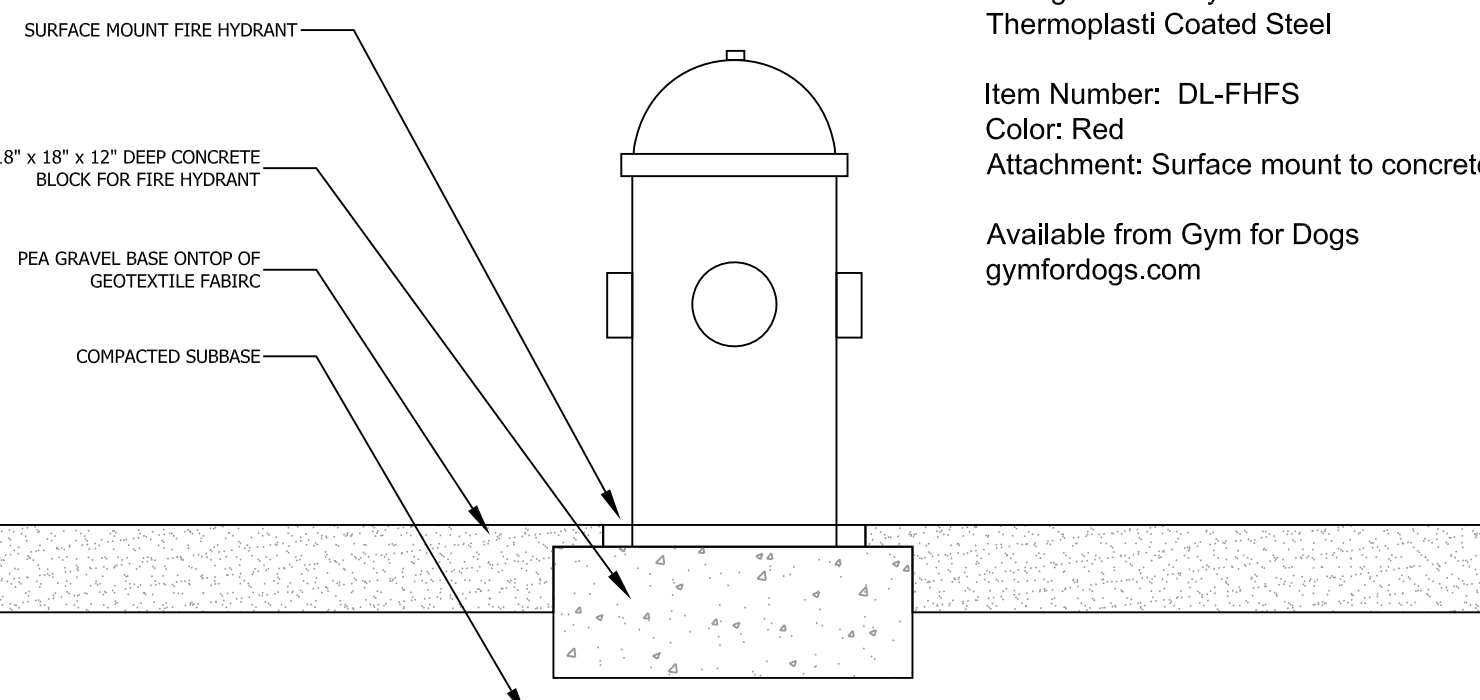
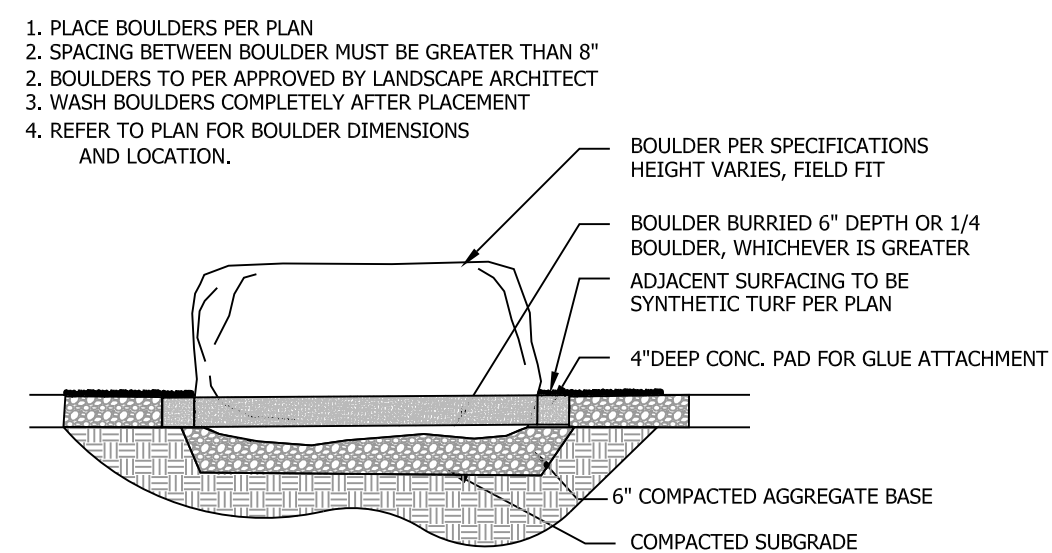
1. SITE LAYOUT TO BE COMPLETED IN THE FIELD PER THE DESIGN INTENT AND MEASUREMENTS PROVIDED. MODIFICATIONS MAY BE NECESSARY TO ACCOMMODATE PRESERVATION OF EXISTING TREES OR OTHER FACTORS THAT MAY DEVELOP DURING CONSTRUCTION.
2. PROJECT MANAGER TO APPROVE PROJECT STAKING PRIOR TO STAKING CONCRETE FORMWORK, FENCING AND PLACEMENT OF DOG ELEMENTS.
3. DOG PARK ELEMENTS SHALL MAINTAIN A MINIMUM 5 FOOT CLEARANCE FROM ALL HARDSCAPE ELEMENTS.
4. QUANTITIES PROVIDED ARE DERIVED IN GOOD FAITH BASED ON THE AUTOCAD DRAWINGS. FINAL QUANTITIES MAY SLIGHTLY DIFFER BASED ON THE NATURE OF A FIELD FIT PROJECT.
5. FENCING TO BE OFF SET OF WALK WALKS, AND PLANTERS AS SHOWN.

1. SITE LAYOUT TO BE COMPLETED IN THE FIELD PER THE DESIGN INTENT AND MEASUREMENTS PROVIDED. MODIFICATIONS MAY BE NECESSARY TO ACCOMMODATE PRESERVATION OF EXISTING TREES OR OTHER FACTORS THAT MAY DEVELOP DURING CONSTRUCTION.
2. PROJECT MANAGER TO APPROVE PROJECT STAKING PRIOR TO STAKING CONCRETE FORMWORK, FENCING AND PLACEMENT OF DOG ELEMENTS.
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4. QUANTITIES PROVIDED ARE DERIVED IN GOOD FAITH BASED ON THE AUTOCAD DRAWINGS. FINAL QUANTITIES MAY SLIGHTLY DIFFER BASED ON THE NATURE OF A FIELD FIT PROJECT.
5. FENCING TO BE OFF SET OF WALK WALKS, AND PLANTERS AS SHOWN.



Style: "Brownstone" Or Equal
Available from:
The Rock Garden
Fort Collins, CO

3.5 STUMPS



Available from Gym for Dogs
gymfordogs.com

Available from Dog Waste Depot
dogwastedepot.com

SIGNED BY: D. DEITEMEYER
 WITNESSED BY: D. DEITEMEYER
 DATE: Feb 17, 2023
 SCALE: 1" = 12'
 ATTACHMENTS: Addendum 1



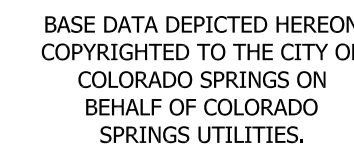
ANTILERS PARK DOG PARK LAYOUT PLAN

ET

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FILE NUMBER:

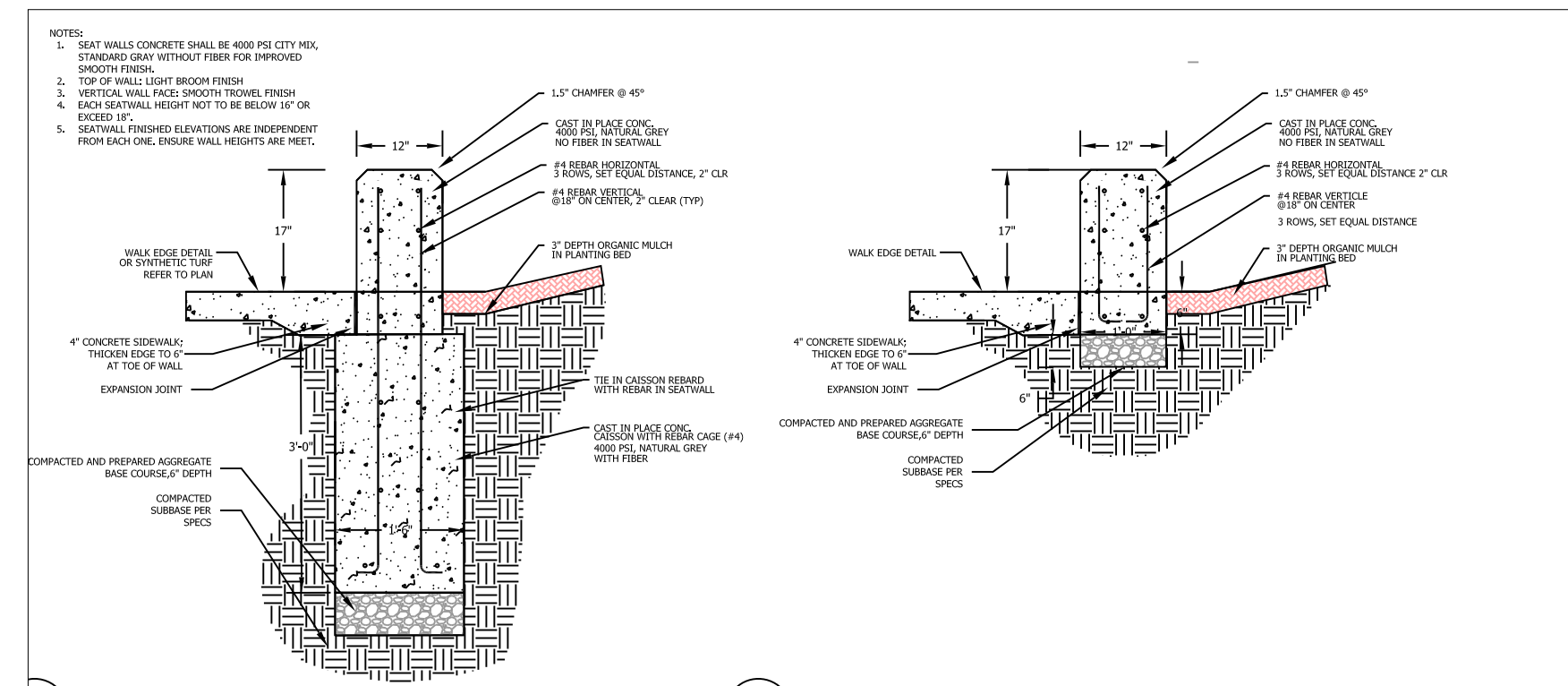
1. THE OVERALL SITE DRAINS FROM THE NORTH TO THE SOUTH. REFER TO GRADING PLAN FOR PROPOSED SLOPES AND ELEVATIONS.
2. EACH SYNTHETIC TURF DOG AREA WILL HAVE A DRY SUMP INSTALLED AT THE LOW END OF THE AREA
3. ALL GRADES FOR WALKWAYS, BREEZE PATH AND SYNTHETIC TURF TO BE ADA ACCESSIBLE AND NOT TO EXCEED 2% IN ALL DIRECTIONS UNLESS OTHERWISE NOTED
4. BENCH PADS, 8" WIDE MOW BOARDED EDGES TO BE FLUSHED WITH FINISHED GRADE
5. EACH SEAT WALL SEGMENTS SHALL BE 17" IN HEIGHT.
6. FINISHED GRADE HEIGHTS FOR DOG ELEMENTS TO BE FIELD PROVIDED AND COORDINATED WITH THE PROJECT MANAGER
7. AFTER GRUBBING, SITE IS ANTICIPATED TO BALANCE WITH THE UNDERSTANDING REQUIRED IMPORTED SUB BASE WILL PROVIDE NECESSARY FILL TO ACHIEVE FINAL GRADES.



DESIGNED BY: D. DEITEMEYER
DRAWN BY: D. DEITEMEYER
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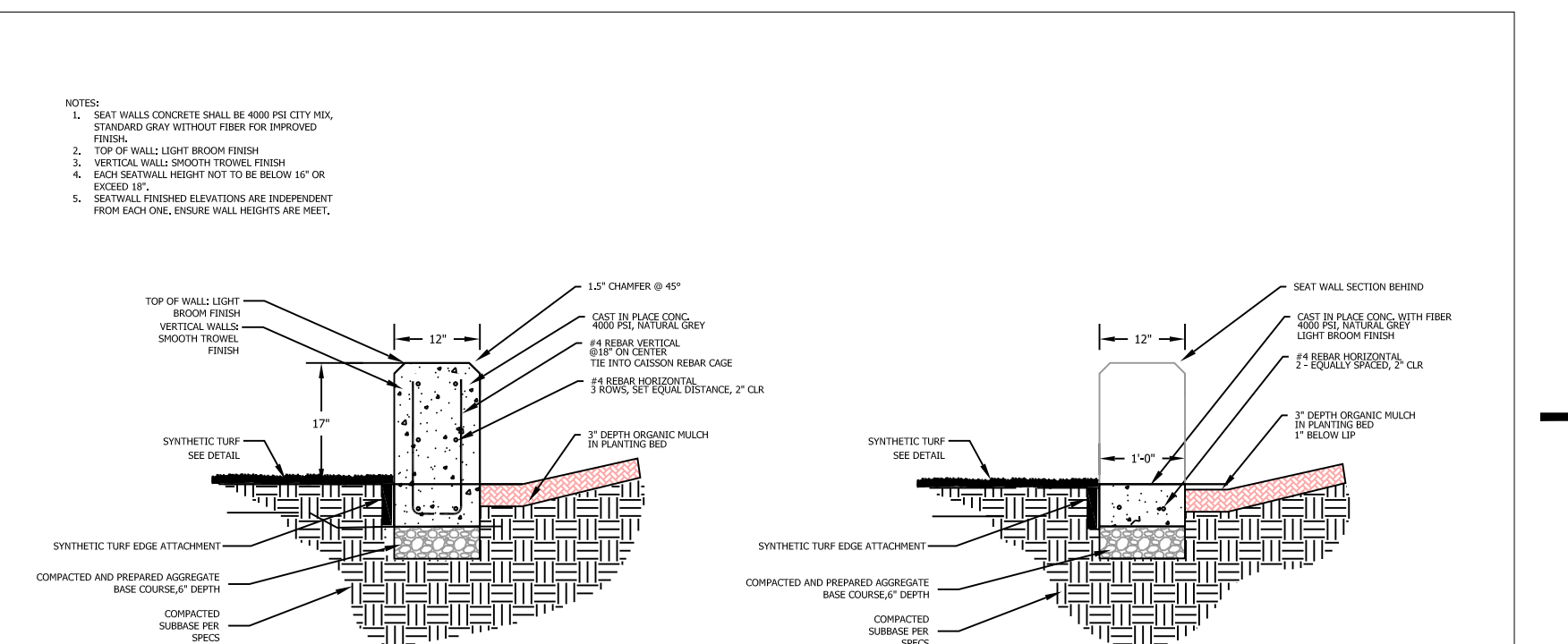


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4.1 SEATWALL CAISSON

4.2 SEATWALL ON GRADE



4.3 SURFACING AT SEATWALL

4.4 SURFACING AT 12" BORDER

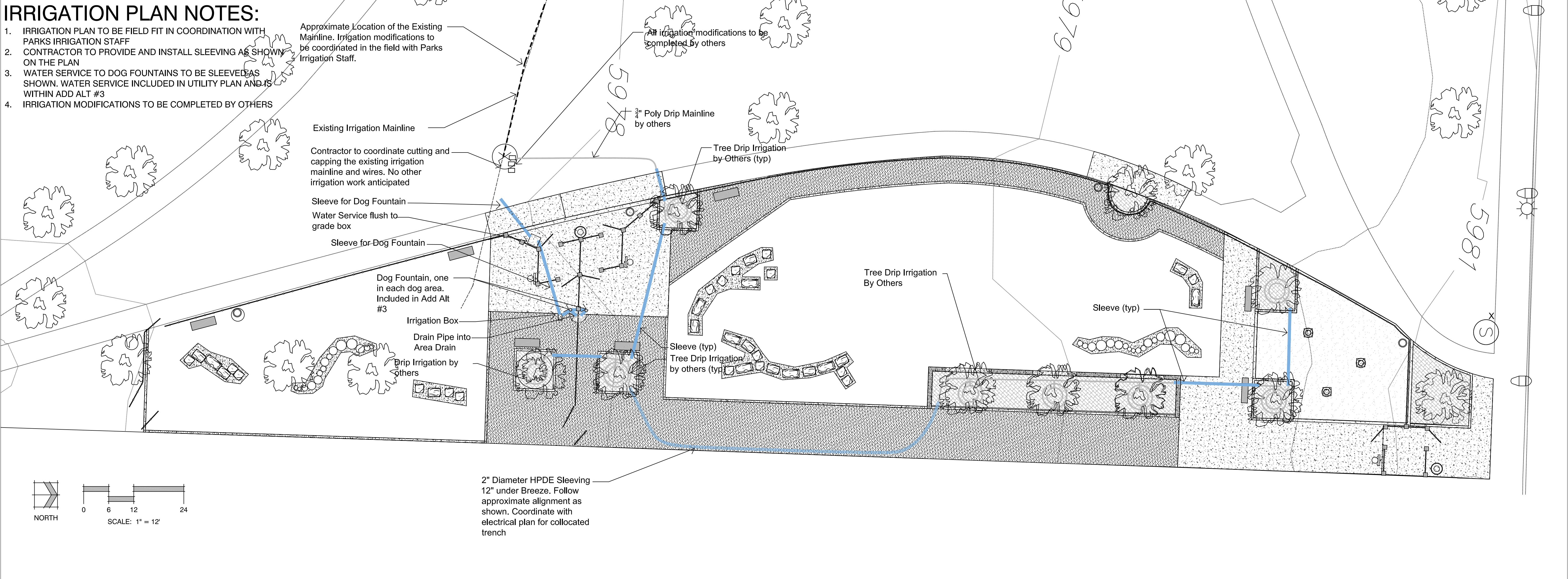
ANTLERS PARK
DOG PARK
GRADING PLAN

SHEET 4
OF 7 SHEET

FILE NUMBER:

IRRIGATION PLAN NOTES:

- 1. IRRIGATION PLAN TO BE FIELD FIT IN COORDINATION WITH PARKS IRRIGATION STAFF
- 2. CONTRACTOR TO PROVIDE AND INSTALL SLEEVING AS SHOWN ON THE PLAN
- 3. WATER SERVICE TO DOG FOUNTAINS TO BE SLEEVED AS SHOWN. WATER SERVICE INCLUDED IN UTILITY PLAN AND IS WITHIN ADD ALT #3
- 4. IRRIGATION MODIFICATIONS TO BE COMPLETED BY OTHERS



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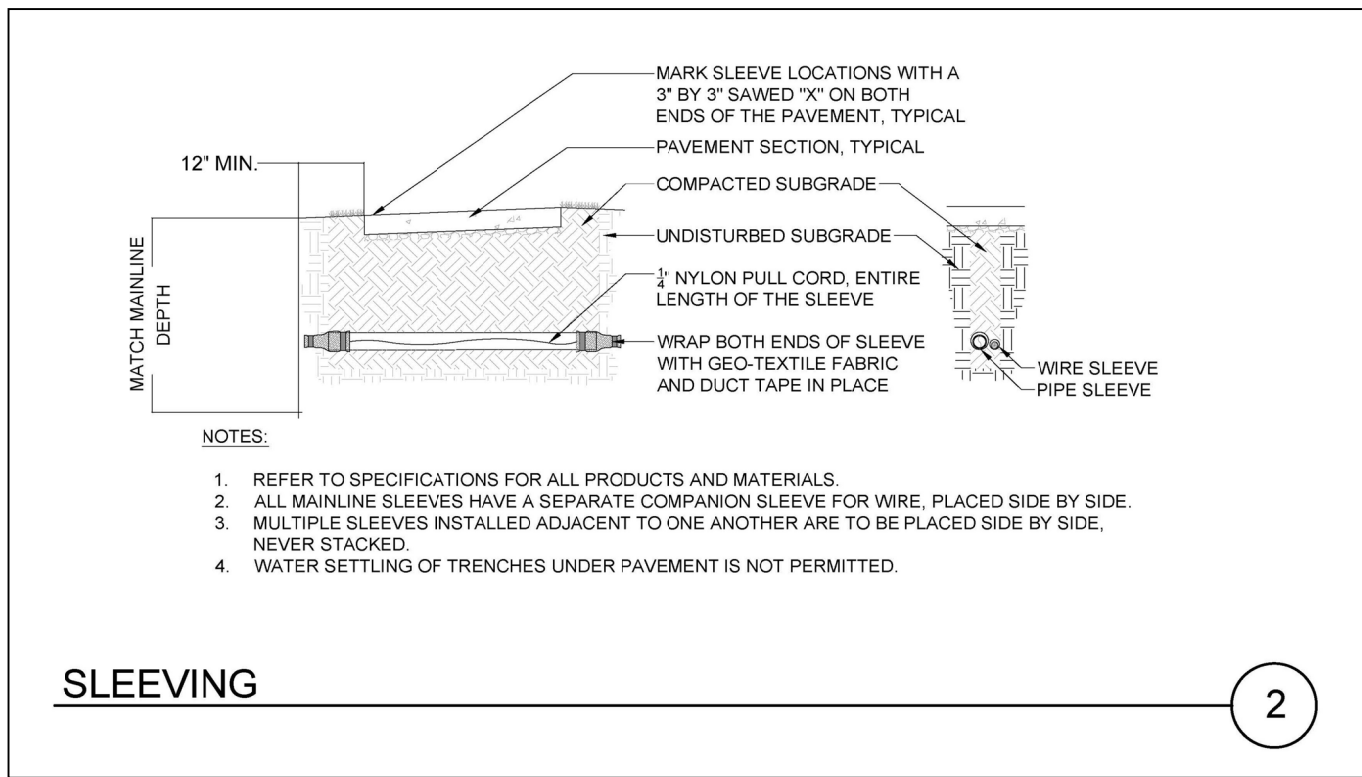
DESIGNED BY: D. DEITEMEYER
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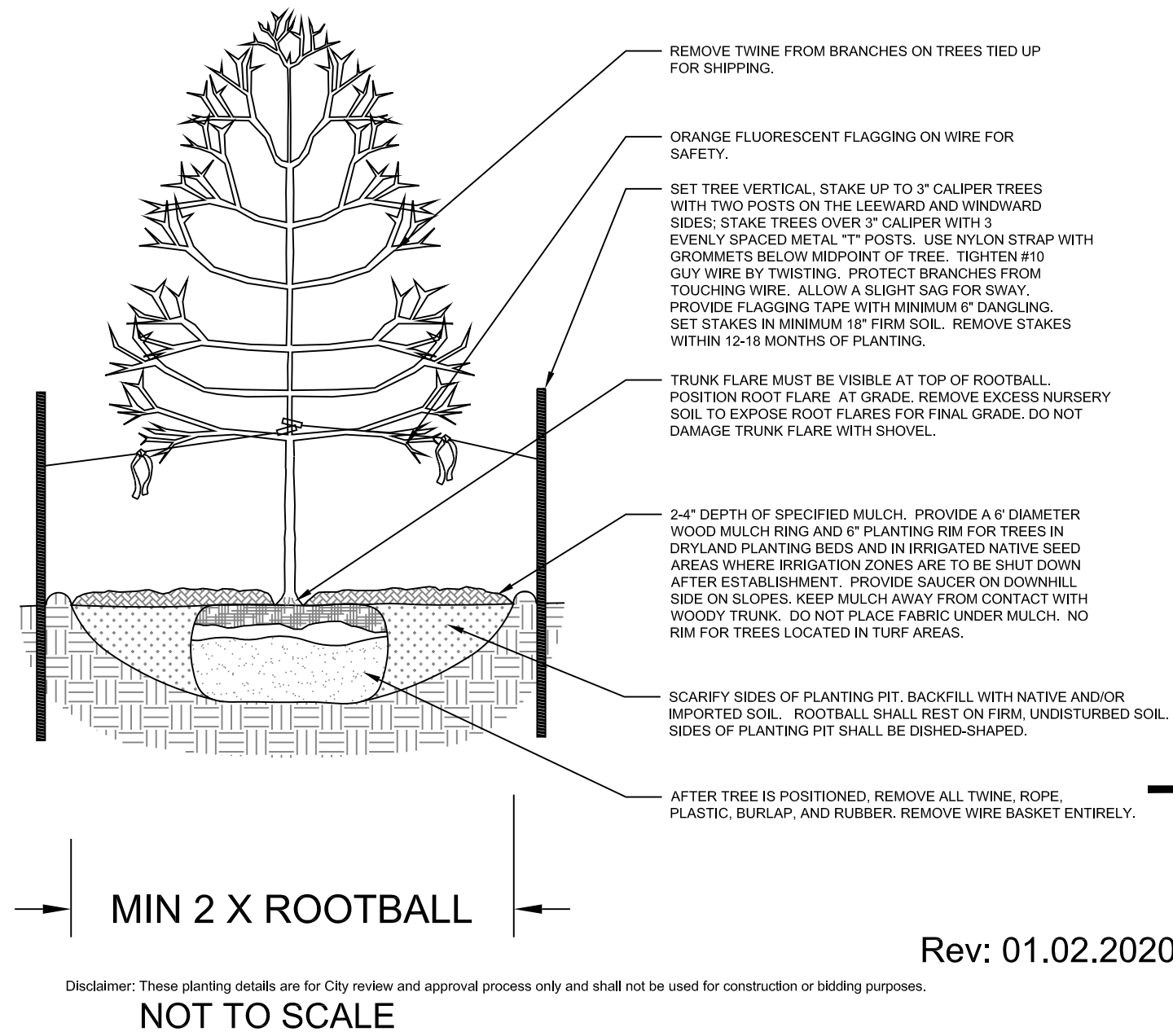
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- NOTES:
- 1. AT TIME OF PLANTING, DO NOT REMOVE OR CUT LEADER AND PRUNE ONLY DEAD OR BROKEN BRANCHES, CROSS OVER BRANCHES, AND WEAK OR NARROW CROTCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
 - 2. STRUCTURAL PRUNING SHOULD NOT BEGIN UNTIL AFTER ESTABLISHMENT PERIOD, USUALLY TWO GROWING SEASONS.
 - 3. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
 - 4. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
 - 5. BACKFILL WITH NATIVE AND/OR IMPORTED TOPSOIL.
 - 6. WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK. USE ELECTRICAL OR DUCT TAPE, NOT TWINE.
 - 7. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
 - 8. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



5.1 Irrigation Sleeving



5.2 Tree Planting Detail

ANTLERS PARK
DOG PARK
IRRIGATION AND LANDSCAPE PLAN

TITLE:

SHEET

5

OF

7

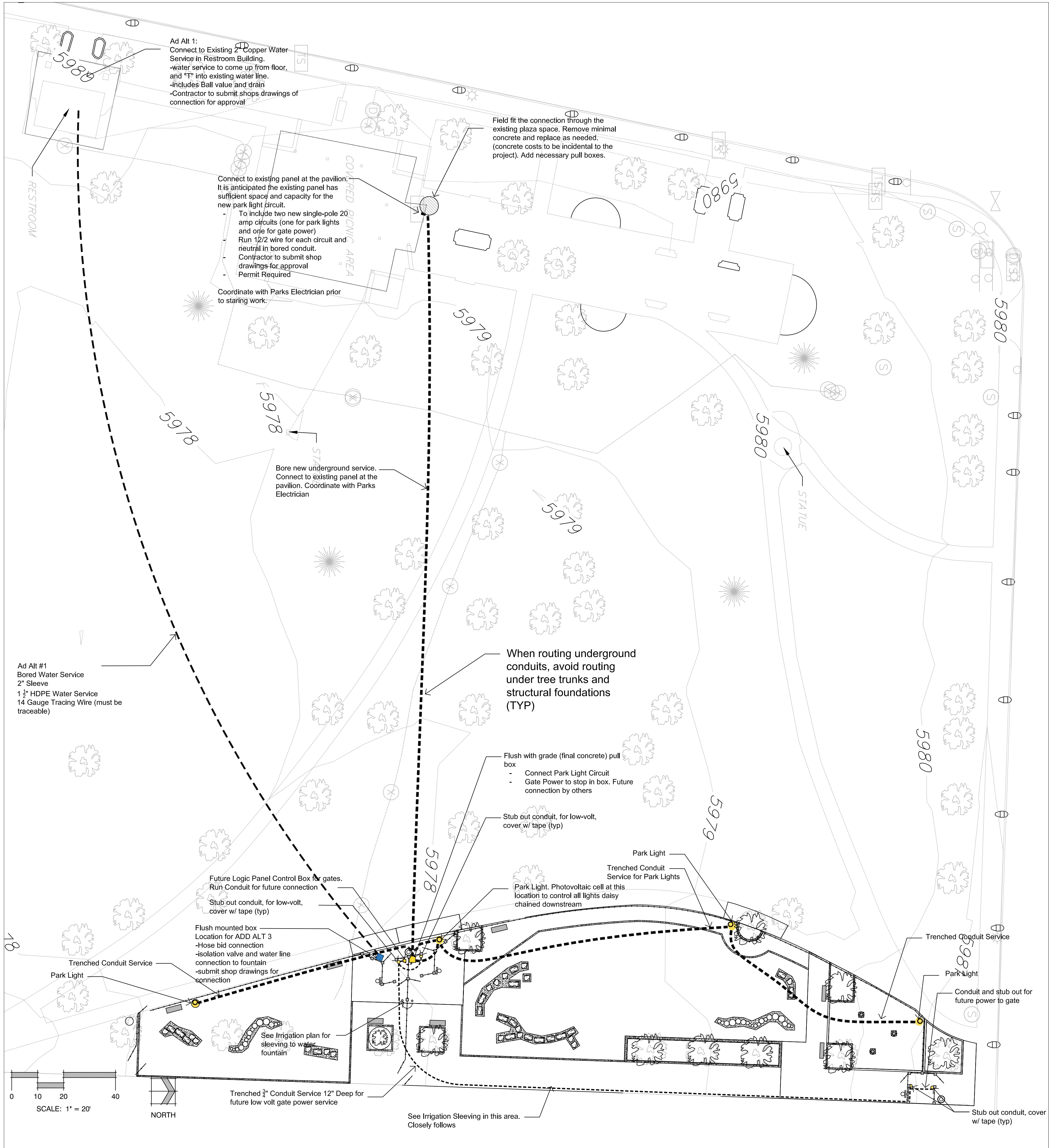
SHEETS

FILE NUMBER:

Rev: 01.02.2020

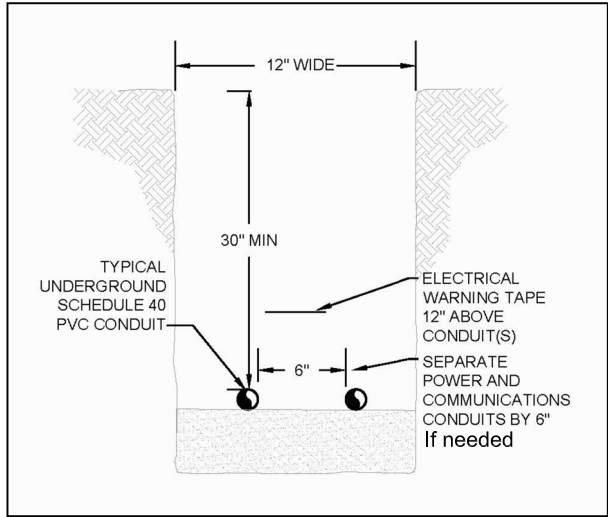
NOT TO SCALE

HERE

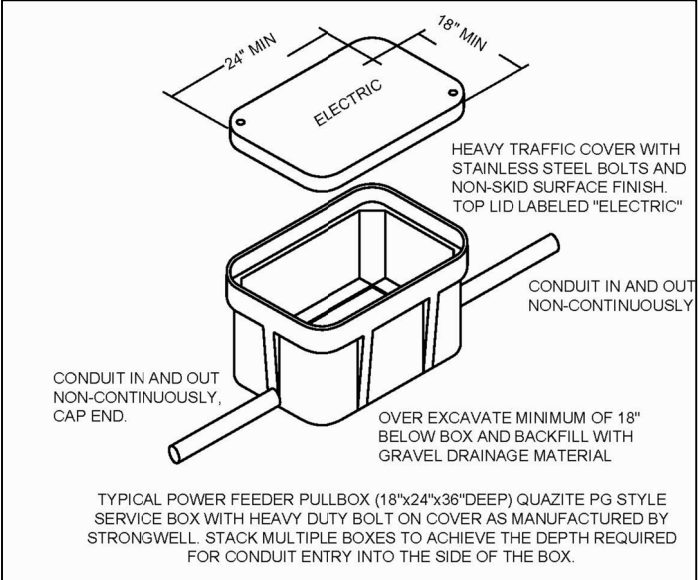


UTILITY PLAN NOTES

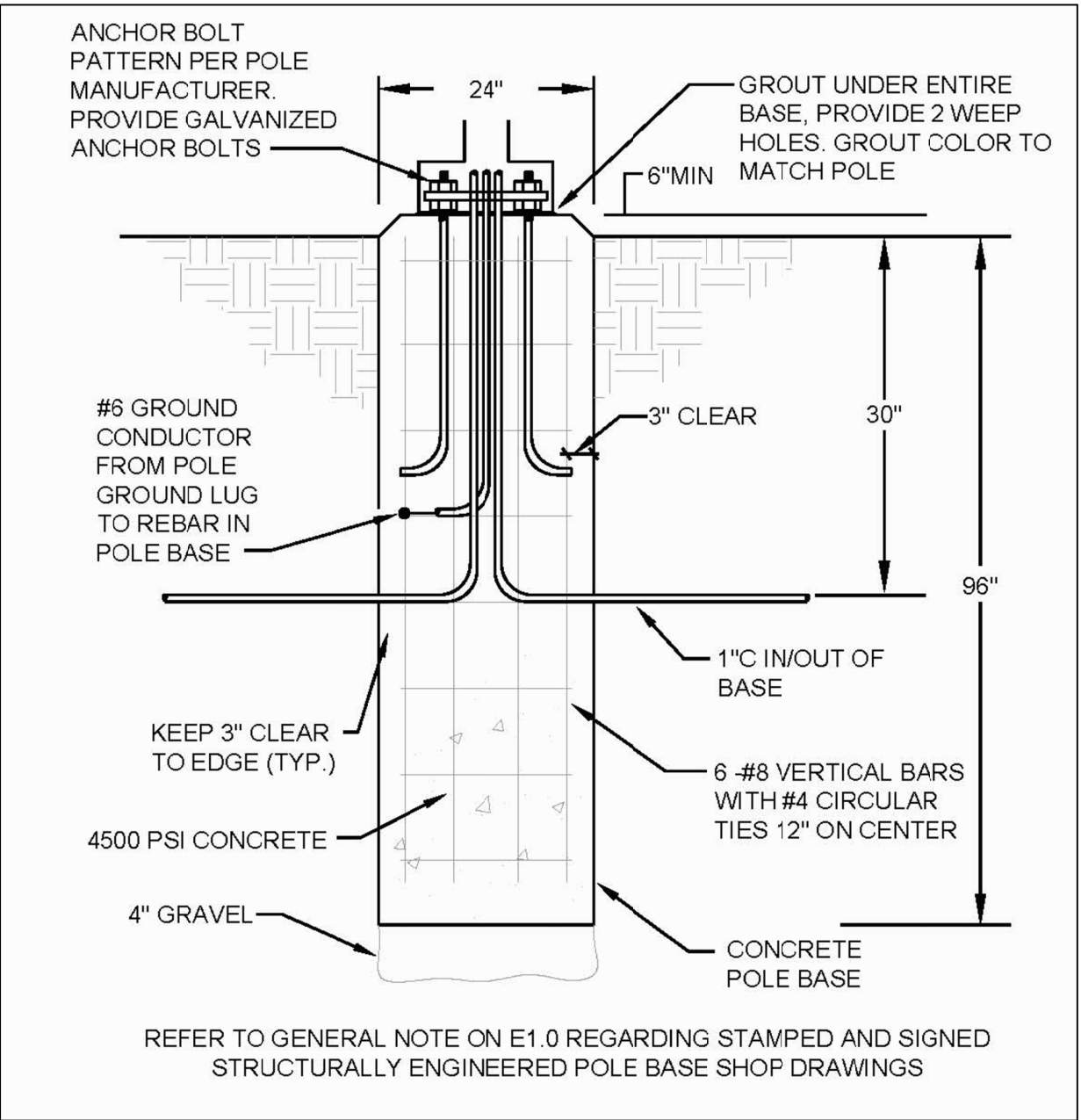
1. WATER SERVICE AND ELECTRICAL WORK IS IDENTIFIED AS AN ADD ALT BID. REFER TO BID SCHEDULE, ADD ALT #2 and ADD ALT #3.
2. COORDINATE WITH PARKS STAFF FOR LOCATION OF IRRIGATION MAINLINE TO FIELD LOCATE THE BORROW ELECTRICAL SERVICE LINE.
3. ALL WIRING SHALL BE IN COMPLIANCE WITH THE NEC LATEST EDITION
4. REFER TO THE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL INSTALLATION CONDUIT DEPTHS, AND SPECIFICATION REQUIREMENTS. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE TO THE MOST CURRENT LOCAL CODES AND THE NEC LATEST EDITION.
5. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC WITH PVC COATED GRC ELBOWS AND RISERS TO 4 FEET ABOVE GRADE AND 1 INCH MINIMUM DIAMETER, UNLESS OTHERWISE NOTED.
6. ALL UNDERGROUND ELECTRICAL CIRCUITS SHALL BE INSTALLED WITH A MINIMUM 30 INCH BELOW GRADE WITH BURIED ELECTRICAL WARNING TAPE INSTALLED DIRECTLY ABOVE BETWEEN 6 AND 12 INCHES BELOW GRADE. CONTRACTOR SHALL PROVIDE PULL BOXES AS REQUIRED TO MINIMIZE THE NUMBER OF BENDS TO MEET CODE.
7. ALL ELECTRICAL DEVICE LOCATIONS SHALL BE COORDINATED WITH THE PARKS ELECTRICIAN AND LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO DETERMINE TYPICAL INSTALLATION REQUIREMENTS/LOCATIONS IN RELATION TO THE SITE ELEMENTS. LOCATIONS ARE COORDINATED WITH SIDEWALKS, FENCING, PLANTERS AND SITE FURNISHINGS.
8. UNDERGROUND CONDUIT IS INDICATED BY DASHED LINES.
9. ALL NEW CIRCUITS SHALL HAVE GROUNDING CONDUCTORS IN ALL FEEDERS AND BRANCH CIRCUITS.
10. THE CONTRACTOR SHALL PROVIDE STAMPED AND SIGNED STRUCTURALLY ENGINEERED POLE BASE SHOP DRAWINGS FOR THE PARK LIGHTS, THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING THE AUTHORITY HAVING JURISDICTION WITH A STAMPED LETTER "GENERAL COMPLIANCE LETTER", VERIFYING THAT ALL NEW LIGHT BASES CAISSONS AND LIGHT ATTACHMENTS TO THE BASES HAVE BEEN INSTALLED IN ACCORDANCE WITH THE STAMPED STRUCTURAL PLANS AND ANY/ALL APPLICABLE CODES. THE POLE BASE DETAILS PROVIDED IN THE ELECTRICAL DRAWINGS ARE FOR GENERAL STYLE AND DIMENSIONS ONLY.



6.1 Conduit Trench Detail



6.2 Flush with Grade Pull Box Detail



6.3 Park Light Caisson General Detail

Park Light Fixture
Lithonia RSX1
LED Area Luminares
Type 4

Color: Black
Attachment: Pole Mount

Available from Acuity Brands
AcuityBrands.com

6.4 Park Light and Light Pole

Park Light Pole
Square Straight Steel Pole
Item SSS 20 5C
20' Height

Color: Black DBLXD

Available from Acuity Brands
AcuityBrands.com

6.4 Park Light and Light Pole

Photovoltaic Sensor
Button Thermal Photocontrol, 102 V
Product number: Model # K40Z1C
Manufacture: Intermatic

Located on first light poll, controls downstream lights with daisy chain

Contractor to coordinate with Parks Staff

6.5 Photovoltaic Sensor

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DRAWN BY: D. DEITEMEYER
DATE: Feb 17, 2023
SCALE: 1" = 20'
REVISIONS: Addendum 1



1401 RECREATION WAY
COLORADO SPRING CO 80905
(719) 385-5940



ANTLERS PARK
DOG PARK
UTILITY PLAN
(ADD ALT WORK)

TITLE:

SHEET

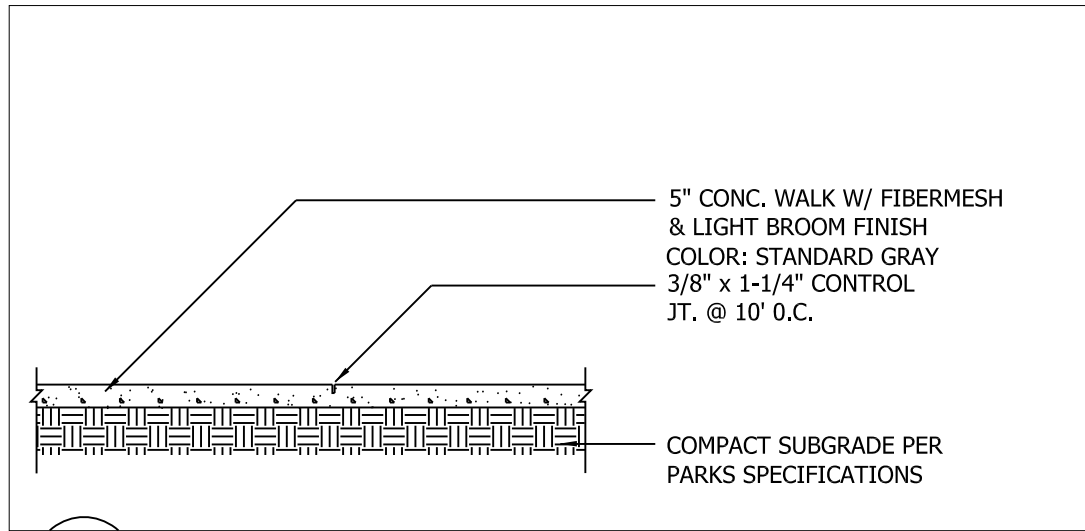
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OF

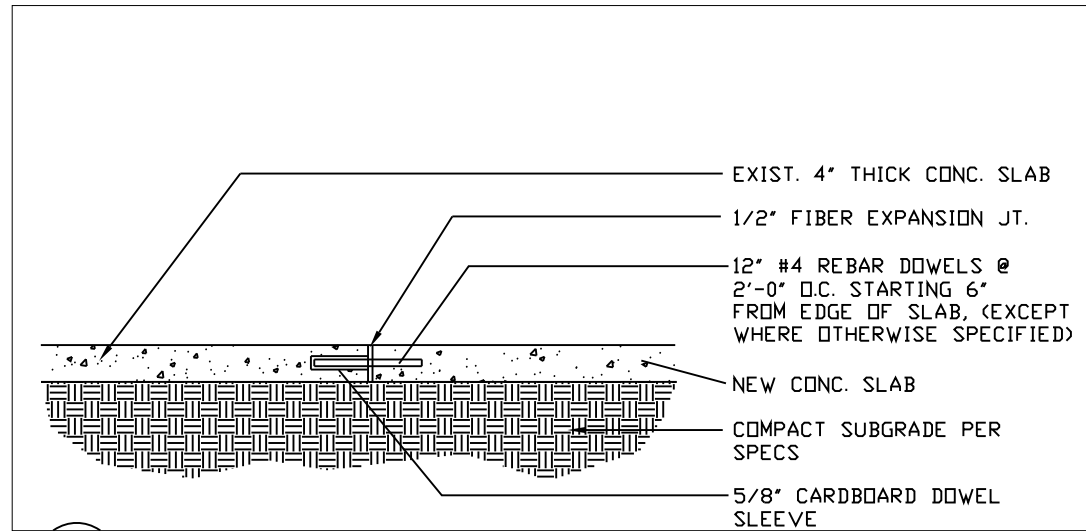
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SHEETS

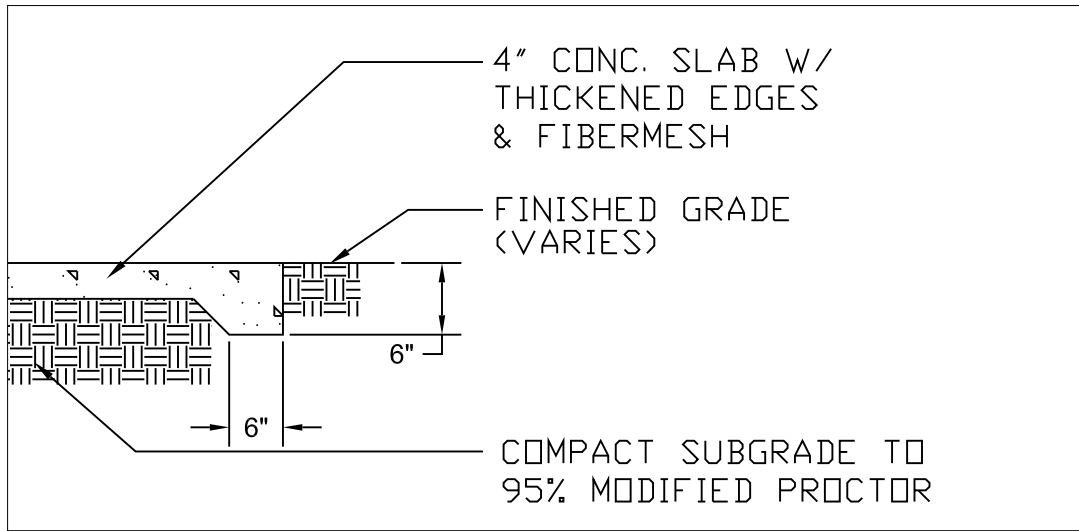
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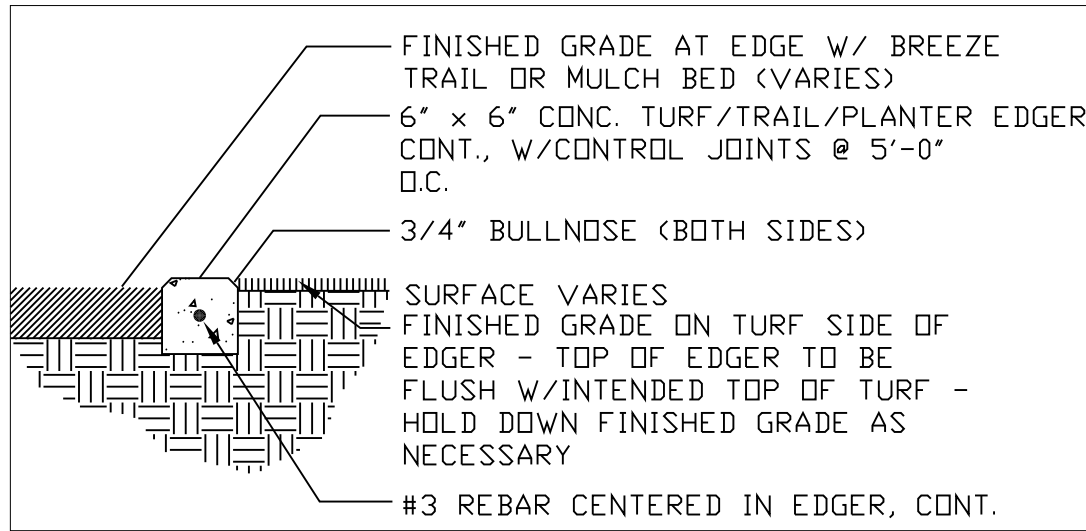
7.1 Concrete Walk



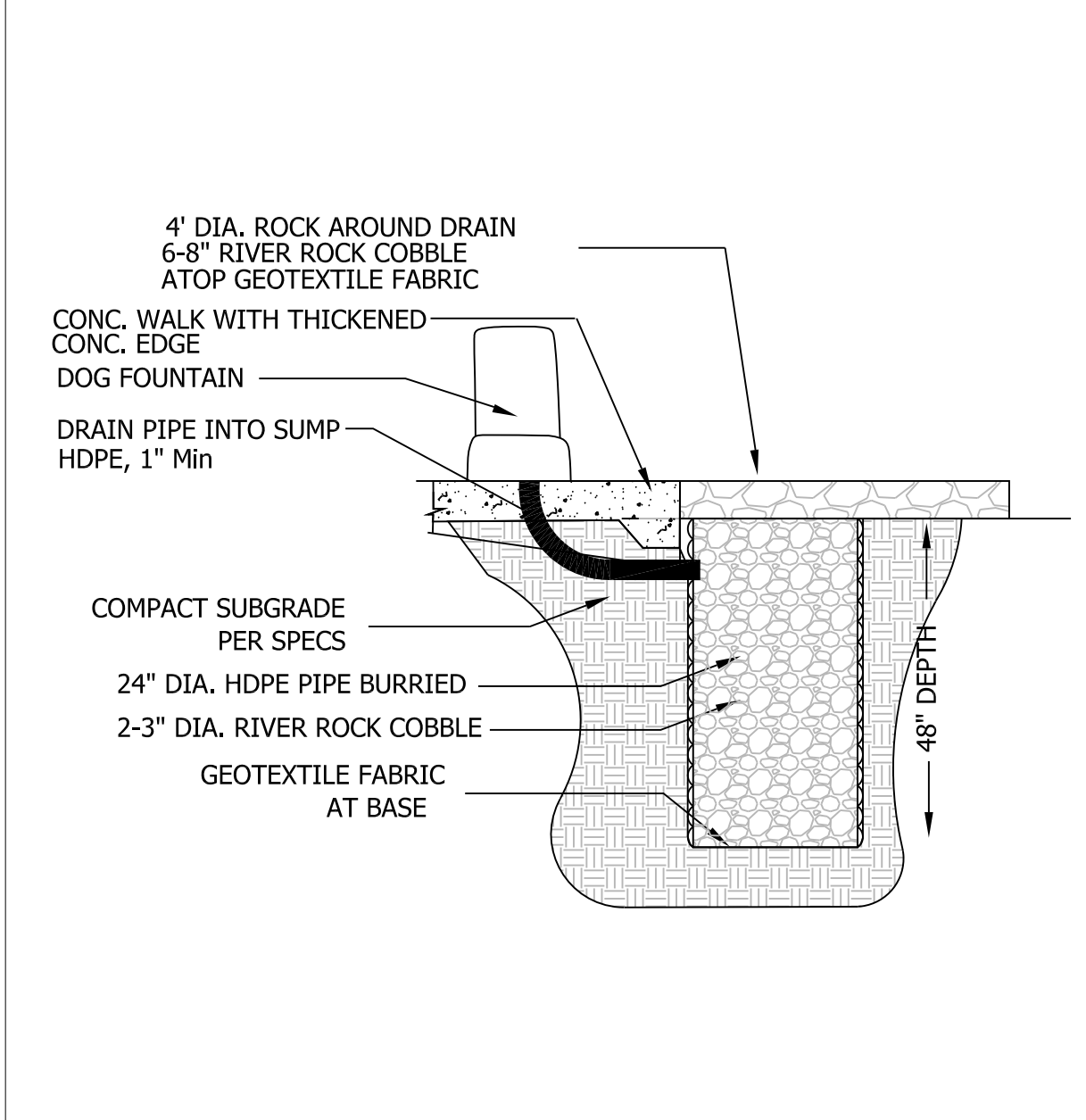
7.2 Doweled Connection Concrete Walk



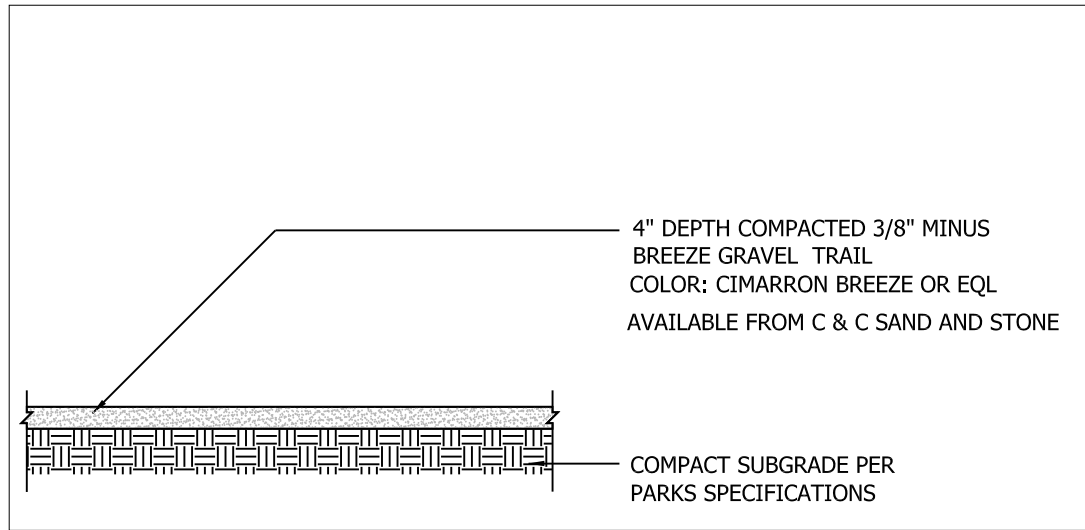
7.3 Thickened Concrete Edge



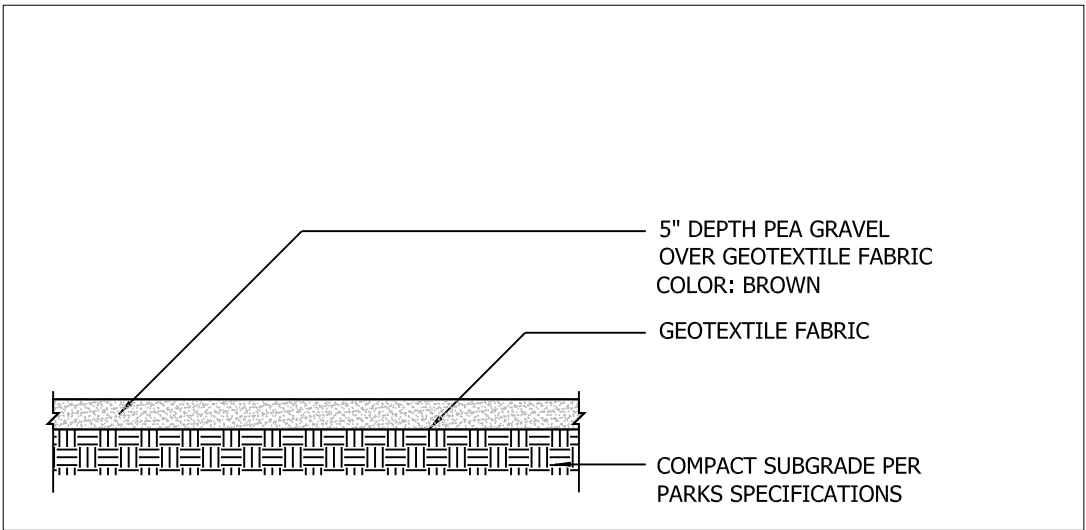
7.4 6" Concrete Edging



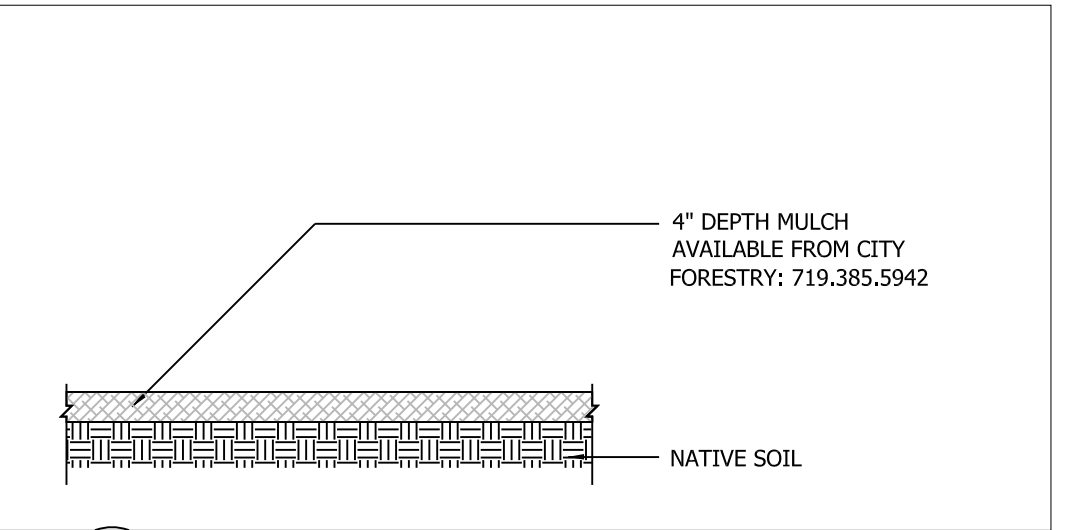
7.9 Fountain Sump Drain



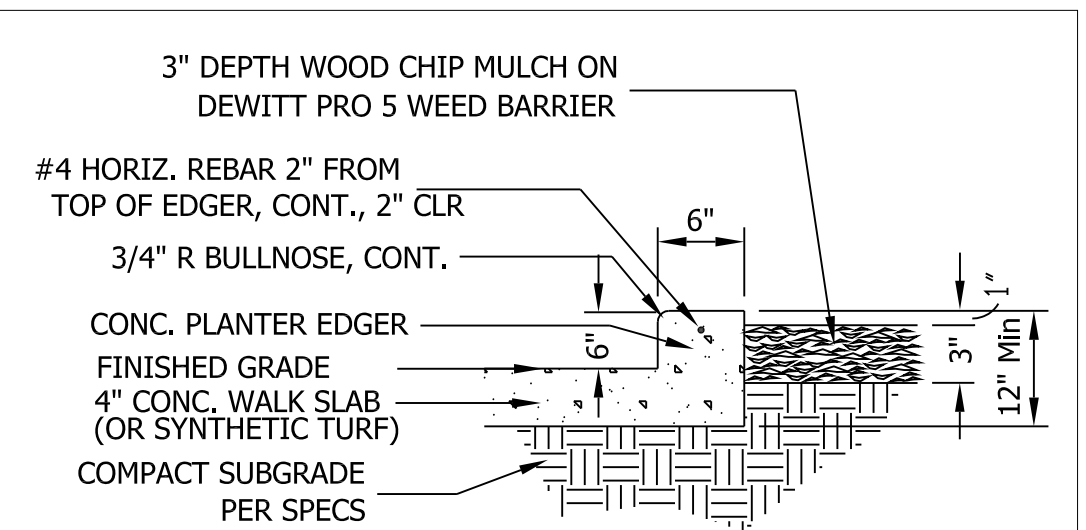
7.5 Breeze Gravel Walkway



7.6 Pea Gravel Area



7.7 Mulch Area



7.8 6" Concrete Planter Curb

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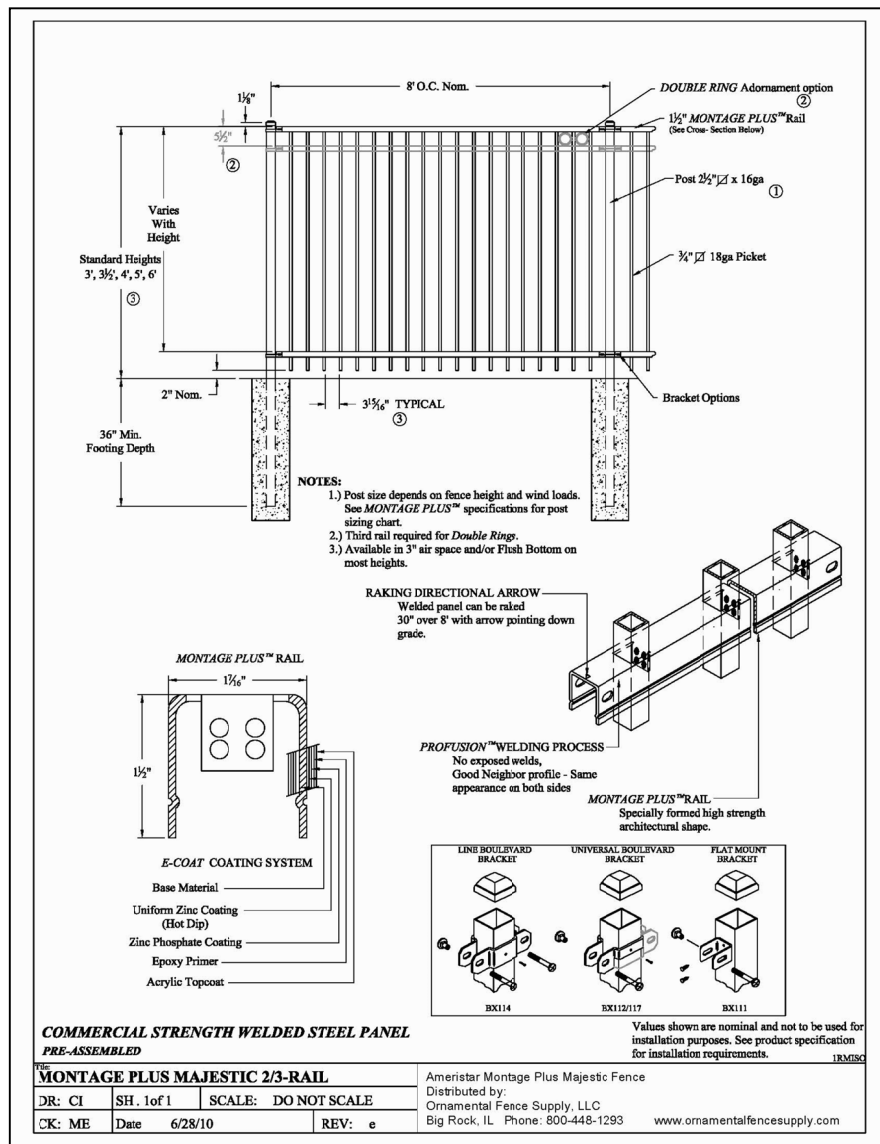


FENCE INSTALLED BY OTHERS.
DETAILS PROVIDED FOR
REFERENCE

Perimeter Ornamental Fencing
Montage Plus Majestic 3-rail

Height: 6' height x 8' width panels
Color: Black

Footing depth, 36" depth in concrete



7.10 Ornamental Fencing

FENCE INSTALLED BY OTHERS. DETAILS
PROVIDED FOR REFERENCE

Ornamental Pedestrian Gate
Montage Plus Majestic 3-rail Swing Gate

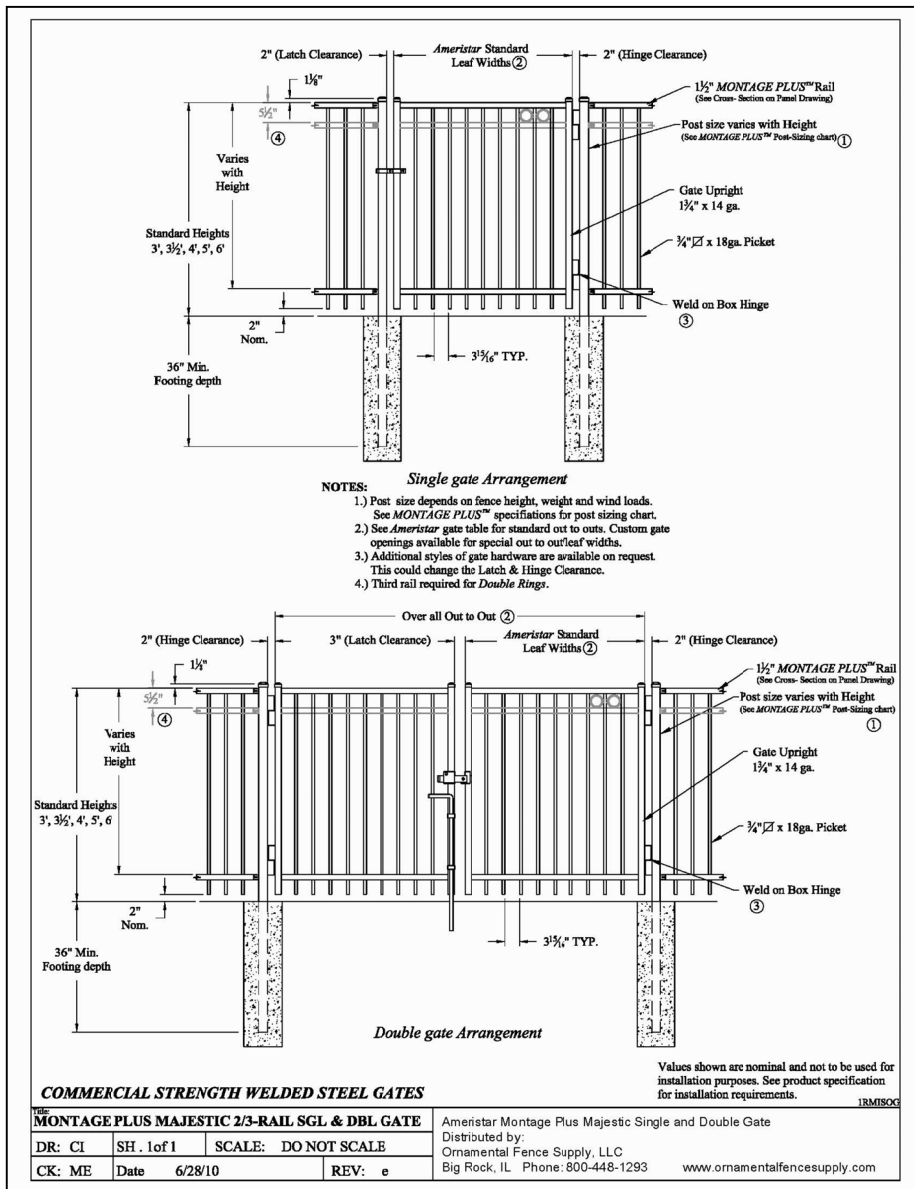
Height: 6' height x 3' width, swing gate
Color: Black

Footing depth, 36" depth in concrete

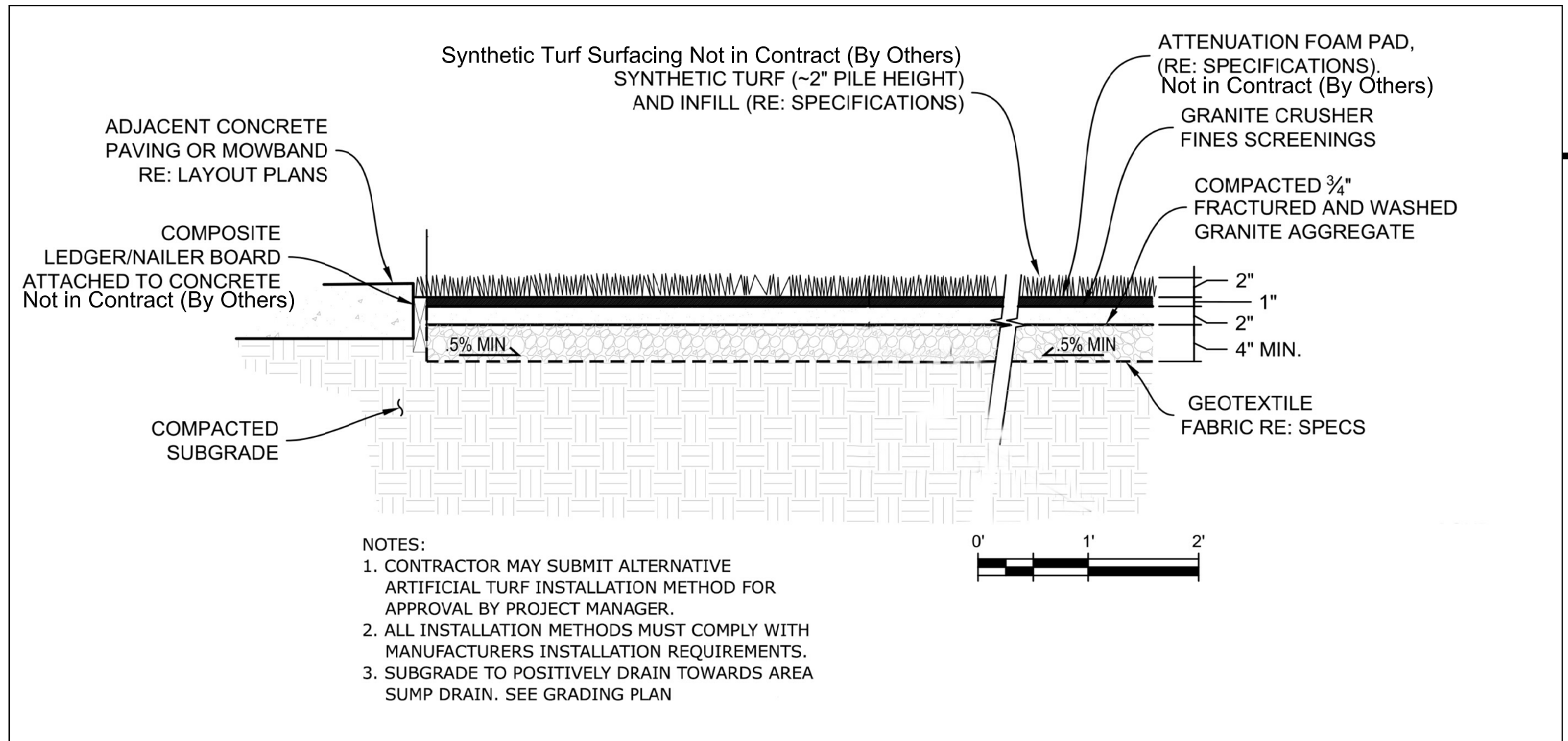
Ornamental Double Gate (for maintenance
access)
Montage Plus Majestic 3-rail

Height: 6' height x 6' width, double swing
gate for 12' opening
Color: Black

Footing depth, 36" depth in concrete



7.11 6' Ht. Pedestrian Gate

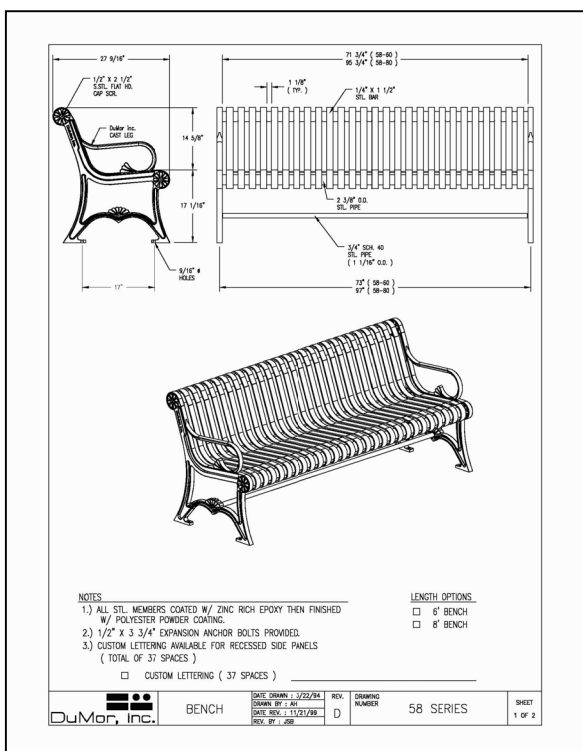


7.12 Synthetic Turf Base Preparation

DuMor Site Furnishings
6' Cast Bench Steel Seat, 2 Arms
Item No.: 58-60
Color: Black
Attachment: surface mount

Available from :
Rocky Mountain Recreation Inc
303.783.1452

NOTE: Each Bench to be mounted to
concrete pad or concrete walkway

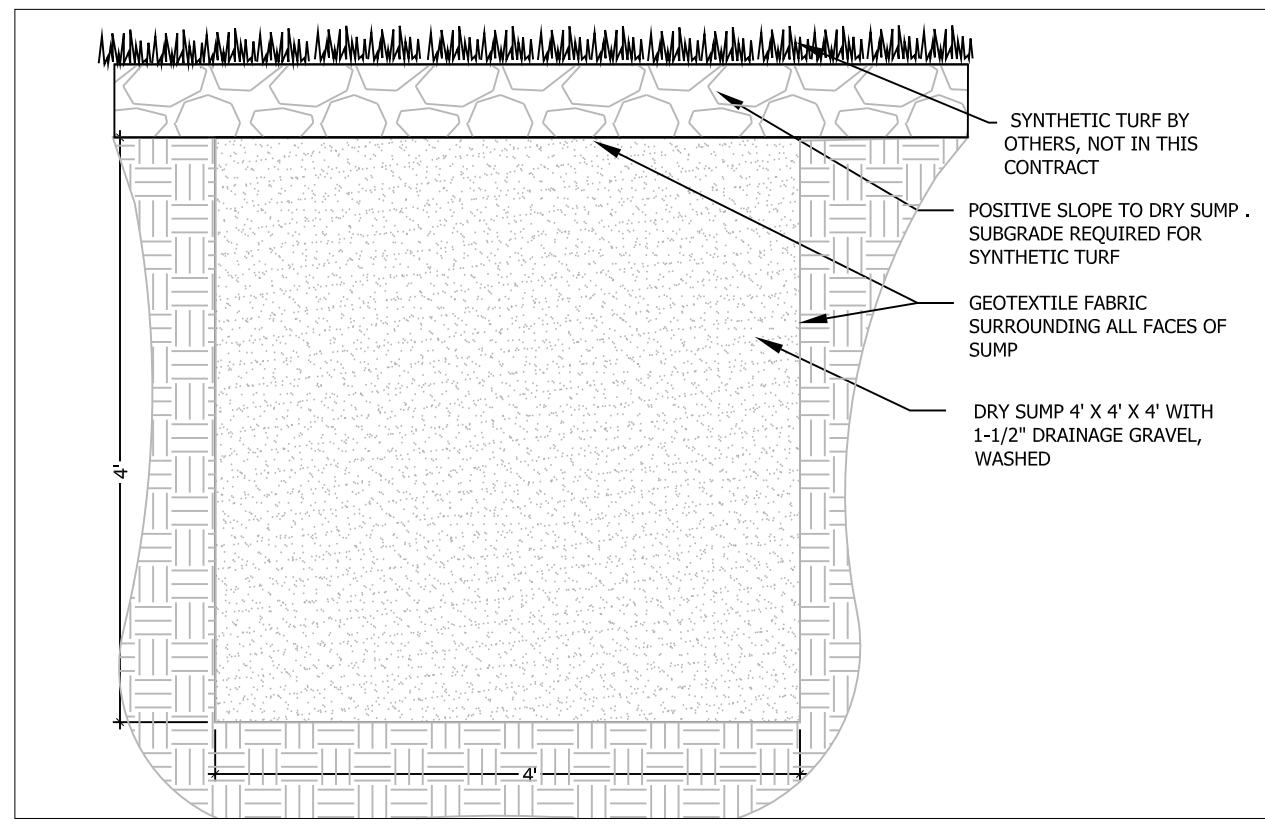
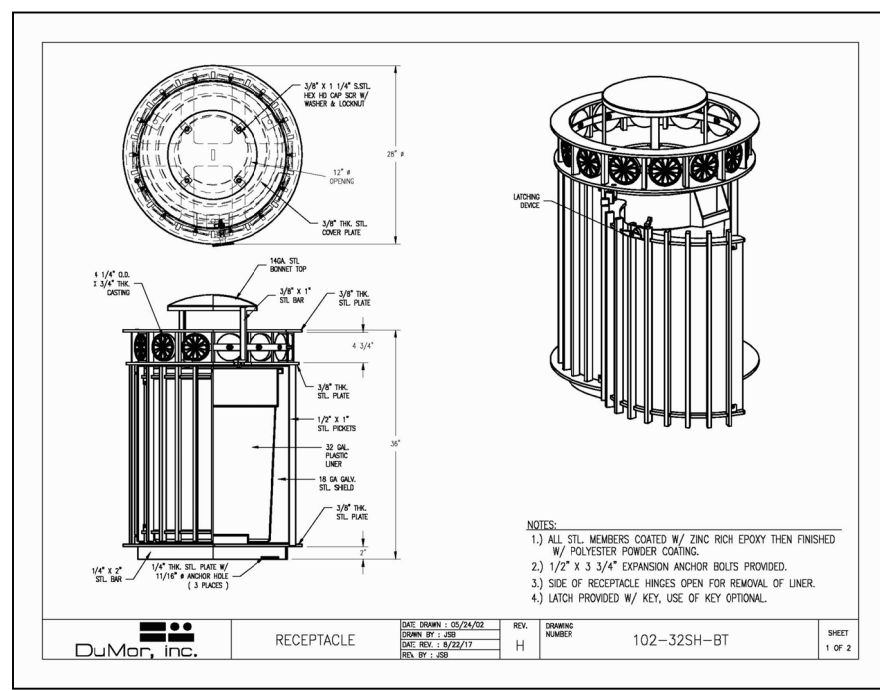


7.13 Park Bench

DuMor Site Furnishings
32 Gallon Steel Receptacle with Shield,
Bonnet Top
Item No.: 102-32SH-BT
Color: Black
Attachment: Surface Mount

Available from :
Rocky Mountain Recreation Inc
303.783.1452

7.14 Trash Receptacle



7.15 Synthetic Turf Sump Drain Detail

ANTLERS PARK
DOG PARK
CONSTRUCTION DETAILS

TITLE:

SHEET 7

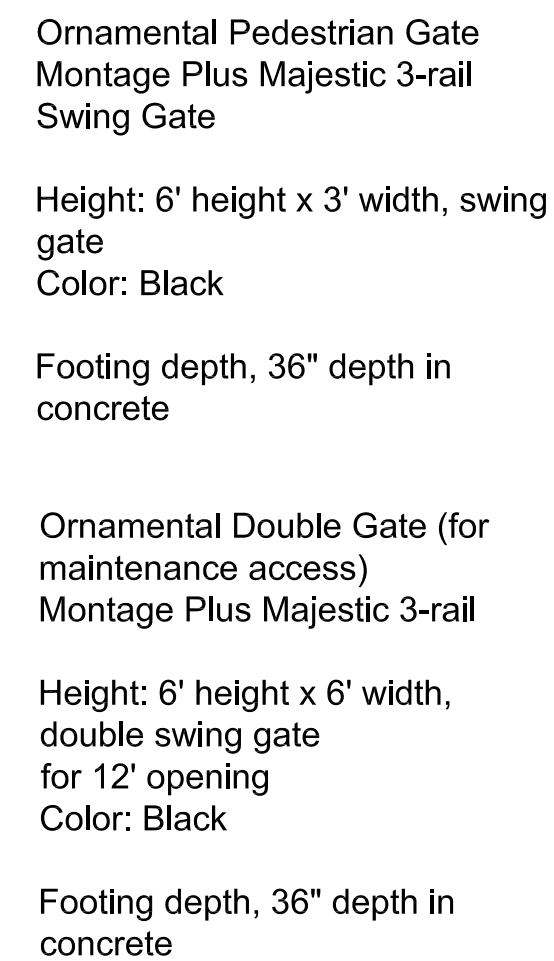
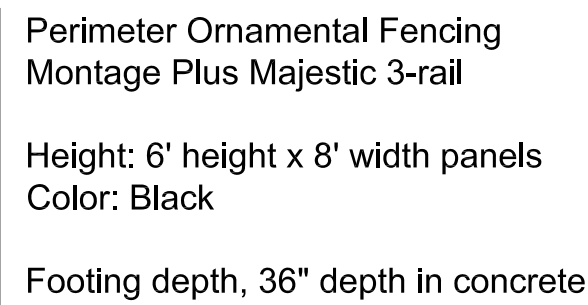
OF 7 SHEETS

FILE NUMBER:

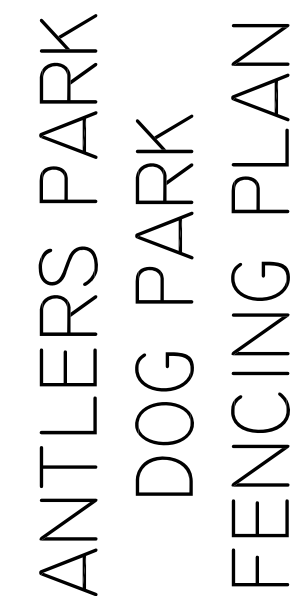
FOR BID CONSTRUCTION DRAWINGS - FEB 17, 2023
31 W. Pikes Peak Ave, Colorado Springs, CO 80903

A map of the Antlers Park area. The map shows a grid of streets. At the top, W Bijou St runs horizontally. Below it, W Kiowa St runs horizontally. Further down, W Colorado Ave runs horizontally. At the bottom, W Vermijo Ave and W Cimarron St run horizontally. On the left, Interstate 25 runs vertically. On the right, Cascade Ave and Tejon St run vertically. S. Sierra Madre St runs vertically on the left side of the map. A shaded rectangular area is labeled Antlers Pl. To the right of this area is a curved line representing a path or boundary, with an arrow pointing to it labeled Antlers Park. The city of Pikes Peak is labeled in two locations: one near the top right and one near the center right.

1. THE CONTRACTOR SHALL HAVE IN THEIR POSSESSION AT ALL TIME ONE (1) SIGNED COPY OF THE PLANS AND SPECIFICATIONS WHICH HAVE BEEN APPROVED BY THE CITY OF COLORADO SPRINGS.
2. THE CONTRACTOR SHALL COORDINATE INSPECTIONS WITH PARK STAFF FOR THE FOR THE FOLLOWING: FENCE LAYOUT AND GATE PLACEMENT. A MINIMUM OF 24 HOURS OF NOTICE TO THE OWNER'S REPRESENTATIVE, AND DESIGNATED PARTIES IS REQUIRED PRIOR TO COMMENCEMENT OF WORK.
3. THE CONTRACTOR SHALL SUBMIT A PROJECT SCHEDULE TO THE OWNER'S REPRESENTATIVE PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL SUBMIT WEEKLY UPDATE SCHEDULES DURING THE PROJECT UNTIL COMPLETION. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF VALUES TO THE OWNER'S REPRESENTATIVE PRIOR TO THE PRE-CONSTRUCTION MEETING.
4. ALL SURVEY AND LAYOUT NEEDED TO PERFORM THE SCOPE OF WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND AT THE CONTRACTOR'S EXPENSE. THE PROJECT MAY BE FIELD FIT FOLLOWING THE DIRECTIONS AND INTENT OF THE CONSTRUCTION DRAWINGS.
5. REMOVE AND LEGALLY DISPOSE OF DEBRIS TO AN OFFSITE LOCATION AS NEEDED TO COMPLETE THE PROJECT. EARTHWORK REQUIRED TO COMPLETE ALL CONTRACT WORK ITEMS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: EXPORT EXCESS MATERIALS OFF-SITE, BACKFILL, COMPACTION, ROUGH GRADING AND FINAL GRADING. THESE ARE AN INCIDENTAL COSTS TO BE PAID BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL ACQUIRE AND MANAGE ALL PERMITS NECESSARY TO PERFORM PROJECT. THE CONTRACTOR SHALL ALSO CALL FOR UTILITY LOCATES AND SUPPLY THE OWNER'S REPRESENTATIVE A COPY OF THE LOCATE SHEETS 72 HOURS PRIOR TO ANY EARTHWORK ACTIVITY.
7. ALL CONCRETE FOOTERS SHALL INCLUDE FIBERESH. CONTRACTOR TO FINISH TO OF FOOTERS AT CONCRETE WALKS TO MATCH SURFACE BROOM FINISH.
8. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED AREAS DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO CONCRETE, ASPHALT, REVEGETATION, TREES, OR WALKS.



1. THE SITE IMPROVEMENTS (FLATEWORK AND BASE PREP) SHALL BE COMPLETED BEFORE THE FENCE CAN BE INSTALLED. SELECTED CONTRACTOR SHALL COORDINATE WITH STAFF ON INSTALLATION SCHEDULE.
2. CONCRETE WORK WILL INCLUDE 12" X 12" SQUARE BLOCK OUTS FOR POSTS IN NEW WALKWAYS. FENCE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING POST AND FINISHING CONCRETE TO MATCH CONCRETE WALKS.
3. POSTS INSTALLED AT TURF LOCATIONS AND BREEZE GRAVEL SHALL HAVE CONCRETE FOOTER BELOW GRADE TO ALLOW FOR FINISHED SURFACE TO COVER AND CONCEAL
4. FENCE CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING ALL FENCING MATERIAL, LABOR AND EQUIPMENT FOR INSTALLATION.



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DESIGNED BY: D. DEITEMEYER
DRAWN BY: D. DEITEMEYER
DATE: Feb 6, 2023
SCALE: 1" = 12'
REVISIONS: Addendum 1



1401 RECREATION WAY
COLORADO SPRING CO 80905
(719) 385-5940



ANTLERS PARK

DOG PARK SURFACING

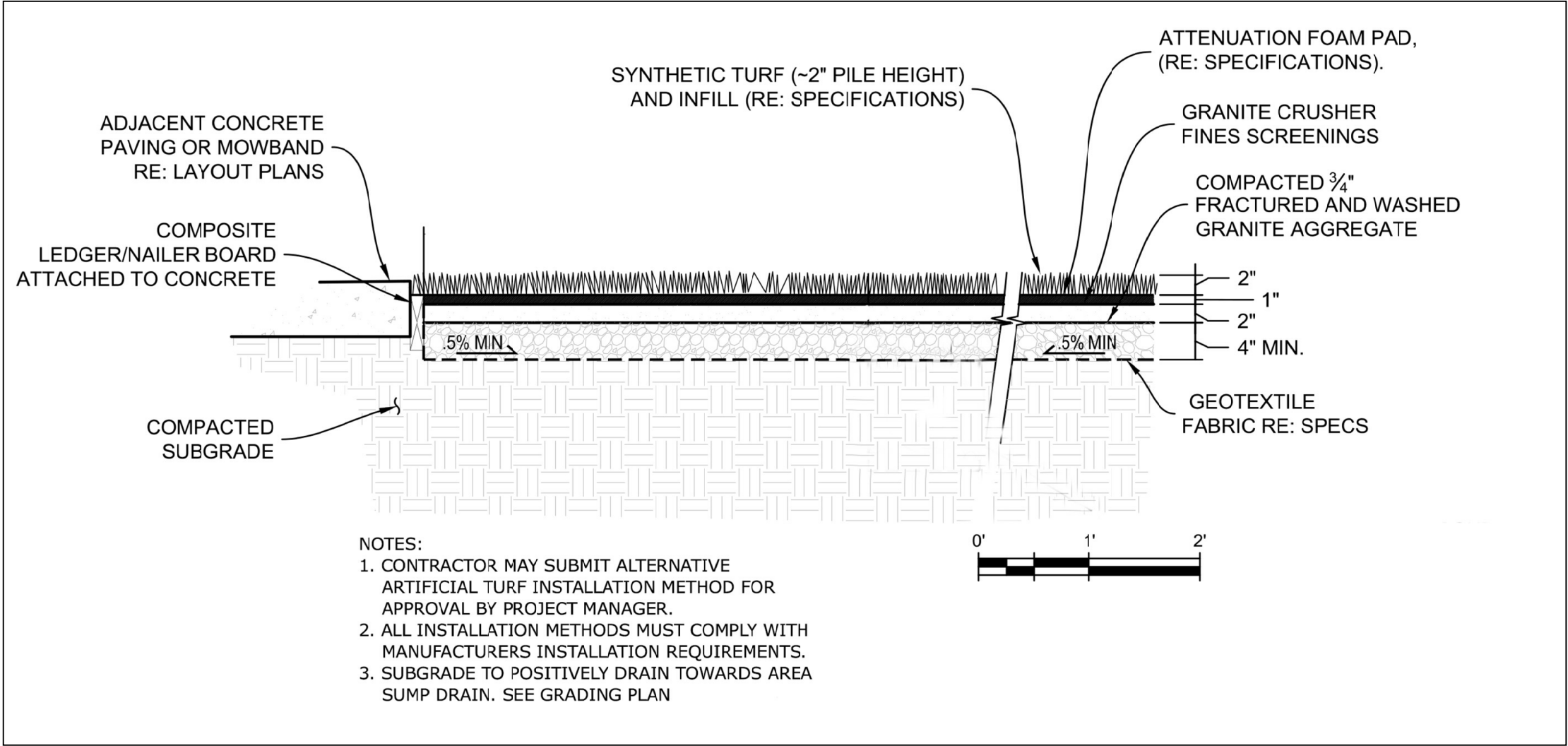
FOR BID CONSTRUCTION DRAWINGS - FEB 17, 2023
31 W. Pikes Peak Ave, Colorado Springs, CO 80903

VICINITY MAP

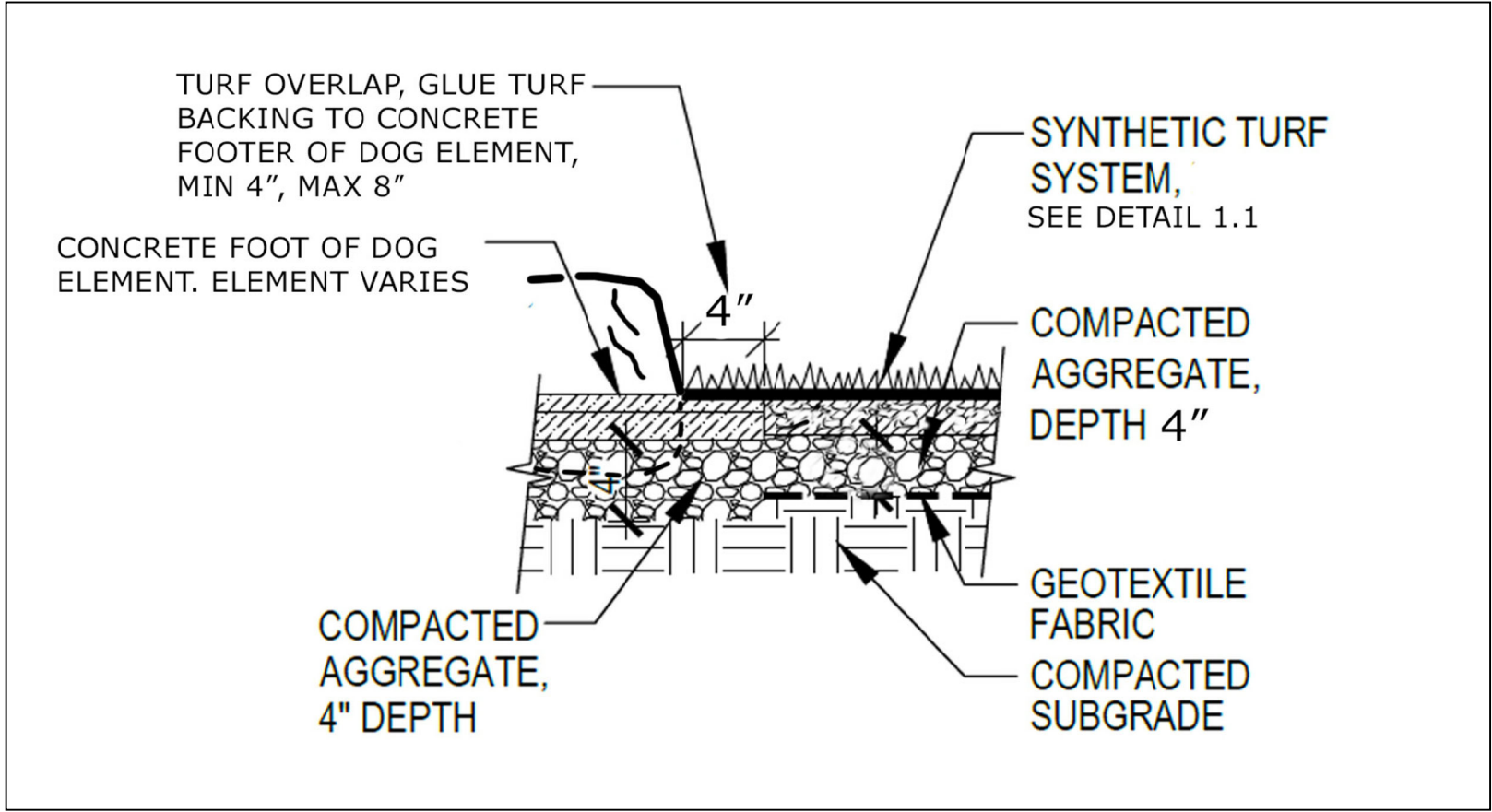


GENERAL NOTES

1. THE CONTRACTOR SHALL HAVE IN THEIR POSSESSION AT ALL TIME ONE (1) SIGNED COPY OF THE PLANS AND SPECIFICATIONS WHICH HAVE BEEN APPROVED BY THE CITY OF COLORADO SPRINGS.
2. THE CONTRACTOR SHALL COORDINATE INSPECTIONS FOR THE FOLLOWING: LAYOUT, FINE GRADING, AND FINAL INSPECTION. A MINIMUM OF 24 HOURS OF NOTICE TO THE OWNER'S REPRESENTATIVE, AND DESIGNATED PARTIES IS REQUIRED PRIOR TO COMMENCEMENT OF WORK.
3. THE CONTRACTOR SHALL SUBMIT A PROJECT SCHEDULE TO THE OWNER'S REPRESENTATIVE PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL SUBMIT WEEKLY UPDATED SCHEDULES DURING THE PROJECT UNTIL COMPLETION. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF VALUES TO THE OWNER'S REPRESENTATIVE PRIOR TO THE PRE-CONSTRUCTION MEETING.
4. ALL SURVEY AND LAYOUT NEEDED TO PERFORM THE SCOPE OF WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND AT THE CONTRACTOR'S EXPENSE. THE PROJECT MAY BE FIELD FIT FOLLOWING THE DIRECTIONS AND INTENT OF THE CONSTRUCTION DRAWINGS.
5. REMOVE AND LEGALLY DISPOSE OF DEBRIS TO AN OFFSITE LOCATION AS NEEDED TO COMPLETE THE PROJECT. EARTHWORK REQUIRED TO COMPLETE ALL CONTRACT WORK ITEMS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: EXPORT EXCESS MATERIALS OFF-SITE, BACKFILL, COMPACTION, ROUGH GRADING AND FINAL GRADING, THESE ARE AN INCIDENTAL COSTS TO BE PAID BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL ACQUIRE AND MANAGE ALL PERMITS NECESSARY TO PERFORM PROJECT. THE CONTRACTOR SHALL ALSO CALL FOR UTILITY LOCATES AND SUPPLY THE OWNER'S REPRESENTATIVE A COPY OF THE LOCATE SHEETS 72 HOURS PRIOR TO ANY EARTHWORK ACTIVITY.
7. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED AREAS DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO CONCRETE, ASPHALT, REVEGETATION, TREES, OR WALKS.



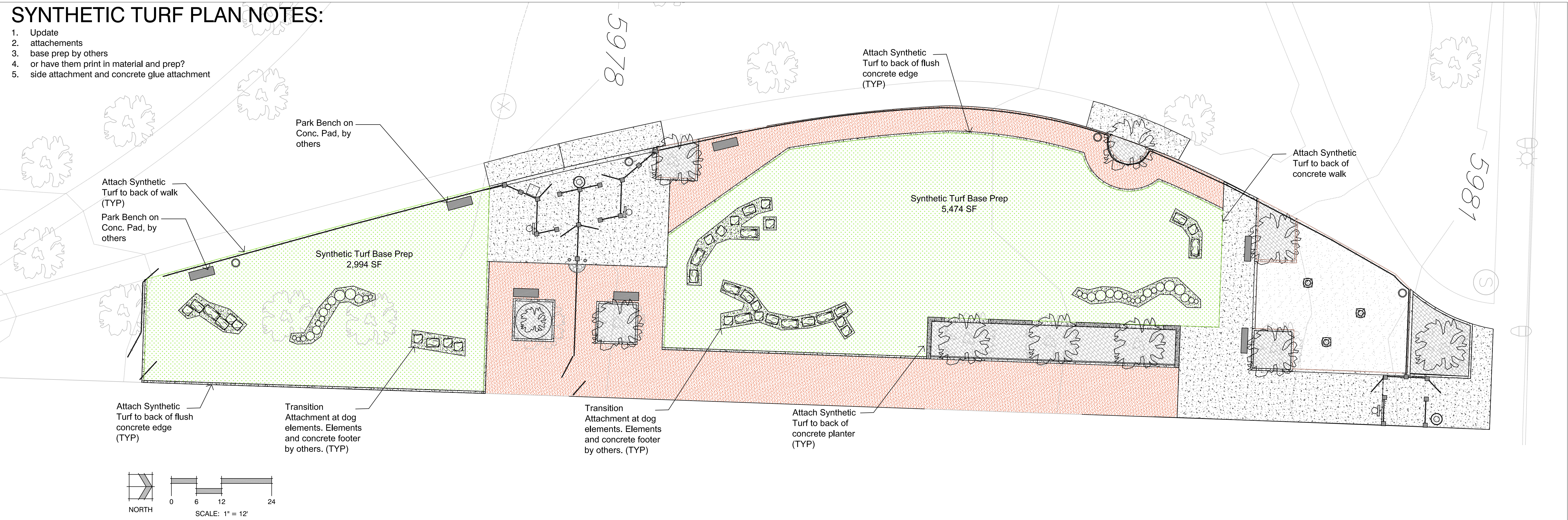
1.1 Synthetic Turf Installation Detail



1.2 Synthetic Turf Concrete Attachment at Dog Elements

SYNTHETIC TURF PLAN NOTES:

1. Update
2. attachements
3. base prep by others
4. or have them print in material and prep?
5. side attachment and concrete glue attachment



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DRAWN BY: D. DEITEMEYER
DATE: Feb 6, 2023
SCALE: 1" = 12'
REVISIONS: Addendum 1



1401 RECREATION WAY
COLORADO SPRING CO 80905
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ANTLERS PARK
DOG PARK
SYNTHETIC TURF PLAN

TITLE:

SHEET

1

OF

1

SHEETS

FILE NUMBER:

SECTION VI

6.0 SCHEDULES

- Schedule A.1 Price Sheet for Antlers Park Dog Park – Construction
- Schedule A.2 Price Sheet for Antlers Park Dog Park - Fencing
- Schedule A.3 Price Sheet for Antlers Park Dog Park - Turf
- Schedule B General Construction Terms and Conditions
- Schedule C.1 Statement of Work - Construction
- Schedule C.2 Statement of Work - Fencing
- Schedule C.3 Statement of Work - Turf
- Schedule D Construction Specifications for Antlers Park Dog Park
- Schedule E Minimum Insurance Requirements
- Schedule F Notification of Utilities

**SCHEDULE A.1 – PRICE SHEET FOR ANTLERS PARK DOG PARK –
CONSTRUCTION**

**PLEASE FILL OUT EXCEL FORM (A.1) FOR CONSTRUCTION AND SUBMIT IN
BIDNET (WWW.BIDNETDIRECT.COM)**

SCHEDULE A.1 - CONSTRUCTION

Antlers Dog Park

| Item No. | Spec. Reference | Estimate of Quantity | Unit of Measure | Totals |
|-----------------------------|---|----------------------|-----------------|----------|
| SCHEDULE OF VALUES | | | | |
| General | | | | |
| 1 | Mobilization | 1 | LS | \$ _____ |
| Site Clearing and Grubbing | | | | |
| 2 | Grass, vegetation removal and grubbing, demolition, irrigation demolition in project | 1795 | SY | \$ _____ |
| 3 | Existing concrete Removal | 45 | SF | \$ _____ |
| 4 | Tree Preservation | 1 | LS | \$ _____ |
| Earth Work | | | | |
| 5 | Fine Site Grading (balanced site) | 1,795 | SY | \$ _____ |
| 6 | Base preparation for concrete areas, planter curbs and concrete edge | 1,795 | SY | \$ _____ |
| 7 | Base Preparation for Synthetic Turf Area | 941 | SF | \$ _____ |
| 8 | Sump Drain under Synthetic Turf (4' x 4' x 4') | 2 | EA | \$ _____ |
| Concrete Paving – Flat Work | | | | |
| 9 | 6" wide Concrete edge (flush) with fiber mesh | 364 | LF | \$ _____ |
| 10 | 6" wide Concrete Slope Edge at Pea Gravel Area | 64 | LF | \$ _____ |
| 11 | 6" Wide Concrete Planter vertical Curb with fiber mesh | 376 | LF | \$ _____ |
| 12 | Sidewalk, 4" thick with fiber mesh with thicken concrete edge, including concert pads for benches, and sidewalk replacement | 302 | SY | \$ _____ |
| | Concrete for dog elements footers and glue pad for future turf | 71 | SY | \$ _____ |
| Site Amenities | | | | |
| 13 | Trash receptacles | 2 | EA | \$ _____ |
| 14 | Park Bench | 7 | EA | \$ _____ |
| 15 | Dog Baggie Station | 3 | EA | \$ _____ |

Dog Park Amenities

| | | | | |
|----|---|---|----|----------|
| 16 | Feature 1 - Serpentine Balance Course BIG Dog Area | 1 | EA | \$ _____ |
| 17 | Feature 1 - Serpentine Balance Course SMALL Dog Area | 1 | EA | \$ _____ |
| 18 | Feature 2 - Boulder Cluster BIG dog area (2 areas) | 1 | EA | \$ _____ |
| 19 | Feature 2 - Boulder Cluster SMALL dog area | 1 | EA | \$ _____ |
| 20 | Feature 3 - Boulder Jump Course BIG Dog Area | 1 | EA | \$ _____ |
| 21 | Feature 3 - Boulder Jump Course SMALL Dog Area | 1 | EA | \$ _____ |
| 22 | Feature 5 - Ornamental Fire Hydrant | 3 | EA | \$ _____ |

Landscaping

| | | | | |
|----|---|-------|----|----------|
| 23 | Irrigation Sleeving - 3" PVC | 130 | LF | \$ _____ |
| 24 | Irrigation Sleeving - 2" HDPE | 88 | LF | \$ _____ |
| 25 | Irrigation Box | 1 | EA | \$ _____ |
| 26 | Water Service valve box, installed flush to finished walk | 1 | EA | \$ _____ |
| 27 | Compacted breeze gravel trail, 4" thick | 400.5 | SY | \$ _____ |
| 28 | Mulch for Planter Areas (Material available from City Forestry) | 107 | SY | \$ _____ |
| 29 | Pea Gravel, 5" depth over fabric | 104 | SY | \$ _____ |
| 30 | Pin Oak Tree (Quercus palustris), 3" Cal. Provided and Installed | 1 | EA | \$ _____ |

TOTAL BASE PRICE

\$ _____

Written Total: _____

ADD ALT 1 - Flat Work

| | | | | |
|------|--|------|----|-------------|
| A1.1 | Deduct 6" Plater Curb from scope of work | -80 | LF | \$ __-_____ |
| A1.2 | ADD ALT 12" wide flush edging | 31.5 | LF | \$ _____ |
| A1.3 | ADD ALT - 12" Wide x 17" height above grade Concrete Seat Wall on Caissons (no Fiber mesh) | 48.5 | LF | \$ _____ |

TOTAL BASE PRICE + ADD ALT #1

\$ _____

Written Total Base Bid + Add Alt 1 _____

ADD ALT 2 - Electrical Service

| | | | | |
|------|---|-----|----|----------|
| A2.1 | Electrical connection at existing Panel, including permits. | 1 | LS | \$ _____ |
| A2.2 | Electrical Service, bored (Pavilion panel to park light) through park. Include Conduit, Pull Box and Wires | 300 | LF | \$ _____ |
| A2.3 | Park Light Electrical service trenched (from pull box in dog park to end of line - last light). Includes Materials and wire | 310 | LF | \$ _____ |
| A2.4 | Low Volt Trenched Conduit (3/4" PVC) with J-Boxes and stub outs at each gate for future low volt power supply | 272 | LF | \$ _____ |
| A2.5 | Park Lights (Caisson, pole and light provided and installed) | 4 | EA | \$ _____ |

TOTAL BASE PRICE + ADD ALT #1 + ADD ALT #2 \$ _____

Written Total Base Bid + Add Alt 1 + Add Alt 2 _____

ADD ALT 3 - Water Service

| | | | | |
|------|--|---|----|----------|
| A3.1 | Water Service Connection in existing bathroom building | 1 | LS | \$ _____ |
| A3.2 | Water Service Boring sleeve, 1 1/2" HDPE water Line and tracing wire. Estimated 355 LF | 1 | LS | \$ _____ |
| A3.3 | Provide and install hose bib and water service connection to two dog drinking fountains in flush water service box | 1 | LS | \$ _____ |
| A3.4 | Area Drain at doggie fountain (2' radius x 4' deep) with rock cobble | 1 | EA | \$ _____ |
| A3.5 | Doggie water fountain, purchased and installed [Connection to water service included in above line item]. | 2 | EA | \$ _____ |

TOTAL BASE PRICE + ADD ALT #1 + ADD ALT #2 + ADD ALT #3 \$ _____

Written Total Base Bid + Add Alt 1 + Add Alt 2 + Add Alt 3 _____

SCHEDULE A.2 – PRICE SHEET FOR ANTLERS PARK DOG PARK- FENCING

**PLEASE FILL OUT EXCEL FORM (A.2) FOR FENCING AND SUBMIT IN BIDNET
(WWW.BIDNETDIRECT.COM)**

| SCHEDULE A.2 - FENCING | | | | |
|---|---|----------------------|-----------------|----------|
| Antlers Dog Park | | | | |
| Item No. | Spec. Reference | Estimate of Quantity | Unit of Measure | Totals |
| SCHEDULE OF VALUES | | | | |
| General | | | | |
| 1 | Mobilization | 1 | LS | \$ _____ |
| Fencing | | | | |
| 21 | 6' Height Ornamental Fence, purchased and installed | 434 | LF | \$ _____ |
| Gate | | | | |
| 23 | 6' Height Ornamental Fence double swing gate, 12' opening, purchased and installed | 2 | EA | \$ _____ |
| 24 | 6' Height 3' Wide Ornamental Fence Pedestrian Gate, purchased and installed | 7 | EA | \$ _____ |
| TOTAL BASE PRICE \$ _____ | | | | |
| Written Total: _____ | | | | |
| ADD ALTERNATE BID #1. (In replacement of Base Bid) | | | | |
| General | | | | |
| 1 | Mobilization | 1 | LS | \$ _____ |
| Fencing | | | | |
| 21 | 6' Height Black-Vinyl coated chain link fence, Purchased and installed | 434 | LF | \$ _____ |
| Gate | | | | |
| 23 | 6' Height Black-Vinyl coated chain link fence double swing gate, 12' opening, purchased and installed | 2 | EA | \$ _____ |
| 24 | 6' Height 3' Wide Black-vinyl coated chain link Fence Pedestrian Gate, purchased and installed | 7 | EA | \$ _____ |
| TOTAL ADD ALT BID #1 PRICE \$ _____ | | | | |
| Written Total: _____ | | | | |

SCHEDULE A.3 – PRICE SHEET FOR ANTLERS PARK DOG PARK- TURF

**PLEASE FILL OUT EXCEL FORM (A.3) FOR TURF AND SUBMIT IN BIDNET
(WWW.BIDNETDIRECT.COM)**

| <div> <div>SCHEDULE A.3 - TURF</div> <div>Antlers Dog Park</div> </div> | | | | |
|---|---|----------------------|-----------------|----------|
| Item No. | Spec. Reference | Estimate of Quantity | Unit of Measure | Totals |
| SCHEDULE OF VALUES | | | | |
| General | | | | |
| 1 | Mobilization | 1 | LS | \$ _____ |
| Landscaping | | | | |
| 2 | Synthetic Turf and pad (purchase, install) Sub-base prepared by others | 941 | SY | \$ _____ |
| TOTAL BASE PRICE | | | | |
| Written Total: _____ | | | | |

SCHEDULE B – GENERAL CONSTRUCTION TERMS AND CONDITIONS

GENERAL CONSTRUCTION TERMS AND CONDITIONS

SECTION 100 DEFINITIONS AND TERMS

Titles used in these specifications having a masculine gender, such as “workmen” and the pronouns “he” or “his”, are for the sake of brevity and are intended to refer to persons of any gender.

The titles or headings of the sections and subsections herein are intended for convenience of reference and shall not have any bearing on their interpretation.

When the Contract indicates that something “shall” be done, the action is required and is not discretionary.

| | |
|--------------|---|
| Calendar Day | Each and every day shown on the calendar, beginning and ending at midnight. |
|--------------|---|

| | |
|--------------|---|
| Change Order | A written order issued to the Contractor by the City covering contingencies, extra work, increases or decreases in Contract quantities, and additions or alterations to the plans or specifications, within the scope of the Contract, and establishing the basis of payment and time adjustments for the work affected by the changes. The Change Order is the only method authorized for changing the Contract. |
|--------------|---|

| | |
|------|---|
| City | The City of Colorado Springs, Colorado. |
|------|---|

| | |
|--------------------|---|
| Contract Documents | Contract Documents include the Request for Proposal, Instructions to Offerors, Proposal, Amendments, the signed Contract, surety bonds, insurance documents, all terms, conditions, and provisions, and the Specifications, including all modifications thereof incorporated in any of the documents before execution of the agreement. |
|--------------------|---|

| | |
|----------|--|
| Contract | The executed written agreement between the City and the Contractor setting forth the obligations of the parties for the performance of the work and the basis of payment. The Contract includes the Contract Documents, Notice to Proceed, and executed Change Orders, all of which constitute one instrument. |
|----------|--|

| | |
|-----------------|---|
| Contractor | The person, persons, firm, or corporation to whom a Contract is awarded by the City and who is subject to the terms of said Contract. Contractor shall include the agents, employees, workmen, subcontractors and any assignees of said Contract. |
| Engineer | An engineer of the City of Colorado Springs. |
| Notice | Any written notice served pursuant to the terms of the Contract. Notice shall be deemed to have been duly served if delivered in person or by registered mail to: The Project Manager assigned to the Contract, City of Colorado Springs, City Engineering, 30 South Nevada Ave., Room 403, Colorado Springs, CO 80903. Notice to the Contractor will be to the Authorized Representative of the Contractor at the site of the Project in person; or by registered mail to the Contractor's principal place of business as indicated in the Contractor's proposal certifications; or as to the Surety on the performance bond by registered mail to the Surety at the home office of such surety. |
| Plans | The drawings, or reproductions, provided by the City that show the location, character, dimensions, and details of the work to be done. |
| Project Manager | An individual representing the City responsible for managing and oversight of the Contract. . |
| Project | The entire improvement outlined in the Scope of Services which is to be constructed in whole or in part pursuant to the Contract. |
| Subcontractor | A person, firm, or corporation, other than the Contractor, supplying labor or materials, or both, or equipment furnished at the site of the project under an Agreement with the Contractor. |
| Surety | The person, firm, or corporation that has executed as surety the Contractor's Proposal, Performance, Payment and Maintenance Bonds. |
| Work | Work performed under the Contract. |

Working Days

Days of the week, not including weekends and City holidays, unless otherwise stated.

SECTION 101 CONTRACT DOCUMENT INTERPRETATION

101.00 INTENT OF CONTRACT DOCUMENTS

The sections of the Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intent of the Contract Documents is to include the cost of all labor and materials, water, fuel, tools, plants, equipment, light, transportation, and all other expenses as may be necessary for the proper execution of the work. If the Contract Documents should be contradictory in any part, the order of precedence shall be as described in the Contract.

Any work shown on the Plans and not covered in the specifications, or included in the Specifications and not shown on the Plans, shall be executed by the Contractor as though shown both on the Plans and included in the Specifications.

If the Contractor, in the course of the work, finds any discrepancy between the Plans and the physical layout, or any errors or omissions in Plans or layout, he shall immediately so inform the Project Manager and the Project Manager will promptly verify them. Any work done after such discovery without written consent of the Project Manager authorizing the same shall be done at the Contractor's risk and sole expense.

Any incidental and/or appurtenant items not specifically called for in the Plans and Specifications, but which are necessary to complete the work in accordance with the requirements of good practice, as determined by the Project Manager, shall be included as a part of the Contractor's proposal price and furnished at no additional cost to the City.

In interpreting the Contract Documents, words describing materials or work which have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract documents, shall be constructed in accordance with such well known meaning recognized by architects, engineers, and the trade.

101.01 SPECIAL PROVISIONS, SPECIAL SPECIFICATIONS

Special Provisions or Special Specifications may be written to expand upon, modify or cancel these general provisions or the standard specifications.

101.02 STANDARD MANUFACTURER

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

101.03 "OR EQUAL" CLAUSE

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

SECTION 102 COMPLIANCE WITH LAWS

102.00 PUBLIC IMPROVEMENT ASSESSMENT

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

102.01 ALL LEGAL PROVISIONS INCLUDED

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

102.02 LICENSES AND PERMITS

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

SECTION 103 AWARD AND EXECUTION OF CONTRACT

103.00 CONTRACT EXECUTED

A single original Contract to include the Contractor's Performance, Labor and Material Payment and Maintenance Bonds may be executed and maintained in the official Contract file located in the City Contracts office. The original copy of the Contract maintained in the City Procurement Services file shall take precedence for purposes of interpretation or determining what the Contract says. After all required signatures are obtained; photocopy counterparts (copies) will be made and distributed to the following, as applicable:

- (a) Contractor
- (b) Project Manager
- (c) City Finance Department
- (d) Inspector

Each Bond shall have an original Power of Attorney attached. The Contractor shall provide compensation insurance and public liability and property damage insurance as outlined in the Contract. The costs of executing the bonds, Contract, and insurance, including all notaries' fees and expense, are to be paid by the Contractor to whom the Contract is awarded. Bonds shall be furnished on forms prepared by the City. Copies of the City's Bond Forms are included in the Exhibits Section of the Request for Proposal, if applicable.

103.01 VERBAL AGREEMENTS

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

103.02 CONTRACT SECURITY

The Contractor shall furnish good and sufficient Performance, Labor and Material Payment and Maintenance Bonds on the form attached hereto in an amount not

less than the full amount of the Contract price as security for the faithful performance of the Contract, for the payment of all persons performing labor and furnishing material in connection with the work, and for all guarantees of materials and workmanship required in the Contract. If at any time during the continuance of the Contract a surety on the Contractor's bond or bonds becomes irresponsible, as determined in the City's sole and absolute discretion, the City shall have the right to require additional and sufficient sureties which the Contractor shall furnish within ten (10) days after written notice to do so. Any additional surety bonds shall cover the entire original Contract amount and any increases thereto.

103.03 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, whether it be of a direct or indirect nature. Further in that regard, it is expressly understood and agreed that for such purposes neither the Contractor nor the Contractor's employees, agents, servants or other personnel shall be entitled to any City payroll, insurance, unemployment, worker's compensation, retirement or any other benefits whatsoever.

SECTION 104 THE CONTRACT: FOLLOWING EXECUTION

104.00 MATERIALS

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

104.01 SCHEDULE

In the event of contradictions or inconsistencies, this clause shall take precedence over any language relevant to scheduling included anywhere else in this Contract.

The Contractor shall be responsible for planning, scheduling, and reporting the progress of the work to ensure timely completion of the work as called for in the Contract Documents. The Contractor shall prepare a detailed Project schedule ("Project Schedule") that shall be used for coordination, for evaluation of progress, and for the evaluation of changes to the Contract. The Project Schedule shall include all activities, including those of subcontractors, Contractor's engineers and surveyors, and suppliers. Seasonal and weather constraints, utility coordination, railroad restrictions, right of way restrictions, traffic constraints, environmental constraints, other project interfaces, expected job learning curves and other constraints shall be considered when preparing the Project Schedule, including any phasing or sequencing of the work specified in the Contract Documents. Days scheduled as no work days shall be indicated. The Project Schedule shall consist of a Methods Statement as defined in subsection (a) below and a progress schedule consisting of (1) a Critical Path Method ("CPM") schedule as defined in subsection (b) below, or (2) a Bar Chart schedule as defined in subsection (c) below. A CPM Schedule shall be required if the Contract exceeds \$250,000 or if the construction period exceeds 150 Calendar Days, unless the Contract Documents stipulate otherwise. The CPM Schedule shall utilize Primavera's Suretrak Project Manager software (or other software designated by the Project Manager), or be capable of being read and manipulated by Suretrak Project Manager software (or other software designated by the Project Manager). The Project Schedule shall show all work completed within the Contract Period of Performance. The City reserves the right to approve or disapprove any proposed schedule. If disapproved, the Contractor must make requested changes and resubmit the schedule for approval within five working days of the disapproval by the City.

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

The Bar Chart or CPM 90-day schedule shall be submitted at least 14 Calendar Days prior to the start of the work. The Project Manager's review will not exceed five working days. Work shall not begin until the Project Schedule is accepted in writing, unless otherwise approved by the Project Manager.

- (a) Methods Statement. A Methods Statement shall be prepared for the prominent features listed in the Contract Documents, and for any feature not listed in the Contract Documents that the Contractor considers a

controlling factor for timely completion. The Methods Statement shall be a detailed narrative describing each feature and all work necessary to complete the feature. The Methods Statement shall be submitted with the Contractor's schedule. The following format is required:

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

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

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

The progress schedule shall include as a minimum the prominent features of this Project as listed in the Contract Documents. The progress schedule shall include all activities for all work on the Project, including subcontracted work, delivery dates for critical material, submittal and review periods, milestone requirements and no work periods. Where the Project has

specific phases, each phase shall be described separately for each applicable prominent feature.

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

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

1. 90-Day Schedule. The 90-Day Schedule shall provide all necessary detail for procurement, construction and submittal activities required during the first 90 days of the Period of Performance. This submittal shall include a Time Scaled Logic Diagram.
2. Project Schedule, as described above.

The Project Schedule shall cover the entire Period of Performance.

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

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

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

(c) Bar Chart. The Bar Chart shall be time scaled and shall show the following:

1. The prominent features, as listed in the Contract Documents.

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

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

- (d) Project Coordination. The Contractor shall coordinate and schedule its work to include anticipated utility work. Various City and private utility entities may be working to install and/or inspect their utilities within the Project area. Reasonable delays should be expected for utility lowering, relocations and placement. These delays shall not be reason for granting any monetary change or performance time alteration to the Contract. As a minimum, the Contractor's Project Schedule shall reflect coordination with the following:

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

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

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

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

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

If it is determined that a revision to the Project Schedule is required, it shall be provided to the Project Manager for review within 15 Calendar Days of Contractor receiving written notification of the requirement from the Project Manager. The Project Manager's review of the revised schedule will not exceed 5 working days.

Revisions required as a result of the Project Manager's review shall be submitted within 5 working days. When accepted by the Project Manager in writing, the revised schedule shall become the Project Schedule.

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

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

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

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

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

104.02 SCHEDULE OF VALUES

Promptly following the execution of the Contract Documents for all Firm Fixed Price, lump sum Contracts, the Contractor shall prepare and transmit to the Project Manager two copies of an itemized Project cost breakdown showing the unit quantities of each major construction item and the corresponding unit prices. Such unit prices shall contain all costs including profit and overhead of each item complete in place. The total cost of all the items shall equal the Contract price for the Project. This breakdown, once approved by the Project Manager, will be used primarily in determining payment due the Contractor as provided herein. If, in the opinion of the Project Manager, any unit price submitted by the Contractor is unbalanced, a detailed breakdown of the items contained in the unit will be required.

For Contracts executed on a fixed unit price basis, payment shall be made based on the actual number of units installed or performed that are complete, however, payment shall not exceed the total Contract amount unless previously approved by Change Order.

104.03 SURVEYS

Unless otherwise specified in the Contract Documents, the City will furnish all site surveys, easements, pipeline licenses, etc., necessary to authorize construction of any permanent works required in the Contract, where such work is to be done on property other than the City's.

The Project limits of construction shall be within the public right-of-way and/or City easements. The Contractor shall not trespass on premises outside of the limits of construction for this Project, unless permission to do so is granted by the property owner in writing. Copies of any such grant shall be furnished to the City prior to the performance of any work outside the limits of construction.

104.04 SUBCONTRACTS

The Contractor will be permitted to subcontract a portion of the Contract; however, the Contractor shall perform work amounting to 30 percent or more of the original total cost of proposal items. Any items designated in the Contract as "specialty items" may be performed by subcontractor. The cost of "specialty items" so performed by subcontractor may be deducted from the original total cost of proposal items before computing the amount of work required to be performed by the Contractor.

The calculation of the percentage of subcontracted work shall be based on the Contract unit prices rather than subcontract unit prices. Proportional value for a subcontracted partial Contract item will be verified by the Project Manager. For the purpose of calculating the value of subcontracted work, the cost of procuring materials and manufactured products can be included in either the Contract or subcontract. However, when a firm both sells material to a Contractor and performs the work of incorporating the materials into the Project, these two phases shall be considered in combination and as constituting a single subcontract.

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

- (a) Name, address, and telephone number of the subcontractor

(b) Branch of work covered

(c) Total price of subcontract

(d) Date of subcontract

It shall be the responsibility of the Contractor to file with the Project Manager copies of applicable permits and licenses required to do the subcontracted work. Subcontracts or transfer of Contract obligations shall not release the Contractor of liability under the Contract and bonds.

104.05 OTHER CONTRACTS

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

SECTION 105 CONSTRUCTION SITE

105.00 LANDS TO BE USED FOR WORK

The Contractor shall confine the work activities to the area shown in the construction drawings. The Project Manager will furnish the Contractor with copies of all executed right of way (ROW) and easement documents for the Project. The established work zone shall be marked and secured with orange safety fence. 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 indemnify and hold the City harmless from any claims or losses from damage or disruption of private property.

Contractor shall provide, at its expense and without liability to the City, any additional land and access thereto that may be required for temporary construction facilities or for storage of materials. All such costs will be considered incidental to the work and will not result in additional cost to the City. 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 Contractor shall indemnify and hold the City harmless from any claims or losses related to Contractor trespassing.

105.01 STORAGE OF MATERIALS

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

105.02 LOADING OF STRUCTURES

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

105.03 SANITARY PROVISIONS

The Contractor shall provide and maintain on the construction site at all times suitable sanitary facilities for use of those employed on this Contract without committing any public nuisance. All toilet facilities shall be subject to the approval of the El Paso County Public Health Department. All portable toilet facilities for this Project shall be kept on City or State right-of-way as directed by the Project Manager.

105.04 ACCIDENT PREVENTION

The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The Contractor shall submit to the City an acceptable, comprehensive Safety Plan for review prior to commencement of the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

- a.) All persons on or about the Site or who may be affected by the Work;
- b.) All Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
- c.) Other property at the site or adjacent thereto, including buildings, real property, trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of the Work.

Notwithstanding the foregoing, the City reserves the right to direct the Contractor to stop work and correct an unsafe condition at any time that any person present at the job site identifies any unsafe condition or action. For this purpose only, any person at the job site is authorized to act on behalf of the City, but such intermittent delay shall not be grounds for an increase in the Contract price or schedule.

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

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

Excavated materials shall be placed a safe distance from the sides of the trench. Heavy equipment shall not be used or placed near the sides of a trench unless the trench is adequately braced.

The Contractor shall not load or permit any part of a structure to be loaded with a weight that will endanger the structure's safety.

The Contractor shall designate a qualified and experienced safety representative at the Work site(s) whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety plans and programs.

105.05 PROTECTION OF THE PUBLIC WORKS AND PROPERTY

The Contractor shall provide and maintain all necessary watchmen, barricades, lights, and warning signs and take all necessary precautions for the protection of the public. The Contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the City's property from injury or loss arising in connection with the Contract. The Contractor shall make good any damage, injury, or loss to their work and to the property of the City resulting from lack of reasonable protective precautions except such as may be due to errors in the Contract Documents, or caused by agents or employees of the City. The Contractor shall check all cautionary signs at least once a day during this Contract.

The Contractor shall continuously maintain adequate protection of all their work from damage and shall protect the City's and adjacent property from injury arising in connection with this Contract.

The Contractor will be responsible for any and all damage to property, public or private, that may be caused by its operations in the performance of this Contract, and the Contractor shall defend any suit that may be brought against itself or the City on account of damage inflicted by its operations, and shall pay any judgments awarded to cover such damage and shall indemnify the City for any losses arising out of such damage or related claims.

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

105.06 PUBLIC ROADS

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

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

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

All signing and barricading shall conform to the latest editions of the following:

- (a) Manual of Uniform Traffic Control Devices for Street and Highways (MUTCD)
- (b) City of Colorado Springs Traffic Signage and Markings Manual
- (c) City of Colorado Springs Construction Traffic Control Manual

The City Traffic Engineer may require flag persons or off-duty police officers for traffic direction.

105.07 PROTECTION OF EXISTING CURBS, GUTTERS AND DRIVEWAYS

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

105.08 PROTECTING AND REMOVING PLANTINGS

The Contractor shall protect all existing trees, shrubs and other plantings from above ground and root structure damage during the construction activities. Plantings which are considered to be slightly damaged shall be properly pruned and sealed according to accepted nursery practices. Contractor shall be liable for the costs of any unnecessary damage to plants or trees 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 inspector or owner (plantings on private property), the Contractor shall at his expense remove the planting. The Contractor shall coordinate with the City Forester prior to working in the vicinity of plantings in the public right of way.

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. Work shall be done only by a licensed Tree Service as provided in City Code Chapter 2, Article 3, Part 3.

105.09 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall make every effort to minimize the inconvenience to property owners and to the traveling and pedestrian public, and shall conduct the Work to minimize obstruction to traffic and inconvenience to property owners affected by the Work.

The Contractor shall notify and coordinate the closing and construction of the driveways, curb, gutter and sidewalks with the Project Manager and the adjoining property owners in advance of Work in writing. The Contractor shall provide 72 hours written notice in advance of any construction that may affect access, parking and/or existing structures, including fences adjacent to that property.

Suitable access and parking will be maintained at all times. Access may be limited to half the existing driveway width for limited periods during concrete driveway and street construction. An additional verbal notice shall be provided to each business or property owner 30 minutes prior to the actual access drive closure.

Relocating of fences and structures shall be coordinated with property owners and shall include miscellaneous items including, but not limited to, utility services, street signs and mailboxes, sod replacement, sprinkler system modifications, control boxes, railroad tie walls, etc. If no such items are specifically included in the Contract, these items will be considered incidental to the work and are to be included in the unit prices. The Contractor shall coordinate the salvaging of any materials suitable for re-use with the City Inspector and, if on private property, with the respective property owners.

Any restrictions on street parking or traffic movement shall be coordinated with the City Traffic Engineer.

105.10 FAILURE TO MAINTAIN SAFE SITE

If the City becomes aware of failure to comply with applicable safety regulations, the Project Manager may inform the Contractor who shall take immediate steps to remedy the noncompliance. The Project Manager shall give written notification to the Contractor directing it to correct the unsafe acts or conditions. If the Contractor fails to comply with such a notification, the Project Manager may issue a Stop Work order in accordance with this Contract, and work shall only be resumed after adequate corrective actions have been taken to correct the safety deficiencies the Contractor has been notified of. Stoppage of work because of noncompliance with prescribed accident precaution measures shall not be considered a changed condition or changes in work, nor reason for extension of completion time.

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

105.11 EROSION AND DRAINAGE CONTROL

Contractor shall provide for the drainage of stormwater and such water as may be applied or discharged on the site in performance of the work per the latest revision of the City of Colorado Springs Drainage Criteria Manual, Volume II. Drainage facilities shall be adequate to prevent damage to the work, the site, and adjacent property.

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

Should the affected areas of the Project exceed one acre, a Stormwater Discharge Permit shall be required. Affected area includes excavations, material stockpiles and areas where equipment and vehicles disturb the ground. An exact definition of the affected area should be obtained from the Colorado Department of Public Health and Environment (CDPHE).

105.12 POLLUTION

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

105.13 TEMPORARY CONSTRUCTION

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

105.14 TEMPORARY WATER SUPPLY

The Contractor shall provide, at Contractor's own expense, temporary water connections and water supply necessary for the prosecution of the work and permit all contractors on the work to use this supply at a reasonable prorated charge, or by sub-metering. The Contractor shall pay for all water consumed in the work, and shall arrange with Colorado Springs Utilities for temporary connections and payment of service charges. Upon completion of the Contract work, all temporary waterlines shall be removed. The City will devise a method and plan to monitor and enforce the proper use of temporary water. The City will inspect for compliance.

105.15 TEMPORARY ELECTRICITY

The Contractor shall arrange with the Colorado Springs Utilities for temporary electricity necessary for the prosecution of the work. The Contractor shall pay for all electric current consumed, and shall permit all contractors on the work to use this supply at a reasonable prorated charge, or by sub-metering.

105.16 TEMPORARY HEAT

The Contractor shall provide adequate, temporary heat required during construction. Until the building or work area is enclosed, heavy tarpaulin shall be

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

105.17 TEMPORARY ENCLOSURES

The Contractor shall provide and maintain temporary enclosures for the work as may be required to permit continuation of interior work during inclement weather, if wall and roof construction has progressed sufficiently to make interior work possible. This applies only to structures. It does not apply to road improvements or other outdoor improvements.

105.18 CLEAN-UP

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

SECTION 106 ROYALTIES, PATENT INFRINGEMENTS, SPECIAL LICENSES AND PERMITS

106.00 ROYALTIES AND PATENTS

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

SECTION 107 WORK PROVISIONS AND RULES

107.00 COMMENCEMENT AND COMPLETION OF WORK

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

107.01 FAILURE TO COMPLETE WORK ON TIME, LIQUIDATED DAMAGES

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

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

107.02 WORK IN BAD WEATHER

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

The granting of a time extension for inclement weather does not imply or guarantee that additional compensation for incidental and appurtenant work caused by such weather will be approved or authorized by the Project Manager. Weather delays that can be reasonably anticipated shall not result in increased cost to the City. The Project Manager will be the sole judge as to the reasonableness of delays for inclement weather.

107.03 EXCUSABLE DELAYS

The Contractor's right to proceed will not be terminated, and the Contractor will not be charged with damages, for delays in completing the work that arise from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include:

- (a) Acts of God or of the public enemy,
- (b) Acts of the government in either its sovereign or Contractual capacity,

- (c) Acts of another contractor in the performance of a contract with the government,
- (d) Fires,
- (e) Floods,
- (f) Epidemics,
- (g) Quarantine restrictions,
- (h) Strikes of employees other than Contractor's employees,
- (i) Freight Embargos,
- (j) Unusually severe weather, or
- (k) Delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers.

107.04 COMPENSATION FOR COMPENSABLE DELAYS

If the Project Manager determines that a delay is compensable in accordance with the Contract, monetary compensation will be determined in accordance with this subsection.

- (a) These categories represent the only costs that are recoverable by the Contractor. All other costs or categories of costs are not recoverable:
 - 1. Actual, reasonable wages and benefits, including FICA, paid for additional non-salaried labor;
 - 2. Reasonable and actual costs for additional bond, insurance and tax;
 - 3. Increased, reasonable, and actual costs for materials;
 - 4. Reasonable equipment costs calculated in accordance with the current edition of the Rental Rate Blue Book of Rental Rates for Construction Equipment for Contractor-owned equipment and based on invoice costs for rented equipment;
 - 5. Reasonable and actual costs of extended job site overhead;
 - 6. Reasonable subcontractor's claims (the same level of detail as specified herein is required for all subcontractors' claims)

7. An additional 10 percent will be added to the total of items (1), (2), (3), (4), (5), and (6) as compensation for items for which no specific allowance is provided, including profit, overhead, and general and administrative expenses.
- (b) In adjustment for costs as allowed above, the City will have no liability for the following items of damages or expense:
1. Profit in excess of that provided in (a) above;
 2. Loss of profit;
 3. Additional cost of labor inefficiencies in excess of that provided in (a) above;
 4. Home office or other overhead or general and administrative expenses in excess of that provided in (a) above;
 5. Consequential damages, including but not limited to loss of bonding capacity, loss of bidding opportunities, and insolvency;
 6. Indirect costs or expenses of any nature in excess of that provided in (a) above;
 7. Attorney's fees, claim preparation fees, and expert fees.

All costs claimed must be documented and accompanied by a written certification from the Contractor.

107.05 EMERGENCY WORK

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

107.06 VALUE ENGINEERING CHANGE PROPOSALS BY THE CONTRACTOR

The Contractor is encouraged to develop and offer proposals for improved construction techniques, alternative materials and other innovations. Proposals must provide a project comparable to the City's original design either at lower cost, with improved quality, or both. If a Value Engineering Change Proposal (VECP) Proposals shall be submitted only after contract award. If a VECP is rejected, the

work shall be completed in accordance with the Contract at the Contract price. The Contractor shall have no claim against the City for compensable or noncompensable delay to the Contract based on the failure to respond to a VECP.

The Contractor may submit either a full VECP or a preliminary Conceptual VECP, followed by a full proposal. The City Engineer will provide timely review of all VECPs and advise the Contractor whether the VECP is complete or incomplete. When the VECP is complete, the Project Manager will advise the Contractor of either the approval of the VECP or the reasons for rejection of the VECP.

Cost savings generated to the Contract as a result of VECPs offered by the Contractor and accepted by the Project Manager shall be shared equally between the Contractor and the City.

If the Project Manager determines that the time for response indicated in the submittal under item (c)5 below is insufficient for review, the Contractor will be promptly notified. Based on the additional time needed by the Project Manager for review and the effect on the Contractor's schedule caused by the added time, the Project Manager will evaluate the need for a non-compensable time adjustment to the Contract.

(a) VECPs that will be considered are those that would produce savings to the City or provide improved Project quality without impairing essential functions and characteristics of the Project. Essential functions include but are not limited to: service life, economy of operation, ease of maintenance, desired appearance, safety, and impacts to the traveling public or to the environment during and after construction.

(b) *Submittal of Conceptual Proposal.* For VECPs that require a significant amount of design or other development resources, the Contractor may submit an abbreviated conceptual proposal for preliminary evaluation. The Project Manager will evaluate the information provided and advise the Contractor if any conditions or parameters of the conceptual proposal are found to be grounds for rejection. Preliminary review of a conceptual proposal reduces the Contractor's risk of subsequent rejection but does not commit the City to approval of the full VECP. The following information shall be submitted for each conceptual proposal.

1. A statement that the proposal is submitted as a conceptual VECP.
2. A general description of the difference between the existing Contract and the proposed change, and the advantages and disadvantages of each, including effects on cost, service life, economy of operation, ease of maintenance, desired appearance, safety, and impacts to the traveling public or to the environment during and after construction.

3. A set of conceptual plans and a description of proposed changes to the Contract specifications.
 4. An estimate of the anticipated cost savings or increase.
 5. A statement specifying:
 - a. when a response to the conceptual proposal from the City is required to avoid delays to the existing contract prosecution,
 - b. the amount of time necessary to develop the full Proposal,
 - c. the date by which a Change Order must be executed to obtain maximum benefit from the VECP, and
 - d. the VECP's impact on time for completing the Contract.
- (c) *Submittal of Full Value Engineering Change Proposal.* The following materials and information shall be submitted with each VECP.
1. A statement that the proposal is submitted as a VECP.
 2. A description of the difference between the existing Contract and the proposed change, and the advantages and disadvantages of each, including effects on service life, economy of operation, ease of maintenance, desired appearance, safety, and impacts to the traveling public or to the environment during and after construction.
 3. A complete set of plans and specifications showing the proposed revisions relative to the original Contract. This portion of the submittal shall include design notes and construction details. The proposed plans and specifications shall be signed and sealed by the Contractor's engineer.
 4. A complete analysis indicating the final estimated costs and quantities to be replaced by the VECP compared to the new costs and quantities generated by the VECP. All costs and proposed unit prices shall be documented by the Contractor.
 5. A statement specifying the date by which a Change Order must be executed to obtain the maximum cost reduction during the remainder of the Contract.
 6. A statement detailing the effect the VECP will have on the time for completing the Contract.

7. A description of any previous use or testing of the proposed changes and the conditions and results. If the VECP was previously submitted on another City project, the VECP shall indicate the date, Contract number, and the action taken by the City.
8. An estimate of any effects the VECP will have on other costs to the City.
9. A statement of life cycle costs, when appropriate. Life cycle costs will not be considered as part of cost savings but shall be calculated for additional support of the VECP. A discount rate of four percent shall be used for life cycle calculations.
10. A statement specifying when a response from the City is required to avoid delays to the prosecution of the Contract.

(d) *Evaluation.* VECPs will be evaluated in accordance with the following:

1. The Project Manager will determine if a VECP qualifies for consideration and evaluation. The Project Manager may reject any VECP that requires excessive time or costs for review, evaluation, or investigations. The Project Manager may reject proposals that are not consistent with the City's design policies and criteria for the Project.
2. VECPs, whether or not approved by the City, apply only to this Contract and become the property of the City. VECPs shall contain no restrictions imposed by the Contractor on their use or disclosure. The City has the right to use, duplicate and disclose in whole or in part any data necessary for the utilization of the Proposal. The City retains the right to utilize any accepted VECP or part thereof on other projects without obligation to the Contractor. This provision is subject to rights provided by law with respect to patented materials or processes.
3. If the City is able to demonstrate that it is already considering certain revisions to the Contract, prior to receipt of the VECP, or has approved certain changes in the Contract for general use that are subsequently proposed in a VECP, the Project Manager will reject the VECP and may proceed to implement these changes without obligation to the Contractor.
4. The Contractor shall have no claim against the City for additional costs or delays resulting from the rejection or untimely acceptance of a VECP. These costs include but are not limited to: development costs, loss of anticipated profits, increased material or labor costs, or untimely response.
5. VECP will be rejected if equivalent options are already provided in the Contract.

6. VECP that only reduce or eliminate Contract pay items will be rejected.
 7. The savings generated by the VECP must be sufficient to warrant a review and processing, as determined by the Project Manager.
 8. A VECP changing the type or thickness of the pavement structure or changing the design of a bridge will be rejected.
 9. Additional information needed to evaluate VECPs shall be provided in a timely manner. Untimely submittal of additional information will result in rejection of the VECP. Where design changes are proposed, the additional information shall include results of field investigations and surveys, design and computations, and changed plan sheets required to develop the design changes.
- (e) *Payment.* If the VECP is accepted, the changes and payment will be authorized by a Change Order. Reimbursement will be made as follows:
1. The changes will be incorporated into the Contract by changes in quantities of unit items, new agreed unit price items, or both, as appropriate, under the Contract.
 2. The Price of the contract will be revised to reflect the changes in the VECP. The City will pay the Contractor 50 percent of the savings to the City upon completion of the Project. The savings to the City shall be the difference between the cost of the revised work and the cost of the related construction required by the original Contract computed at Contract prices.
 3. Costs incurred by the Contractor for development, design, and implementation of the VECPs will not be reimbursed.
 4. When work performed under an approved VECP is modified to fit field or other conditions, the maximum amount paid for the work will be limited to that which would have been paid if the work had been performed under the original Contract provisions. The rejection or limitation of reimbursement shall not constitute the basis of any claim against the City for delay or for other costs except as allowed under the original Contract.

107.07 AUTHORITY OF THE PROJECT MANAGER

The Project Manager will decide all questions regarding the quality and acceptability of materials furnished, work performed, and the rate of progress of the work, all interpretation of the plans and specifications, and the acceptable fulfillment of the Contract. The Project Manager will perform technical inspection

of the work and shall have authority to reject all work and materials which do not conform to the Contract.

The Project Manager has authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the Contract or for the convenience of the City. The Project Manager may order the Contractor, by giving ten (10) days written notice, to suspend, delay, or interrupt all or any portion of the work required by the Contract for a period of up to (10) ten Calendar Days at no additional cost to the City. The Project Manager may immediately stop the work when it is determined that the public's safety and welfare is in jeopardy.

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

107.08 DUTIES OF THE INSPECTOR

Inspectors employed by the City are authorized to inspect all work done and materials furnished. Any such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. An inspector is not authorized to alter or waive the provisions of the Contract. An inspector is not authorized to issue instructions contrary to the provisions of the Contract or to act as foreman for the Contractor.

107.09 CONSTRUCTION OBSERVATION AND INSPECTION

The Project Manager shall at all times have access to the work, and the Contractor shall provide proper equipment, materials and labor as required for such access and inspection.

All equipment, material, and articles incorporated into the work covered by this Contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this Contract. The Project Manager shall have the right to reject materials and workmanship, which are defective, or require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises and replaced without charge to the City. If the Contractor does not correct such rejected work and remove rejected materials within a reasonable time fixed by written notice, the City may remove them and charge the expense to the Contractor.

Should it be considered necessary or advisable by the Project Manager at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall on request promptly furnish necessary facilities, labor and materials. If such work is found to

be defective in any material respect due to fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual, reasonable cost of labor and material necessarily involved in the examination and replacement, plus ten (10) percent, will be allowed the Contractor.

All materials to be incorporated in the work, all labor performed, all tools, appliances, and methods used shall be subject to the inspection and approval or rejection of the Project Manager.

If the Project Manager points out to the Contractor, Contractor's foreman, or agent any neglect or disregard of the Contract provisions, such neglect or disregard shall be remedied and further defective work be discontinued immediately.

The Contractor shall execute the work only in the presence of the Project Manager or authorized representative, unless provision has been made for the work to proceed without complete engineering supervision or inspection. The presence of the Project Manager or authorized representative shall in no way relieve the Contractor of any responsibility under this Contract.

The observation of the work by the Project Manager is intended to aid the Contractor in applying labor, materials, and workmanship in compliance with the Contract provisions. Such observation, however, shall not relieve the Contractor from any of Contractor's Contract obligations.

107.10 CONTRACTOR COOPERATION

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

- (a) Workmen, Methods and Equipment: Permission from the Project Manager to use any particular methods, equipment or appliances shall not be so construed as to relieve the Contractor from furnishing other equipment or appliances or adopting other methods when those in use prove unsatisfactory to the Project Manager, or as to bind the Project Manager to accept work which does not comply with the Contract.

107.11 CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the work is accepted by the Project Manager as evidenced by the issuance of the Certificate of Completion, the Contractor shall have the charge and care thereof and shall take every necessary precaution against injury or damage to any

part thereof by action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expense thereof.

The Contractor shall be responsible for the preservation of all public and private property, trees, fences, monuments, and other property, along and adjacent to the improvements and shall use suitable precautions necessary to prevent damage to pipes, conduits, and other underground structures. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work, or in consequence of the non-execution thereof on the part of the Contractor, such property will be restored by the Contractor and at Contractor's expense to a condition similar, or equal to that existing before such damage or injury to the satisfaction of the City's Project Manager.

It shall be the responsibility of the Contractor, when moving or operating equipment, to make all arrangements for temporary crossings of telephone, transmission, pipe lines, railroad tracks, and irrigation ditches. This work shall not be paid for as a separate item but shall be considered as incidental to the project.

107.12 PROTECTION OF UTILITIES

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

The City does not warrant any survey work or location of utilities or other underground apparatuses whether performed by the City, its agent, or an independent contractor. Contractor understands and agrees any survey or location work performed by the City, its agent, or other independent contractor is provided for guidance purposes only, so as to show the approximate location of underground utilities or apparatuses. Contractor understands the existence or exact location of underground utilities or apparatuses may not be known to the City or the design engineer of record. Contractor, therefore, agrees that it shall verify the existence and location of any underground utilities or apparatus along the route of work. Verification shall be done by potholing or using other methods which will detect the exact depth, dimensions, and location of any underground utilities or apparatus.

Contractor shall be liable for any damages, loss, or claims of whatsoever kind caused by its failure to pothole or use other methods of identifying the exact depth,

dimensions, and location of any underground utilities or apparatus. Contractor agrees that any claim of any kind whatsoever, damages, loss, lawsuit, demand, or request for equitable adjustment ("Claims"), shall be waived and the City shall be forever released and discharged from such Claims if Contractor fails to comply with its obligations under this section. Contractor agrees that if it fails to maintain all records or other evidence establishing that it potholed or otherwise determined the exact location, depth, and dimensions of all underground utilities and apparatuses, then it shall not be permitted to make any Claim arising from or related to the location of underground utilities or apparatus.

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

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. All overtime costs for inspection by Colorado Springs Utilities, or other utilities personnel, shall be the Contractor's expense. 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.

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

Before any excavation is begun in the vicinity of water lines, railroad tracks, or structures, sewer lines, telecommunication conduits or cablevision line, each utility company, including Colorado Springs Utilities (if applicable), department, or company concerned must be notified in advance of such excavation, and such excavation shall not be made until an authorized representative of the utility concerned is at the site.

All utilities encountered must be kept in operation by the Contractor and must be protected and/or repaired at the Contractor's own expense, unless otherwise specified in the Contract documents. The Contractor shall be held liable for all damages to any and all public utilities encountered on the project, which damages are due to the Contractor's operations. Such damages shall include all physical damages to utilities and also all damages due to interruption of service of such utilities, when such damages and interruptions are caused by the Contractor's operations.

Where alterations or moving of utilities is not required to permit construction of the project, the Contractor shall take such measures as the Project Manager may direct to properly protect these utilities throughout his construction operations and shall cooperate at all times with the proper authorities and/or owners in maintaining service of railroads, conduits, pole lines, transmission lines, pipe lines, sewers, etc., affected by this project.

The costs of damages due to the Contractor's operation shall not be allowable under this Contract and shall result in no additional cost to the City. The cost of protecting utilities where alteration or relocation is not required to permit construction of the project shall be considered as included in the original Contract price for the project and shall result in no additional cost to the City.

Should any pipe line, water lines, or gas mains, electrical conduits, sewer pipes, overhead wiring, telecommunication lines, power lines, or any other such utilities, not specifically mentioned and provided for elsewhere as a part of this Contract, have to be moved, repaired, reconditioned, or revised due to the construction, or moved temporarily to permit construction of the project the party or parties owning and operating such utilities shall perform the actual work of moving, repairing, reconditioning, or revising such utilities. Any such work would be added via change order, and the cost of this work will be borne by Colorado Springs Utilities, the utility company's involved, or other means arranged by the City.

(a) Existing Utilities

1. Existing Gas Lines: As of April 1, 1983, Federal law requires anyone who uncovers a gas line to report it to the gas company and allow it to be inspected by the gas company personnel before it is backfilled. Colorado Springs Utilities or other provider is to be notified prior to any excavation around gas lines. A Colorado Springs Utilities. or other applicable provider. inspector is to be notified and present on site prior to construction activities around gas lines.
2. Existing Sewer Mains and Services: All relocation, replacement protection shown on the plans or determined necessary by the inspector shall be performed according to the latest Colorado Springs Utilities

Wastewater Standard Specifications. Minimum 48 hours' notice must be given to Colorado Springs Utilities prior to any related work.

3. The Contractor shall adjust sanitary sewer manhole rims to an elevation acceptable to Colorado Springs Utilities. The Contractor shall contact Colorado Springs Utilities twenty-four (24) hours prior to manhole rim adjustments.
4. Existing Water Mains and Services: All relocation, replacement or protection shown on the plans or determined necessary by the inspector shall be performed according to the latest Colorado Springs Utilities Water Standard Specifications and the Water Service Standard Specifications. Minimum 48-hour notice must be given to Colorado Springs Utilities prior to any related work. Colorado Springs Utilities reserves the right to schedule any operations at their discretion and to provide for any requirements determined necessary to perform the work. The Contractor shall coordinate with the Colorado Springs Utilities and receive their approval prior to performance of the work.

(b) Utility Support Systems:

1. If required by the Contract documents, or requested by the Project Manager, the Contractor shall submit shop drawings for the method of temporary support for all existing utilities during construction. The temporary support details for existing utilities shall be submitted for review and approval prior to performance of the work. Shop drawings must bear the seal of a Professional Project Manager registered in the State of Colorado, unless so waived by the City.
2. Regardless of City approved shop drawings, the Contractor shall be responsible for the satisfactory support of the utility system and any damages that may occur to the utility involved.

(c) Electric Utility Installation:

1. Any electric facilities unless otherwise noted are to be relocated or modified by Colorado Springs Utilities. The Contractor shall coordinate the work with Colorado Springs Utilities and Colorado Springs Utilities Contractor.
2. Light Pole Installation or Relocation:
 - a. The Contractor is responsible for coordinating with Colorado Springs Utilities, removing existing light pole foundations, constructing new light pole foundations, installing new conduits, and installing lighting junction boxes. The Contractor is responsible for coordinating with

Colorado Springs Utilities for the de-energizing and removal of existing light poles.

- b. Colorado Springs Utilities will remove the existing light standards, reset the light standards upon completion of the new foundations, conduit and junction boxes, pulling wire, and beginning operations of the lighting within the project limits. The Contractor is responsible for scheduling and coordination with Colorado Springs Utilities crews for reinstallation and re-energizing completed light poles.
- (d) Gas Utilities: The Contractor is responsible for coordinating with Colorado Springs Utilities for the relocation of existing Gas lines. Colorado Springs Utilities will relocate the existing gas lines as necessary to install project improvements within the project limits. The Contractor is responsible for scheduling and coordination with Colorado Springs Utilities crews.
- (e) Telecommunication Agencies: Any telephone facilities unless otherwise noted are to be relocated or modified by the respective private utility company. The Contractor shall coordinate the work with the respective private utility company.
- (f) Cablevision: The television utilities are to be relocated by the cable provider. The Contractor shall coordinate the work with any affected cable provider.

107.13 FEDERAL FUNDS

If this Contract is a federally assisted construction contract all applicable federal requirements, terms and conditions, provisions and forms shall apply. Additionally, during the performance of this Contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause

2. The Contractor will, in all solicitations or advancements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
3. The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
4. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other Contract or understanding a notice advising the labor union or workers representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
5. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
6. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Secretary of Labor, State of Colorado Civil Rights Commission and any other governmental agency entity which may be assisting with the funding under this Contract for purposes of investigation to ascertain compliance with such rules, regulations and orders.
7. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any such rules, regulations, or orders, this Contract may be cancelled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further government Contracts or Federally assisted construction Contracts in accordance with the procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other

sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or otherwise provided by law.

8. The Contractor shall include the provisions of Paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the city, state, or any federal governmental entity may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the city, the state, or the United States to enter into such litigations to protect the interests of such governmental entity.

107.14 SUPERINTENDENCE

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

107.15 PREPARATION

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

107.16 STAKING WORK

The Project Manager may provide reference points (horizontal and vertical control) only, unless otherwise noted in the proposal and project specifications. The

Contractor shall engage the services of a licensed surveyor or surveying firm (hereinafter referred to as the Surveyor) to be approved by the Project Manager. The Surveyor shall perform all detailed construction layout and staking including the staking of all storm sewer, street improvements, and utility relocations in accordance with the plans and specifications. The Contractor shall be responsible for the correctness and accuracy of the detailed layout of finished structures.

Any instrument man or survey assistant employed on the work by the Contractor or his subcontractors, who are judged by the Project Manager to be incompetent, shall be removed from the work and replaced by a competent individual.

107.17 DEVIATION ALLOWED

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

107.18 RIGHT-OF-WAY

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

107.19 SHOP DRAWINGS AND SUBMITTALS

The Contractor shall submit to the Project Manager all shop drawings and submittals required for the work, including those pertaining to structural and reinforcing steel within fifteen (15) Calendar Days from the date of the Notice of Award. The Contractor shall make any corrections in the drawings required by the Project Manager and resubmit the same without delay.

Three final copies of all shop drawings (if applicable), submittals (if applicable) and schedules shall be submitted to the Project Manager, who after checking will retain

two copies and return one copy to the Contractor. The Project Manager's approval of shop drawings of equipment and material shall extend only to determining the conformity of such equipment and materials with the general features of the design drawings prepared by the Project Manager. It shall be the responsibility of the Contractor to determine the correctness of all dimensions and minor details of such equipment and materials so that when incorporated in the work, correct operations will result.

107.20 RECORD DRAWINGS

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

(a) Drawings:

1. Depths of various elements of foundation in relation to finish floor datum.
2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements and Project survey control.
3. Location of internal utilities and appurtenances concealed in the construction, referenced to permanent surface improvements and project survey control.
4. Field changes of dimensions and detail.
5. Changes made by Change Order.
6. Details not on original Contract drawings.

(b) Specifications and Addenda:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by Change Order.

107.21 MATERIALS

Unless otherwise stipulated in the Specifications, all workmanship, equipment, materials, and articles incorporated in the work covered by this Contract are to be new and of the best grade of their respective kinds for the purpose. The Contractor shall furnish to the Project Manager for the Project Manager's approval, the name

of the manufacturer of machinery, mechanical and other equipment, which he contemplates installing, together with their performance capacities and other pertinent information including but not limited to instruction manuals pertaining to the use and operation of such machinery, mechanical and other equipment.

When required by the Specifications, or when called for by the Project Manager, the Contractor shall furnish for approval full information concerning the materials or articles which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials, and articles installed or used without such approval shall be at the risk of subsequent rejection.

107.22 MATERIAL INSPECTION AT PLANT

If the Project Manager inspects the materials at the source, the following conditions shall be met:

- (a) The Project Manager shall have the cooperation and assistance of the Contractor and the materials producer.
- (b) The Project Manager shall have full entry to all parts of the plant necessary for the manufacture or production of the materials being furnished.
- (c) Adequate safety measures shall be provided and maintained.

The City reserves the right to retest all materials which have been previously tested or inspected. The retesting may be prior to or after incorporation of the materials into the work. Those materials inspected and tested after delivery on the Project or after incorporation into the work that do not meet the requirements of the Contract will be rejected and replaced at no additional cost to the City.

107.23 HANDLING MATERIALS

All materials shall be handled so their quality and fitness for the work is preserved. Aggregates shall be transported to the work in vehicles constructed to prevent loss or segregation of materials.

107.24 CITY FURNISHED MATERIALS

Material furnished by the City will be made available to the Contractor at the points specified in the Contract.

The cost of handling and placing materials after they are made available to the Contractor shall be considered as included in the Contract price for the item, and shall result in no additional cost to the City.

The Contractor will be held responsible for all material received until it is incorporated into the work and accepted.

Demurrage charges resulting from the Contractor's failure to accept the material at the designated time and point of delivery will be deducted from monies due the Contractor.

107.25 BUY AMERICA REQUIREMENTS

All manufacturing processes, including the application of a coating, for all steel and iron products permanently incorporated in the work shall have occurred in the United States of America. All manufacturing processes are defined as "processes required to change the raw ore or scrap metal into the finished, in-place steel or iron product". This requirement will not prevent a minimal use of foreign steel or iron provided the total project delivered cost of all such steel and iron which includes the cost of delivering the steel and iron to the Project, does not exceed one-tenth of one percent of the total Contract cost or \$2,500, whichever is greater.

With every steel or iron product that requires pre-inspection, pretesting, certified test results, or certificate of compliance, the Contractor shall provide a certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product that every process, including the application of a coating, performed on the steel or iron product either has or has not been carried out in the United States of America. These certifications shall create a chain of custody trail that includes every supplier, distributor, fabricator, and manufacturer that handles the steel or iron product. The lack of these certifications will be justification for rejection of the steel or iron product. Upon completion of the Project, the Contractor shall certify in writing of compliance with this requirement and provide evidence of the Project delivered cost of all foreign steel or iron permanently incorporated into the Project.

107.26 TESTING OF MATERIALS

Tests and Inspections. The City will employ and pay for the services of an approved testing laboratory to perform specified services for the field testing of:

- (a) Soil Compaction Control
- (b) Cast-in-Place Concrete
- (c) Asphalt Concrete Pavement

The Contractor shall perform, or arrange for the performance, and pay all costs in connection therewith, all other tests and inspections required by the Contract documents. The Contractor shall pay for all testing laboratory services in connection with tests verifying conformance of proposed materials and installation

with project requirements including, but not limited to, mix designs, riprap, gradation tests for embedment, fill and backfill materials. The City shall pay for testing laboratory services in connection with tests on materials after incorporation into the project, unless retesting of materials is necessary because of the failure of the materials to meet the Project requirements. The Contractor shall obtain the City's written acceptance of the testing laboratory before having services performed.

(a) Requirements for Independent Testing Consultants.

1. Consultants shall comply with "Recommended Requirements for Independent Laboratory Qualifications", latest edition, published by the American Council of Independent Laboratories, and basic requirements of ASTM E-329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction", latest edition.
2. The Contractor shall submit to the City for prior approval, the name and address of the proposed testing laboratory with description of personnel, facilities, equipment and other qualification data, including certificate of calibration of applicable testing equipment made by an accredited calibrated agency no more than twelve (12) months prior to submittal date.

(b) Test Reports

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

(c) Contractor Responsibilities

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

(d) Reliance on Technical Data

Without warranty or representation as to the accuracy or completeness of any information or data, Contractor may rely upon the general accuracy of the "technical data" contained in the reports, specifications and drawings. The "technical data" is identified in the work technical specifications, drawings and reports that are signed and sealed by a registered Professional Engineer, Architect or Landscape Architect in the State of Colorado. Except for the reliance on the general accuracy of the "technical data," Contractor may not rely upon or make any claim against the City with respect to:

1. the accuracy or completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in the reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

107.27 UNANTICIPATED CIRCUMSTANCES

Contractor understands that this is a firm fixed price contract and so long as there are no changes in the scope of work or unanticipated circumstances as provided in subsection A-C below, Contractor must deliver the project for the agreed price. The parties agree that not every circumstance can be anticipated or known at the time this Contract was executed. Compensation for unanticipated circumstances, limited to subsections A –C, shall, at the City's sole discretion, be provided by the following method(s): (1) Unit prices previously approved; (2) allowing additional compensation on a time and materials method, not to exceed an agreed-to amount; (3) an agreed lump sum; and/or (4) the actual cost of:

- (a) labor (including foreman and additional supervision, if necessary);
- (b) materials necessary for incorporation into the Project;
- (c) rental cost of construction plant and equipment used for work;
- (d) Power and fuel required for operation of power equipment necessary to perform work;
- (e) Contractor shall provide to the City physical evidence of all costs, including, but limited to, payroll, invoices, vouchers, estimates, bills, accounting records, or other relevant records. Contractor agrees that its failure to provide evidence of a claimed cost shall be a waiver of such cost(s) and the City shall be released and forever discharged from any claim of any kind whatsoever, loss, damages, request for equitable adjustment, or demand related thereto. Contractor further agrees that, at the City's discretion, a fixed fee, not to exceed 10% of the costs of work shall be added

to such costs as compensation for the cost of management, insurance, benefits, bond, profit, and any other expenses.

To the extent unanticipated circumstances arise, Contractor shall follow the procedures and processes set forth herein and, if applicable, the Dispute Resolution provisions of this Contract. Contractor agrees that its failure to follow the processes set forth herein and the Dispute Resolution process shall forever waive, release, and discharge the City from any claim of any kind whatsoever, damages, losses, lawsuits, or demands known or unknown. Additionally, the terms “detail” or “particularity” mean specificity, providing the exact basis and reason therefor with citations to the Contract or Contract Documents. Vague or ambiguous references such as “other matters” or “other costs” shall not be permitted and are not subject to any compensation method whatsoever.

A. Differing Site Conditions or Changed Conditions: A differing site condition or changed condition means subsurface, latent, or unknown physical site conditions that are materially different than that which is indicated in the contract and which is not ordinarily encountered and generally recognized in the work provided for in the Contract.

Contractor understands the City must be permitted the opportunity to timely investigate all differing site/changed condition matters; document conditions as they existed on the site at the time; take measurements, photographs, witness statements and the like; negotiate a compromise resolution with the Contractor and/or subcontractors; and avoid the cost, expense and delay of formal litigation.

Upon discovering a differing site condition, the Contractor shall not disturb the conditions and immediately contact the Project Manager. Within five days of discovering the condition, the Contractor shall provide written notice to the Project Manager of the condition. The written notice shall describe the condition with particularity; provide the precise material difference of the condition from the Contract, design plans, and/or other Contract Documents; describe, in detail, how the condition is not a condition that would be ordinarily encountered and generally recognized in the work provided for in the Contract; and provide a detailed explanation, including all accounting and other evidence supporting, Contractor’s losses, costs, delays, and changes in time required for performing the work. Contractor agrees that any claim, loss, damage, delay, or change in time that is not supported by evidence shall be disallowed. Contractor waives and forever releases and discharges the City from any claim of whatsoever kind, loss, damages, demand, and/or request for equitable adjustment whether known or unknown by disturbing the condition before notifying the Project Manager and by failing to provide timely detailed written notice as required herein. Any issue which is not provided for, in detail, in the written notice shall also be waived and the City shall be forever released and discharged from any

claim whatsoever, loss, damage, or request for equitable adjustment, or demand arising therefrom.

After Contractor fully complies with the provisions in this section and after receiving the written notice, the Project Manager shall promptly investigate the condition and determine whether such condition materially differs from that indicated in the Contract Documents and whether it is a condition that would not ordinarily be encountered and generally recognized in the work provided for in the Contract. If the Project Manager determines the condition is a "differing site condition," then a Change Order shall be issued describing the differing site condition and compensation method agreed to by the parties. By signing the Change Order, Contractor agrees the City shall be released and fully discharged from any claim whatsoever, loss, damage, request for equitable adjustment, or demand arising from the matters described in the Change Order. The parties shall also sign a document which describes in detail each condition and each claim, loss, damage, delay, or change in time related to that particular condition which was agreed to and fully resolved as well as any condition and each claim loss, damage, delay, or change in time related to that particular condition which is disputed.

If the Contractor disputes, disagrees with, or otherwise considers unfair any decision or ruling by the City, then Contractor shall, within 10 Calendar Days, provide the City with written notice of the dispute as set forth in the dispute section of this Contract and shall follow the dispute resolution process provided therein.

B. Defective or Deficient Construction Plans or Documents: A defective or deficient construction plan or document means a material error, mistake, oversight, or omission in the design plans or documents providing the specifications depicting the general and detail features of the work to be performed.

Upon discovering a defect or deficiency, the Contractor shall immediately contact the Project Manager. Within five days of initially advising the Project Manager of the defect or deficiency, the Contractor shall provide written notice to the Project Manager. The written notice shall describe the defect or deficiency with particularity explaining why it is a material defect or deficiency; provide precise detail explaining why the defect or deficiency is not something Contractor should know how to do or why the defect or deficiency is not a condition that would be ordinarily encountered and generally recognized in the work provided for in the Contract; and provide a detailed explanation, including all accounting and other evidence supporting, Contractor's losses, costs, delays, and changes in time required for performing the work. Contractor agrees that any claim, loss, damage, delay, or change in time that is not supported by evidence shall be

disallowed. Contractor agrees that it shall waive and forever release and discharge the City from any claim of whatsoever kind, loss, damages, demand, and/or request for equitable adjustment whether known or unknown by failing to immediately notifying the Project Manager and by failing to provide timely detailed written notice as required herein. Any issue which is not provided for in the written notice shall also be waived and the City shall be forever released and discharged from any claim whatsoever, loss, damage, or request for equitable adjustment, or demand arising therefrom.

After Contractor fully complies with the provisions in this section and after receiving the written notice, the Project Manager shall promptly investigate the condition and determine whether such matter is a “defective or deficient design plan or document” as defined herein. If the Project Manager determines the matter is a “defective or deficient design plan or document,” then a Change Order shall be issued describing the defective or deficient design plan or document, the correction and compensation method agreed to by the parties. By signing the Change Order, Contractor agrees the City shall be released and fully discharged from any claim whatsoever, loss, damage, request for equitable adjustment, or demand arising from the matters described in the change order. The parties shall also sign Form A of this Contract which describes in detail each condition and each claim, loss, damage, delay, or change in time related to that particular condition which was agreed to and fully resolved as well as any condition and each claim loss, damage, delay, or change in time related to that particular condition which is disputed.

If Contractor disputes, disagrees with, or otherwise considers unfair any decision or ruling by the City, then Contractor shall, within 10 Calendar Days, provide the City with written notice of the dispute as set forth in the Dispute Resolution section of this Contract and shall follow the dispute resolution process provided therein.

C. Changes in Work and Additional/Extra Work (fixed price contract): When additional information through excavation, testing, site investigation, differing site conditions, or otherwise is obtained the City shall have the right to alter, change the location, re-design, change the work, add to the work, accelerate work, or reduce work, change the method or manner of performance, change services, and/or change materials described in the Contract (collectively “Changed Work”).

If the City changes work, then a Change Order shall be issued by the Project Manager. Contractor shall not be required to perform any Changed Work without a Change Order issued by the Project Manager. Such Changed

Work shall be performed under the terms set forth in the original Contract and compensated as agreed in this section of the Contract.

If Contractor disputes any Changed Work or compensation method for such Changed Work requested by the City or set forth in a Change Order, Contractor shall, without delay, perform such work. Within 10 Calendar Days of receiving the Change Order, Contractor shall provide the City with written notice of the dispute as set forth in the Dispute Resolution section of this Contract and shall follow the dispute resolution process provided therein. Contractor further agrees that any issue not provided for, in detail, in the written notice shall also be waived and the City shall be forever released and discharged from any claim whatsoever, loss, damage, or request for equitable adjustment, or demand arising therefrom. Any matter resolved through the Dispute Resolution process shall be set forth in Form A of this Contract which describes in detail each Changed Work, including the compensation method, which was agreed to and fully resolved. By signing Form A, Contractor agrees that the City shall be released and fully discharged from any claim whatsoever, loss, damage, request for equitable adjustment, or demand arising from the matters described in Form A.

If Contractor does not dispute any Changed Work or the compensation method for such work, then Contractor shall sign the Change Order and agrees that the City shall be released and fully discharged from any claim whatsoever, loss, damage, request for equitable adjustment, or demand arising from the matters described in the Change Order.

Contractor agrees that the Project Manager shall have the authority to make minor changes in the work which do not involve additional costs and are not inconsistent with the purpose and scope of the work.

If the City finds it necessary or advisable, the City may omit, increase, or decrease any items as it may deem necessary or desirable without changing the unit prices in the proposal, provided such increase or decrease does not exceed 15% of the total monetary value of the original Contract. If material or labor involved in such change is not included in the unit prices of the Contract, but forms an inseparable part of the work to be done under this Contract, and the delay involved in asking for the bids or proposals and the letting of a new contract therefore might result in damage, injury, or impairment of the plant, work system, or other property belonging to the City, the City may in its discretion declare an emergency and require Contractor to proceed with such alterations and additions. The Contract shall not be required to perform such work or furnish extra materials without a Change Order issued by the Project Manager.

107.28 DISPUTE RESOLUTION

Mindful of the high cost of litigation, not only in dollars, but also in time and energy, the parties intend to and do hereby establish the following out-of-court alternate dispute resolution procedure to be followed in the event any dispute, claim of any kind, loss, damage, demand, request for equitable adjustment, or controversy should arise out of, or relating to this Contract or relating to any Change Order or other changes or addendums to this Contract. During the dispute resolution procedure provided in this section, Contract shall continue to perform the work as provided for in this Contract as modified by any Change Order or Contract amendment. Nothing in this section precludes the parties from pursuing any other remedy afforded by the laws of the State of Colorado once the remedies afforded under this Contract have been complied with and exhausted.

A. Disputes Arising from Unanticipated Circumstances: If Contractor disputes, disagrees with, or considers any decision, order, ruling, demand, request, directive, Change Order, or Contract amendment, related to the Unanticipated Circumstances provision of this Contract, and issued by the City, whether verbally or in writing, then Contractor shall:

1. Within 10 days of the City issuing any written or verbal decision, order, ruling, demand, request, directive, Change Order, or Contract amendment, Contractor shall provide written notice to the Project Manager identifying, with specific detail, each disputed matter. Any Unanticipated Circumstance dispute or matter of any kind or nature whatsoever, which Contractor does not identify in detail shall be waived and the City is released and fully discharged from any claim whatsoever, loss, damage, request for equitable adjustment, or demand arising from any matter not explicitly set forth in the written notice and described in detail;
2. Contractor shall provide to the City all evidence of any claim of whatsoever kind, loss, damages, delay cost, or other costs, including, but not limited to payroll reports, daily logs, invoices, accounting file, receipts, email, or other relevant record or document. Any item claimed by Contractor shall be supported by verifiable evidence described herein. If Contractor requires additional time to obtain or compile such evidence, then the Contractor shall have an additional 30 days, but must identify the exact document(s) or other evidence needed, where it is maintained, and explain why it is not available. The City shall not be responsible for any delay or other damage arising from Contractor's request for additional time to obtain documents. Any item unsupported by verifiable evidence shall be waived and Contractor agrees to release and fully discharge the City from any claim of whatsoever kind, loss, damage, request for equitable adjustment, or demand related to such unsupported item.
3. Upon receipt of Contractor's written notice, the Project Manager will investigate the disputed matter(s) and issue a written decision, ruling, order,

and/or directive to Contractor. If Contractor does not dispute the Project Manager's decision, ruling, order, or directive, or a compromise has been reached, then Contractor shall sign Form A. If Contractor disputes or disagrees with the Project Manager's Ruling, then within 20 days of receiving the Project Manager's decision, ruling, order, and/or directive, Contractor must file with the City a written request for review to the City Engineer or City's Manager of the Procurement Services Division. The written request for review shall (a) state in detail the exact issue raised to the Project Manager and the issue(s) related to those matters raised to be reviewed by the City Engineer or Procurement Services Manager; (b) provide an analysis, detailing the basis, reason therefor and the how and why Contractor disagrees with the Project Manager's decision, ruling, order, or directive; and (c) attach all evidence supporting Contractor's dispute. If Contractor fails to provide a timely written request for review to the City Engineer or Procurement Services Manager, then Contractor agrees that it waives, releases, and forever discharges the City from any claim of whatsoever kind, loss, damage, request for equitable adjustment, or demand arising from or related to the Project Manager's decision, ruling, order, or directive.

4. The City Engineer's or Procurement Services Manager's decision shall be final and conclusive for the City of Colorado Springs. If Contractor disputes, disagrees with, or considers such decision unfair, then Contractor shall be free to pursue any other remedy afforded by the laws of the State of Colorado. If Contractor does not dispute the City Engineer's or Procurement Services Manager's decision, ruling, order, or directive or a compromise is reached, then Contractor shall sign Form A.
5. Contractor shall pay the City reasonable attorney's fees and costs associated with its failure to comply with any part of this alternate dispute process.

B. All Other Claims: If a dispute, disagreement, or controversy of any kind, other than those covered in the Unanticipated Circumstances section of this Contract, arises from or is related to the Contract, shall be resolved under the Disputes section in the Contract.

107.29 REMOVAL AND SUSPENSION FOR DEFECTIVE WORK

All work or material which has been rejected shall be remedied or removed and replaced in an acceptable manner. Additional compensation will not be allowed for such removal and replacement. Any work done beyond the lines and grades shown on the drawings, except as herein provided, will be considered as unauthorized and will not be measured or paid for. Work so done may be ordered removed at the Contractor's expense. Should the Contractor fail to comply promptly with any order of the Project Manager made under the provisions of this

paragraph, the Project Manager shall have the authority to cause said work to be removed and to deduct the cost from any money due, or to become due, from the Contractor. At any time during the course of construction of this project if the provisions of the Plans, Specifications, or Contract provisions are being violated by the Contractor or his employees, the Project Manager shall have the right and authority to order all construction to cease or material to be removed, until arrangements satisfactory to the Project Manager are made by the Contractor for resumption of the work in compliance with the provisions of the Contract.

The Contractor shall promptly remove from the premises all materials and work rejected by the Project Manager as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute Contractor's own work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

All removal and replacement work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected work and materials within ten (10) days' time thereafter, the City may, upon ten (10) days written notice, sell such materials at auction or at private sale and retain the proceeds without compensation to the Contractor.

107.30 CLEANING UP AND FINAL INSPECTION

The Contractor shall at the completion of the work, remove all rubbish from and about the work and all tools, equipment, scaffolding, and surplus materials and shall leave the work clean and ready for use. If not completed by Contractor, the City may remove the rubbish and surplus materials and charge the cost to the Contractor.

All sewers, conduits, pipes, and appurtenances and all tanks, pump wells, chambers, buildings, and other structures shall be kept clean during construction and as the work or any part thereof approaches completion, the Contractor shall systematically and thoroughly clean and make any needed repairs to them. Contractor shall furnish at Contractor's own expense, suitable tools and labor for removing all water and cleaning out all dirt, mortar, and foreign substances. Any undue leakage of water into the structures such as to make the work, in the opinion of the Project Manager, fall short of first class work, shall be promptly corrected by the Contractor at Contractor's own expense.

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

107.31 CUTTING AND PATCHING

The Contractor shall do all cutting, fitting, or patching of work that may be required to make its several parts fit together or to receive the work of other contractors shown upon, or reasonably implied by the Plans and Specifications for the completed Project.

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

Any cost caused by defective or ill-timed work shall be borne by the Contractor.

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

107.32 FINAL TESTS

After completion of the work, the Contractor shall make any and all tests required by the Specifications or by municipal, state, or federal regulations, and where so provided in said regulations shall furnish the City with certificates of inspection by the applicable regulatory bodies. The Contractor shall also make all tests required by the National Board of Fire Underwriters for the purpose of determining insurance rates or other protection of the City or the public.

107.33 CORRECTION OF WORK AFTER FINAL PAYMENT

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

107.34 NO WAIVER OF LEGAL RIGHTS

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

After the Contractor has remedied all deficiencies to the satisfaction of the Project Manager and delivered all construction records including record drawings, maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection and other documents (all as required by the Contract

Documents), the Contractor will be promptly issued a Certificate of Completion by the Project Manager stating that the work is acceptable.

Upon completion of the Contract, the City will make final inspection and notify the Contractor of acceptance. Final acceptance shall not preclude the City from correcting any measurement, estimate, or certificate made before or after completion of the Contract, nor from recovering from the Contractor or Surety, or both, overpayments sustained because the Contractor failed to fulfill the obligations under the Contract.

The Contractor shall be liable to the City for latent defects, fraud, or such mistakes as may amount to fraud, or as regards the City's rights under any warranty or guarantee.

For all non-federally funded projects, the following additional requirements shall apply:

- (a) All work shall be constructed in compliance with standard construction codes, and all materials and workmanship must be guaranteed for a period of two years from the date of final acceptance. If any defect in the work in violation of the foregoing warranty arises, Contractor shall, upon receipt of written notice of such defect, promptly furnish, at no cost to the City, design and engineering, labor, equipment, and materials necessary to correct such defect and cause the Work to comply fully with the foregoing warranty and Contract Documents. This obligation shall survive both final completion of and final payment for the Work. The City shall not be invoiced for any of costs of warranty work, and Contractor shall not be entitled to submit any claim for an increased fee arising therefrom. The Contractor guarantee period (two-year warranty period) will not begin until the Contract is 100 percent complete, as determined by the Project Manager. Acceptance of the 100 percent complete work shall be requested in writing by the Contractor. Any item requiring repair and/or replacement prior to expiration of the two-year warranty period shall be guaranteed for a period of one-year after the date of said correction or repair or for the remainder of the two-year warranty period, whichever is longer.
- (b) In placing orders for equipment, the Contractor shall purchase such equipment only under a written guarantee from the respective manufacturers that the equipment supplied will function satisfactorily as an integral part of the completed Project in accordance with the Plans and Specifications. Furthermore, the Contractor shall require that the manufacturer agree in writing at the time an order of equipment is placed that manufacturer will be responsible for the proper functioning of the equipment in cooperation with the Contractor, and that whenever necessary during the installation period or tuning up period following construction period, the manufacturer will supply without additional cost to the City, such

superintendence and mechanical labor and any adjustments and additional parts and labor needed to make the equipment function satisfactorily, even if the same was not shown on approved shop drawings.

107.35 ACCEPTANCE

- (a) *Partial Acceptance.* If, during the performance of the project, the Contractor satisfactorily completes a unit or portion of the Project, such as a structure, an interchange, or a section of road or pavement that can be used advantageously for traffic, the Project Manager may make final inspection of that unit. If the Project Manager finds that the unit has been satisfactorily completed in compliance with the Contract, the Contractor may be relieved of further responsibility for that unit except as otherwise provided in these general provisions. Partial acceptance shall not void or alter any of the terms of the Contract.
- (b) *Final Acceptance.* Upon notice from the Contractor of presumptive completion of the entire Project, the Project Manager will make an inspection. If the work provided for by the Contract has been satisfactorily completed, that inspection shall constitute the final inspection and the Project Manager will notify the Contractor in writing of final acceptance indicating the date on which the Project was inspected and accepted.

If the inspection discloses any unsatisfactory work, the Project Manager will give the Contractor a written list of the work needing correction. Upon correction of the work, another inspection will be made. If the work has been satisfactorily completed, the Project Manager will notify the Contractor in writing of the date of final inspection and acceptance. Final acceptance under this subsection does not waive any legal rights contained in the No Waiver of Legal Rights section of this Contract.

SECTION 108 PAYMENTS AND ACCEPTANCE OF WORK

108.00 PAYMENTS AND RETAINAGE

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

Payment for work performed by the Contractor under the Contract Documents will be made at the approved unit price or lump sum price for each of the several items as listed in the 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. All incidental work essential to the completion of the Project in a workmanlike manner, and including cleanup and disposal of waste or surplus material, shall be accomplished by the Contractor without additional cost to the City. The cleanup and disposal of waste or surplus material shall be performed during construction or as soon after as is reasonably possible in order to better maintain the aesthetics and safety of the construction area. Payment will be made for the actual quantities constructed or installed, unless otherwise noted in these Contract Documents. However, any changes to plan quantity must be approved through proper Change Order procedures, said quantities being measured as specified in the Contract Documents.

- (1) If the Contract exceeds one hundred fifty thousand dollars (\$150,000.00), and is for the construction, alteration, or repair of any highway, public work, or public improvement, structure, and the Contractor has provided Performance and Payment Bonds: the City shall authorize partial progress payments of the amount due under this Contract monthly, or as soon thereafter as practicable, to the Contractor, if the Contractor is satisfactorily performing the Contract. If the City finds that satisfactory progress is being achieved during any period for which progress is to be made, the City may authorize payment to be made in full without withholding retainage. However, if satisfactory progress has not been made, the City may retain a maximum of ten percent (10%) of the amount of the requested payment until satisfactory progress is achieved. When the work is substantially complete, the City may retain from the remaining unpaid balance that amount the City Procurement Services Manager, at the advice of the Project Manager, considers adequate for protection of the City, suppliers, subcontractors, laborers, vendors, etc., provided that such retainage shall not exceed five percent (5%) of the amount due, and shall release to the Contractor all the remaining funds associated with completed and acceptable work.

If satisfactory progress has not been made the withheld percentage of the Contract price of any such work, improvement, or construction shall be retained on an invoice-to-invoice basis and shall not be cumulative. In other words, if the Contractor is not performing satisfactorily the City will hold ten percent (10%) of what is actually due to the Contractor. For example, if the Contractor is behind schedule and has successfully completed fifty percent (50%) of the work, the City will only pay forty percent (40%) of the invoice, withholding ten percent (10%) of what is due until the Contractor gets back on schedule.

- (2) Whenever a Contractor receives payment pursuant to this section, the Contractor shall make payments to each of the subcontractors of any

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

At the time a subcontractor submits a request for payment to the Contractor, the subcontractor shall also submit to the Contractor a list of the subcontractor's suppliers, sub-subcontractors and laborers. The Contractor shall be relieved of the requirements of this subsection (2) regarding payment in seven (7) days and interest payment until the subcontractor submits such list. If the Contractor fails to make timely payments to the subcontractor as required by this section, the Contractor shall pay the subcontractor interest as specified by Contract or at the rate of fifteen percent (15%) per annum, whichever is higher, on the amount of the payment which was not made in a timely manner. The interest shall accrue for the period from the required payment date to the date on which payment is made. Nothing in this subsection (2) shall be construed to affect the retention provisions of any Contract.

- (3) If the Contractor is not progressing in accordance with the Project Schedule or not performing quality work in accordance with the specifications, the City Procurement Services Manager, at the advice of the Project Manager may withholding retainage up to and including ten percent (10%) of the total contract amount.

108.01 PAYMENTS WITHHELD PRIOR TO FINAL ACCEPTANCE OF WORK

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

- (a) Defective work not remedied.
- (b) Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor.

(c) Failure of the Contractor to make payments properly to subcontractors or for material or labor.

(d) Damage to another contractor.

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

108.02 ACCEPTANCE OF FINAL PAYMENT

If the work is finally accepted by Project Manager under the terms and conditions of the Contract the entire balance found by the Project Manager to be due the Contractor, including the retained percentage, less any retention based on; (1) the Project Manager's estimate of the fair value of the claims against the Contractor; and (2) the cost of completing the incomplete or unsatisfactory items of work with specified amounts for each incomplete or defective item of work; and (3) retentions required by law, shall be due and payable to the Contractor. The date of completion is the date as specified in the Certificate of Completion issued by the Project Manager.

Upon completion of the work under the Contract and before the Contractor will receive or be paid for the Project Manager's final statement, the City Procurement Services Division shall post a notice in the Colorado Springs Gazette that the City has accepted such work as completed according to the Plans and Specifications and rules set forth in the Contract; that the Contractor is entitled to final settlement; that after the date specified in the Notice, the City will pay the full balance due under the Contract; and that persons having claims for labor or material furnished the Contractor must present their claim to the City Procurement Services Division prior to the date specified for such payment. Nothing herein shall be construed as relieving the Contractor and the Sureties on the Contractor's bonds from any claim or claims for work or labor done or materials or supplies furnished in the execution of the Contract.

The making and acceptance of the final payment shall constitute a waiver of all claims by the Contractor against the City.

If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and the Project Manager so certifies, the City may, upon Certificate of Completion by the Project Manager, and without terminating the Contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, and acceptance of the payment shall constitute a waiver of all claims by the Contractor but acceptance of the work shall not constitute a waiver of City claims against the Contractor.

Advertising for Final Payment and processing of the Final Pay Request shall not take place until after the Contractor has submitted Sales and Use Tax Forms to the City and said forms have been reviewed and approved by the City Sales Tax Office.

SCHEDULE C.1 – STATEMENT OF WORK – DOG PARK CONSTRUCTION

ANTLER’S PARK – DOG PARK

Dog Park Construction

The City of Colorado Springs Parks, Recreation and Cultural Services (PRCS Department) seeks one or more experienced contractors to prepare and install a new dog park within the existing historic Antler’s Park in Downtown, an area of approximately (.41 ac/18,000 sf) located at: 5 S Sierra Madre Street, Colorado Springs, CO 80903 (SE Corner of Sierra Madre Street and W. Pikes Peak Ave). This dog park project overall is designed to work with the existing grade, walks and trees onsite, remove existing turf, add new synthetic turf, fence, varying surfaces, a small scope of landscape and irrigation, dog park components, site furniture, and a small water station.

This project has three separate Price Sheets for three components of the Antler’s Dog Park; the three components are 1) Dog Park Construction, 2) Fencing and 3) Turf. Contractors are welcome to submit a proposal and pricing for one, two or all three components of the dog park. Identify all sub-contractors in your proposal.

This **DOG PARK CONSTRUCTION** component has its own plan set, with specifications and a Schedule of Values. Below is an overview of what is included:

- Site demolition.
- Site grading.
- Preparation and installation of new surfacing (concrete, breeze).
- Synthetic Turf - Subgrade preparation and excludes the synthetic turf and pad.
- Add alternates including water service and electrical services
- Order, delivery, and installation of dog park equipment and site furniture.
- Coordination with a fence installer who would install new metal fence and footers with gates.
- Coordination with the synthetic turf installer.

Please see the plan sets, specifications, and price sheet for the breakdown of this work.

Notes:

- Contractor to provide all labor, materials and equipment to construct the project as identified in the Construction Documents and Specifications.
- City responsible for concrete testing and compaction tests.
- Per specification, City to inspect all forms prior to pouring. Contractor to provide 48 hr notification to City project manager.
- Site access will be from the North, off of Pikes Peak Avenue.

Period of Performance: May 1, 2023 – September 30th, 2023 (5 months)

Although the period of performance is listed above, the contractor shall provide a suggested schedule of work which completes the work this summer and allows time for close out. The proposed schedule shall reflect a *sequence of work* including fence and synthetic turf installation targeted timing. The City Project Manager will work with all selected project parties to finalize a construction schedule.

The Downtown dog park is the last project to be accomplished from the Downtown Historic Park 2b TABOR project list. This project has public and stakeholder visibility and is a priority to get under contract and to complete.

Submittal List Overview for Construction

Below is a list of anticipated submittals to be made by the hired contractor to the Project Manager, for approval prior to work being performed. Please refer to the Plans and Specification for a complete list of submittal and approvals necessary.

Pre-Installation Conference:

Schedule

Site Control, Storage and Access Plan

Stormwater Control / BMPs

Temporary Tree Protection per specification, includes site inspection.

Prior to installation:

Concrete: See the full 02751 Cement Concrete Pavement Specifications

(Examples: 1.4 Submittals, 1.5 Quality Assurance Preinstallation Conference, testing and mockups, 3.12 Field Quality Control - testing)

Dog Elements Boulders and logs

Earthwork Submittals per specification 02300, product data, subgrade notification and approval included.

Electrical Plan and confirmation of permit approval. (subject to add alternate approval)

This plan will include all light fixture information, panel, conduit, boring, stub outs, connections, J boxes, etc.

Fence Block Outs, layout and placement

Geotechnical Testing – as needed, not anticipated but listed in specification.

Irrigation Sleeving Product Data,

Planting See 02930 Section Note Sections 1.4 Submittals, 1.5 Quality Assurance, Section 1.7 plant timing, 1.8 Warranty.

Seat Walls includes a form inspection by project manager. (subject to Add Alt approval)

Site Furniture, approval prior to ordering

Soils (as applicable):

Backfill or off-site borrow material

Approved base course

Surfacing: Product samples prior to ordering.

Breeze

Mulch - wood

Pea Gravel

Tree Root Pruning, City Forester or Designee approval needed before main lateral roots or taproots are cut. Cut only smaller roots that interfere with installation of utilities. See specification.

Traffic Control, if needed. Meter Hood permits for site access are the responsibility of the contractor.

Water Extension. (subject to add alternate approval)

This plan will include all light fixture information, panel, conduit, boring, stub outs, connections, J boxes, etc.

SCHEDULE C.2 – STATEMENT OF WORK – FENCING

ANTLER’S PARK DOG PARK

Fencing

The City of Colorado Springs Parks, Recreation and Cultural Services (PRCS Department) seeks one or more experienced contractors to prepare and install a new dog park within the existing historic Antler’s Park in Downtown, an area of approximately (.41 ac/18,000 sf) located at: 5 S Sierra Madre Street, Colorado Springs, CO 80903 (SE Corner of Sierra Madre Street and W. Pikes Peak Ave). This dog park project overall is designed to work with the existing grade, walks and trees onsite, remove existing turf, add new synthetic turf, fence, varying surfaces, a small scope of landscape and irrigation, dog park components, site furniture, and a small water station.

This project has three separate Price Sheets for three components of the Antler’s Dog Park; the three components are 1) Dog Park Construction, 2) Fencing and 3) Turf. Contractors are welcome to submit a proposal and pricing for one, two or all three components of the dog park. Identify all sub-contractors in your proposal.

This **FENCING** component has its own plan set, with specifications and a Schedule of Values. Below is an overview of what is included:

- Preparation and installation of new fence (fence, posts, gates).
- Order and delivery of fence materials.
- Add alternative fence product.
- Coordination with the City Project Manager.
- Coordination with other contractors, as needed.

Please see the plan sets, specifications, and price sheet for the breakdown of this work.

Notes:

- Contractor to provide all labor, materials, and equipment to construct the project as identified in the Construction Documents and Specifications.
- Per specification, City to inspect all fence layout and forms prior to pouring. Contractor to provide 48 hr notification to City project manager.
- Site access will be from the North, off of Pikes Peak Avenue.

Period of Performance: May 1, 2023 – September 30th, 2023 (5 months)

Although the period of performance is listed above, the selected fence contractor must work with the City Project Manager upfront on a broader project schedule and complete work this summer based on that schedule. The City Project Manager will work with all selected project contractors to finalize the overall construction schedule.

The Downtown dog park is the last project to be accomplished from the Downtown Historic Park 2b TABOR project list. This project has public and stakeholder visibility and is a priority to get under contract and completed.

Submittal List Overview

Fence Work

Below is a list of anticipated submittals to be made by the hired contractor to the Project Manager, for approval prior to work being performed. Please refer to the Plans and Specification for a complete list of submittal and approvals necessary.

Pre-Installation Conference:

Schedule

Site Control, Storage and Access Plan

Prior to installation:

Concrete: See the full 02751 Cement Concrete Pavement Specifications

(Examples: 1.4 Submittals, 1.5 Quality Assurance Preinstallation Conference, testing and mockups, 3.12 Field Quality Control - testing)

Fence & Gate Submittal

SCHEDULE C.3 – STATEMENT OF WORK – TURF

ANTLER’S PARK DOG PARK

Synthetic Turf

The City of Colorado Springs Parks, Recreation and Cultural Services (PRCS Department) seeks one or more experienced contractors to prepare and install a new dog park within the existing historic Antler’s Park in Downtown, an area of approximately (.41 ac/18,000 sf) located at: 5 S Sierra Madre Street, Colorado Springs, CO 80903 (SE Corner of Sierra Madre Street and W. Pikes Peak Ave). This dog park project overall is designed to work with the existing grade, walks and trees onsite, remove existing turf, add new synthetic turf, fence, varying surfaces, a small scope of landscape and irrigation, dog park components, site furniture, and a small water station.

This project has three separate Price Sheets for three components of the Antler’s Dog Park; the three components are 1) Dog Park Construction, 2) Fencing and 3) Turf. Contractors are welcome to submit a proposal and pricing for one, two or all three components of the dog park. Identify all sub-contractors in your proposal.

This **SYNTHETIC TURF component** has its own plan set, with specifications and a Schedule of Values. Below is an overview of what is included:

- Preparation and installation of new synthetic turf with pad.
- Subgrade will be prepared during another component.
- Order and delivery of materials.
- Coordination with the City Project Manager.
- Coordination with other contractors, as needed.

Please see the plan sets, specifications, and price sheet for the breakdown of this work.

Notes:

- Contractor to provide all labor, materials and equipment to construct the project as identified in the Construction Documents and Specifications.
- City responsible for concrete testing and compaction tests where applicable.
- Per specification, City to inspect all forms prior to pouring. Contractor to provide 48 hr notification to City project manager.
- Site access will be from the North, off of Pikes Peak Avenue.

Period of Performance: May 1, 2023 – September 30th, 2023 (5 months)

Although the period of performance is listed above, the selected turf contractor must work with the City Project Manager upfront on a broader project schedule and complete work this summer based on that schedule. The City Project Manager will work with all selected project contractors to finalize the overall construction schedule.

The Downtown dog park is the last project to be accomplished from the Downtown Historic Park 2b TABOR project list. This project has public and stakeholder visibility and is a priority to get under contract and completed.

Submittal List Overview**Synthetic Turf**

Below is a list of anticipated submittals to be made by the hired contractor to the Project Manager, for approval prior to work being performed. Please refer to the Plans and Specification for a complete list of submittal and approvals necessary.

Pre-Installation Conference:

Schedule

Site Control, Storage and Access Plan

Prior to installation:

Artificial Turf (underlayment, turf product, attachment details and materials and adhesive materials)

SCHEDULE D – CONSTRUCTION SPECIFICATIONS FOR ANTLERS PARK DOG PARK

Dog Park Construction work the following specifications apply: Site Clearing (02230), Earthwork (02300), Tree Protection (02331), Cement Concrete Pavement (02751), Irrigation (02810), Exterior Plants (02930)

Fencing work the following specifications apply: Cement Concrete Pavement (02751)

Turf none of the specifications from this section apply

(Starts on Next Page)

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 $\frac{3}{4}$ 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. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

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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.

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- 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 (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 is 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 indicated:

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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)

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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.

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- 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 without 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 $\frac{3}{4}$ 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 $\frac{3}{4}$ 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.
 - 2. Drainage fabric.
 - 3. Separation fabric.
- 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.
 - 6. 12-by-12-inch sample of separation 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.

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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 3/4 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.

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- 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:
 - 1. Red: Electric.
 - 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
 - 4. Water Flow Rate: 135 gpm per sq. ft.; ASTM D 4491.
 - 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.
 - 3. Puncture Resistance: 90 lbf; ASTM D 4833.
 - 4. Water Flow Rate: 4 gpm per sq. ft.; ASTM D 4491.
 - 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

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- 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, and 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.

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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 from 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.

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- 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, dampproofing, 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 sheepfoot 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.

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- 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 from irregular surface changes. The degree of finish shall be that ordinarily obtainable from 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 1/2 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.

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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.

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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 sq. 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.

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- 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

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 care 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."

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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 3/4-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.

3.2 EXCAVATION

- 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

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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)

02751 – CEMENT CONCRETE PAVEMENT (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 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 9ASTM C-150) and specifications for air-entrained Portland Cement (ASTM C-175 or C-595) and shall be Type IIA (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 alkalis 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.
 - 6. Applied finish materials.
 - 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.

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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, curved or wood forms of the proper radii shall be used for

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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.
- B. Deformed-Steel Welded Wire Fabric: ASTM A 497, flat sheet.
- C. Epoxy-Coated Welded Wire Fabric: ASTM A 884/A 884M, Class A, plain steel.
- D. Reinforcement Bars: ASTM A 615/A 615M, Grade 60, deformed.
- E. Epoxy-Coated Reinforcement Bars: ASTM A 775/A 775M; 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.
- H. Epoxy-Coated Wire: ASTM A 884/A 884M, Class A coated, plain steel.
- 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, use 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

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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:

| Sieve Size or Test Procedure | Percent Passing or Test Requirement *(Concrete Sand) |
|-------------------------------------|---|
| 3/8" | 100 |
| No. 4 | 95-00 |
| No. 8 | 80-00 |
| No. 16 | 50-85 |
| No. 30 | 25-60 |
| No. 50 | 5-30 |
| No. 100 | 0-10 |
| No. 200 | **0-3 |

**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 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.

| Sieve size or Test Procedure | Percent Passing or Test Requirement |
|-------------------------------------|--|
|-------------------------------------|--|

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| | No. 357 | No. 467 | No. 57 |
|---------|----------|----------|----------|
| 2 1/2" | 100 | --- | --- |
| 2" | 95-100 | 100 | --- |
| 1 1/2" | --- | 95-100 | 100 |
| 1" | 35-70 | --- | 95-100 |
| 3/4" | --- | 35-70 | --- |
| 1/2" | 10-30 | --- | 25-60 |
| 3/8" | --- | 10-30 | --- |
| No. 4 | 0-5 | 0-5 | 0-10 |
| No. 8 | --- | --- | 0-5 |
| No. 200 | *1.0 MAX | *1.0 MAX | *1.0 MAX |

*1.5 MAX for crusher fines

NOTE: Size No. 67 may also be used on a case-by-case basis when approved by the Owner's Representative. The above values are in percentages by weight from AASHTO M-80 No. 357 and 467. Other gradations may be used when specified by the Owner's Representative.

- F. Concrete Strength. Concrete made from the coarse aggregate, graded to comply with the requirements of these specifications, combined with the specified proportions of cement and the fine aggregate proposed for use with the coarse aggregate shall develop a compressive strength at the age of 28 days of not less than 4000 psi.
- G. Water. Water used in concrete shall be potable, clean, and free from deleterious amounts of acids, alkalis, or any organic materials.
- H. Exposed Aggregate. Selected, hard, and durable; washed; free of material that reacts with cementitious material or causes staining; from a single source, with gap graded coarse aggregate as follows:
 - 1. Aggregate Sizes: 3/4 to 1 inch nominal.
 - 2. Aggregate Sizes: 1/2 to 3/4 inch nominal.
 - 3. Aggregate Sizes: 3/8 to 5/8 inch nominal.

2.4 ADMIIXTURES

- 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.
- B. Air-Entraining Admixture: ASTM C260.
- 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.
- 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 payment, 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:
- D. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Fibrillated Fibers:
 - a. Fibrasol F; Axim Concrete Technologies.
 - b. Fibermesh; Fibermesh, Div. Of Synthetic Technologies.
 - c. Forta; Forta Corporation.

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- d. Grace Fibers: W.R. Grace & Co., Construction Products Div.
- 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.
 - d. Grace MicroFiber; W.R. Grace & Co., Construction Products Div.
 - 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, Type2, Class B.

2.7 RELATED MATERIALS

- A. Expansion- and Isolation-Joint Filler Strips: ASTM D 1751, asphalt-saturated cellulose fiber.
- 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.
 - 2. Color: Match Architect's sample.
 - 3. Color: As selected by Architect from manufacturer's full range.
- C. Pavement-Marking Paint: Latex, water-base emulsion; ready mixed; complying with FS TT-P-1952.
 - 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-Resistive 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.
 - 3. Slump Limit: 4 inches.
- 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..

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- 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 | Maximum Water/Cement Ratio by Weight 0.45 |
| Minimum Cement Content per Cubic Yard of Concrete 564 lbs. | |

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. One 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.

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- B. Remove loose material from compacted 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.

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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 a 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 +/- crusher 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.

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- 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.

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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 manufacture'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
 2. Thickness: Plus 3/8 inch minus 1/4 inch.
 3. Surface: Gap below 10-foot-long, unlevelled straightedge not to exceed 1/4 inch.

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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.
9. Contraction Joint Dept: Plus 1/4 inch, no minus.
10. Joint Width: Plus 1/8 inch, no minus.

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.

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- 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)

02810 – IRRIGATION SYSTEMS (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 piping, valves, sprinklers, specialties, controls, and wiring for automatic-control irrigation system.
- B. Related Sections include the following:
- C. The work shall consist of installing a new underground irrigation system. Included as part of this contract will be provision and installation of all labor, equipment, tools and materials necessary for the construction of the irrigation system per specifications and drawings, including any miscellaneous incidental material required to result in a complete and operable system.
 - 1. Tap fees are the responsibility of this installer.
 - 2. Water development charges and water facility distribution charges are not within the scope of work, and will be paid by the Parks and Recreation Department.
 - 3. Installation of electric pedestal, electric meter and extension of secondary power in order to serve Controller is the responsibility of the Contractor. Owner's Representative will initiate meter service.
- D. Work under this section to include provision of all labor, material, permits, and services needed to complete the underground sprinkler system in accordance with the Drawings, General Notes, and Specifications.
 - 1. Provision and installation of incidental equipment of the wet tap and point of connection as required on the Drawings, including a meter pit per City of Colorado Springs Specifications.
 - 2. Provision and installation of subsurface sleeves as required on the irrigation Drawings.
 - 3. Boring beneath existing pavements, which are not to be cut.
 - 4. Saw cutting existing pavements and pavement restoration.
 - 5. Provision and installation of miscellaneous incidental equipment which may not be indicated on drawings but which are required to result in a complete and operable system.
 - 6. Irrigation lines shown on the drawings are diagrammatic. The Contractor shall establish locations of all sprinkler heads, valves, piping, wiring, etc. at the time of construction. Spacing of the sprinkler heads or quick-coupling valves are shown on the drawings and shall not be altered in any manner without the permission of the Owner's Representative.
 - 7. Preparation and provisions of professionally drafted reproducible Mylar full scale as-built Drawings.

1.3 DEFINITIONS

- A. Circuit Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow.
- B. Drain Piping: Downstream from circuit-piping drain valves. Piping is not under pressure.
- C. Irrigation Main Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under regulated distribution.
- D. The following are industry abbreviations for plastic materials:
 - 1. ABS: Acrylonitrile-butadiene-styrene plastic.
 - 2. FRP: Fiberglass-reinforced plastic.
 - 3. PA: Polyamide (nylon) plastic.
 - 4. PE: Polyethylene plastic.
 - 5. PP: Polypropylene plastic.
 - 6. PTFE: Polytetrafluoroethylene plastic.
 - 7. PVC: Polyvinyl chloride plastic.
 - 8. TFE: Tetrafluoroethylene plastic.

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1.4 PERFORMANCE REQUIREMENTS

- A. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. 100 percent water coverage must be maintained in areas where indicated.
- B. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties, unless otherwise indicated:
 - 1. Irrigation Main Piping: 200 psig
 - 2. Circuit Piping: 200 psig
 - 3. Drain Piping: 200 psig
- C. Field Verification: All sprinkler heads, control valve locations, and pipeline locations are to be flagged prior to commencing excavation.
- D. The services of a professional engineer may be retained at the irrigation contractor's expense to assist in accurate field dimensioning and precise location of sprinkler heads proposed or installation per the Drawings.
- E. Minor relocation of equipment, which facilitates the installation, may be made with Owner's approval. Changes shall be made and documented on as-built Drawings.
- F. Parallel piping shall not be combined in common trenches.
- G. Sprinkler heads, which are adjacent to curbing and pavement, are to be installed no closer than one inch and not further than four inches away from curbing/pavement to accommodate turf-trimming operations.

1.5 SUBMITTALS

- A. Product Data: Include pressure ratings, rated capacities, and settings of selected models for the following:
 - 1. Water regulators.
 - 2. Water hammer arresters.
 - 3. General-duty valves.
 - 4. Specialty valves.
 - 5. Control-valve boxes.
 - 6. Sprinklers.
 - 7. Irrigation specialties.
 - 8. Controllers. Include wiring diagrams.
 - 9. Control cables. Include splice kits and conduit.
- B. Shop Drawings: Shop Drawings which clearly indicate changes proposed by the installer to pipe routing, sprinkler head placement, valve placement, zone sequencing, etc., which improve operation and serviceability of the system may be provided. The Owner's Representative must approve any deviations in layout prior to construction.
- C. Other submittals shall be made in accordance with the contract documents and Requirements at Substantial Completion under this Section.
- D. Field quality-control test reports.
- E. Operation and Maintenance Data: For irrigation systems, to include in operation and maintenance manuals. In addition to items specified in Division 1 Section "Closeout Procedures Operation and Maintenance Data," include data for the following:
 - 1. Automatic-control valves.
 - 2. Sprinklers.
 - 3. Controllers.

1.6 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with the following codes, ordinances, regulations, and standards in effect at time of installation:
 - 1. American Society for Testing and Materials (ASTM).

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2. National Plumbing Code (NPC).
 3. Federal Specifications (FS).
 4. Plastic Pipe Institute (PPI).
 5. National Electric Code (NEC).
 6. National Sanitation Code (NEC).
 7. All State and Local codes for cross connection of potable water systems.
 8. All cut-sheets, catalogs, and published data of the manufacturers whose equipment is scheduled for use under this contract.
- C. Failure to be familiar with any requirement shall not preclude installer's responsibility to abide by them.
- D. In the event of a conflict between requirements, the most stringent requirement will prevail in any case.
- E. Qualified personnel who have successfully completed comparable projects previously, and who are knowledgeable and familiar with irrigation system hydraulics shall perform all work under this Section.
- F. On-site personnel shall be capable of determining feasibility of proposed installations (with regard to hydraulics). Failure to be familiar with hydraulic feasibility will not preclude installer's responsibility of accidental or deliberate installation of incompatible equipment, pipe sizes, etc., which do not permit operation of system as intended by design.
- G. The installer shall field verify static pressure at the point of connection and determine its suitability prior to commencing any work downstream of the backflow preventer.
- H. Failure to test and verify adequate static pressure prior to constructing the sprinkler system shall not relieve the installer to provide the adequate operating pressure to provide coverage as intended by design.
- I. It is the installer's responsibility to report inadequate static pressure to the Owner's Representative and to correct the problem prior to commencing work downstream of the point of connection.
- J. All material for use under this Section to be new and previously unused.
- K. The installer shall be responsible for measuring and verifying accuracy of field dimensions versus drawing dimensions. All discrepancies shall be reported to the Owner's Representative and resolved prior to commencing work.
- L. Conflicts and/or discrepancies, which are not fully resolved by the installer prior to commencing work under this Section, shall be resolved in favor of the Owner after commencement of work.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic piping protected from direct sunlight. Support the pipe to prevent sagging and bNo PVC piping shall be stored on job site for longer than 90 days.

1.8 PROJECT CONDITIONS

- A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
- B. Notify Owner's Representative no fewer than two days in advance of proposed interruption of water service. Do not proceed with interruption of water service without Owner's Representative written permission.
- C. The installer shall be completely familiar with all job site conditions, which may affect the work prior to commencing any work under this Section.
- D. No work shall commence until unsatisfactory job site conditions have been brought to the Owner's Representative's attention or otherwise totally resolved.
- E. Should the installer fail to resolve job site conditions, which may negatively affect the work under this Section, he shall assume responsibility for subsequent additional work and costs to resolve unsatisfactory job site conditions.

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- F. Prior to commencing any work under this Section, it will be this installer's responsibility for scheduling and coordinating the locations of all existing utilities on the job site which may affect the work.
- G. All known existing utilities shall be clearly indicated on field drawings, and shall be flagged or otherwise marked on the job site.
- H. Failure to locate existing utilities and provide adequate protection to them during the work shall not preclude responsibility for subsequent damage.
- I. Costs for repair to existing utilities because of failure to properly locate and protect utilities shall be this installer's responsibility. "Utility" shall include but may not be limited to gas, electric, sewer and water, telephone, cablevision lines and sprinkler lines.

1.9 COORDINATION

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements as specified in Section 02751 Cement Concrete Pavement.

1.10 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents. A minimum of (6), irrigation heads or 2% of amount installed.
 - 1. Spare sprinkler head bodies and nozzles of each type installed.
 - 2. Two spare valve keys for drain valves installed.
 - 3. Two spare quick coupling valve keys suitable for use with valves installed.
 - 4. Two spare swivel hose bibs suitable for use with quick coupling valves installed.
 - 5. Two spare locking valve cap keys.
- B. All spare equipment to be new and unused.
- C. All Spare equipment to be provided in a new, sealed cardboard plan tube clearly labeled with the job name and "Spare Irrigation Equipment". Valve keys may be securely taped to the outside of box.
- D. Mylar as-built drawing to be provided in a new sealed cardboard plan tube clearly labeled with the job name "Irrigation System As-Built".
- E. Provision of required spare equipment and closet material in format specified above is to occur at inspection for Substantial Completion.
- F. Failure to provide spare equipment and closet material in the format and at the time required will result in delay of Final Acceptance of all work provided and installed under this Section.
 - 1. Sprinkler Units: Equal to A minimum of (6), or 2% of amount installed for each type and size indicated, which ever is greater.
 - 2. Emitter Units: Equal to A minimum of (6), or 2% of amount installed for each type and size indicated, which ever is greater.
 - 3. Drip Tube Units: Equal to A minimum of (6), or 2% of amount installed for each type and size indicated, which ever is greater.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

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2.2 PIPES, TUBES, AND FITTINGS

- A. Refer to Part 3 "Piping Applications" Article for applications of pipe, fitting, and joining materials.
- B. Steel Pipe: ASTM A 53/A 53M, Schedule 40, Type S or E, Grade A or B, galvanized with threaded ends
 - 1. Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, galvanized, seamless steel pipe with threaded ends.
 - 2. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface and female threaded ends.
 - 3. Gray-Iron Threaded Fittings: ASME B16.4, Class 125, galvanized, standard pattern.
 - 4. Cast-Iron Flanges: ASME B16.1, Class 125.
 - 5. Cast-Iron Flanged Fittings: ASME B16.1, Class 125 galvanized.
- C. Mechanical-Joint, Ductile-Iron Pipe: AWWA C151, with mechanical-joint, bell-and plain-spigot end.
 - 1. Mechanical-Joint, Ductile-Iron Fittings: AWWA C110, ductile- or gray-iron standard pattern or AWWA C153, ductile-iron compact pattern.
 - a. Glands, Gaskets, and Bolts: AWWA C111, ductile-or gray-iron glands, rubber gaskets, and steel bolts.
- D. Push-on-Joint, Ductile-Iron Pipe: AWWA C151, with push-on-joint, bell- and plain-spigot end.
 - 1. Push-on-Joint, Ductile-Iron Fittings: AWWA C110, ductile- or gray-iron standard pattern or AWWA C153, ductile-iron compact pattern.
 - a. Gaskets: AWWA C111, rubber.
- E. Soft Copper Tube: ASTM B 88, Type K, water tube, annealed temper.
 - 1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings unless otherwise indicated.
 - 2. Bronze Flanges: ASME B16.24, Class 150, with solder-joint end.
 - 3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces and solder-joint or threaded ends.
- F. Hard Copper Tube: STM B 88, Type L.
 - 1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings unless otherwise indicated.
 - 2. Bronze Flanges: ASME B16.24, Class 150, with solder-joint end.
 - 3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces and solder-joint or threaded ends
- G. PVC Pipe: ASTM D 1785, PVC 1120 compound, Schedule 40.
 - 1. PVC Socket Fittings, Schedule 40: ASTM D 2466.
- H. PVC Pipe: ASTM D 1785, PVC 1120 compound, Schedule 80.
 - 1. PVC Socket Fittings: Schedule 80.
 - 2. PVC Threaded Fittings: ASTM D2464.
- I. PVC, Pressure-Rated Pipe: ASTM D 2241, PVC 1120 compound, SDR 21.
 - 1. PVC Socket Fittings: Schedule 40
- J. PE, Controlled OD Pipe: ASTM F 771 and ASTM D 3035 PE 3408 compound, DR 9 and DR 11.
 - 1. PE Socket Fittings: ASTM D 2683.
 - 2. PE Butt-Fusion Fittings: ASTM D3261
- K. PE, Controlled Pipe: ASTM F 771 and ASTM D 3035, PE 3408 compound, DR 9 and DR 11.
 - 1. Insert Fittings for PE Pipe: ASTM D 2609, PA or PP. Include bands or other fasteners.
- L. Transition Fittings: Basic Materials and Methods for transition fittings.
- M. Dielectric Fittings: Basic Materials and Methods for dielectric fittings.
- N. Furnish all equipment to complete the sprinkler system per the Drawings and Specification
- O. Acceptable manufacturers, including alternates, as per the Drawings.
- P. Piping:
 - 1. All PVC piping for all mainlines and lateral lines shall be of the size and classification stated on Drawings.
 - a. All piping shall be new and NSF approved.

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2. All mainline PVC pipefittings shall be NSF approved Schedule 40. Unless otherwise indicated on the drawings.
 - a. BOE PVC Class 200 mainline pipe shall meet ASTM requirements 3" and larger mainline pipe to be ring-tite gasketed pipe.
 - b. BOE PVC Class 200 lateral pipelines shall meet ASTM requirements.
 - c. Solvent weld for PVC pipe shall meet ASTM requirements. Cement to be fast set or very fast set.
 - d. Teflon based pipe sealant shall be used on all threaded joints.
 - e. Pipe shall be homogeneous throughout, free from imperfections, cracks, or holes.
 - f. Pipe must be continuously and permanently marked with manufacturer's name or trademark, kind and size (IPS) of pipe, material, and manufacturer's lot number, schedule of type and NSF seal of approval.
 3. Unless otherwise indicated on the Drawings, all sprinkler heads shall be installed on polyethylene swing riser pipe with spiral barb elbows or swing joints as required per the Drawings.
 4. Copper pipe and fittings to be wrought and fastened with silver solder.
- Q. PVC sleeves to be Class 200 BOE of the size and length indicated on the Drawings. Low voltage wiring shall be run in separate sleeve from mainline or lateral sleeve. All hard surfaces, that have sleeves under them, shall be stamped with an "S" into the surface on each end of where the sleeve protrudes.
1. Cast iron sleeves as called for shall be Class 125 of the size and length indicated on the Drawings.

2.3 CORROSION-PROTECTION ENCASEMENT FOR PIPING

- A. Encasement for Underground Metal Piping: ASTM A 674 or AWWA C105, PE film, 0.008-inch minimum thickness, tube or sheet.

2.4 GENERAL-DUTY VALVES

- A. AWWA, Cast-Iron Gate Valves: AWWA C509, resilient-seated nonrising-stem, gray-or ductile-iron body and bonnet gate valve; with bronze and stem nut.
1. Minimum Working Pressure: 200 psig.
 2. End Connections: Mechanical joint.
 3. Interior Coating: Complying with AWWA C550.
- B. Valve Boxes: Comply with AWWA M44 for cast-iron valve boxes. Include top section, adjustable extension of length required for depth of burial of valve, plug with lettering "WATER," Bottom section with Base of size to fit over valve, and approximately 5-inch-diameter barrel.
1. Operating Wrenches: Furnish total of one steel, tee-handle operating wrench with one pointed end, stem of length to operate deepest buried valve, and socket matching valve operating nut.
- C. MSS, Cast-Iron, Nonrising Stem Gate Valves: MSS SP-70, Type I, Class 125, with solid wedge and flanged ends. Include all bronze trim, cast-iron body, and hand wheel.
- D. Curb Valves: AWWA C800. As indicated on drawings.
- E. Service Boxes for Curb Valves: Similar to AWWA M44 requirements for cast-iron valve boxes. Include cast-iron telescoping top section of length required for depth of burial of valve, plug with lettering "WATER," bottom section with base of size to fit over curb valve.
1. Shutoff Rods: Furnish total of one steel, tee-handle shutoff rod(s) with one pointed end, stem of length to operate deepest buried valve, and slotted end matching curb valve.
- F. Copper-Alloy Ball Valves: As indicated on drawings.
- G. Bronze Gates Valves: As indicated on drawings.
- H. Bronze Globe Valves: As indicated on drawings.
- I. PVC Ball Valves: As indicated on drawings.
1. Material Option: MSS SP-122, of plastic other than PVC and suitable for potable water. Include threaded ends and pressure rating not less than 150 psig, unless otherwise indicated.

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2.5 SPECIALTY VALVES

- A. Electric control valves shall be of the type, size and manufacturer indicated on the Drawings.
- B. Unless otherwise indicated on the Drawings, all control valves shall be installed in a globe configuration.
- C. Automatic Drain Valves: As indicated on drawings.
- D. Quick-Couplers: Factory-fabricated, bronze or brass, one-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASE B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key or as indicated on drawings.

2.6 PIPING SPECIALTIES

- A. Water Regulators:
- B. Water Hammer Arresters: As indicated on drawings.
- C. Pressure Gages: As indicated on drawings.

2.7 SPRINKLERS

- A. Description: Brass or plastic housing and corrosion-resistant interior parts designed for uniform coverage over entire spray area indicated, at available water pressure.
 - 1. Flush, Surface Sprinklers: Fixed pattern, with screw-type flow adjustment.
 - 2. Bubblers: Fixed pattern, with screw-type flow adjustment.
 - 3. Shrubbery Sprinklers: Fixed pattern, with screw-type flow adjustment.
 - 4. Pop-up Spray Sprinklers: Fixed pattern, with screw-type flow adjustment and stainless-steel retraction spring.
 - 5. Pop-up Rotary Sprinklers: Gear drive, full-circle and adjustable part-circle types.
 - 6. Pop-up Rotary, Impact Sprinklers: Impact drive, full-circle and part-circle types.
 - 7. Aboveground, Rotary, Impact Sprinklers: Impact drive full-circle and part-circle types.
- B. Pop up Heads:
 - Sprinkler heads shall be of the type, size, and manufacturer indicated on the Drawings.
 - Nozzle types and arcs to be provided shall be as indicated on the Drawings to satisfy the coverage requirements intended by the design.
 - Sprinkler nozzles installed on any single zone shall have matched rates of precipitation.
- C. Gear Driven Heads:
 - All irrigation heads shall be of type, size and manufacturer as designated on drawings. All sprinklers to be installed shall be rubber-covered models, or the heads shall be capable of retracting below finished grade.

2.8 SPRINKLER SPECIALTIES

- A. Application Pressure Regulators: Brass or plastic housing, NPS 3/4, with corrosion-resistant internal parts, and capable of controlling outlet pressure to approximately 20 psig.
- B. Strainer/Filter Units: Brass or plastic housing, with corrosion-resistant internal parts, of size and capacity required for devices downstream from unit.
- C. Emitters: As indicated on drawings.
- D. Drip Tubes: As indicated on drawings.
- E. Other Equipment:
 - 1) Other equipment to be provided and installed, including but not limited to valves, gauges, pressure regulating valves needed to result in a complete and operable sprinkler system shall be provided and installed under this Section.
 - Installation of other equipment shall be as indicated on Drawings, and per manufacturer's recommendations.
 - Water meter pits that are used for irrigation systems will use a 30-300 psi. range clay-valve water regulator.
 - a. Clay-valve 90-016-2" threaded.

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- b. Clay-valve 90-016-3" 150# flange.
- c. Clay-valve 90-016-4" 150# flange.

2.9 AUTOMATIC-CONTROL SYSTEM

- A. As indicated on drawings.
- B. Exterior Control Enclosures: As indicated on drawings.
- C. Interior Control Enclosures: NEMA 250, Type 12, drip proof, with locking cover and two matching keys.
- D. Wiring: UL 493, Type UF-B multiconductor, with solid-copper conductors and insulated cable; suitable for direct burial.
 - 1. Feeder-Circuit Cables: No. 12 AWG minimum, between building and controllers.
 - 2. Splicing Materials: Manufacturer's packaged kit consisting of insulating, spring-type connector or crimped joint and epoxy resin moisture seal; suitable for direct burial.
- E. Concrete Base: As indicated on drawings.
- F. Automatic controllers shall be of the size, type, and manufacturer indicated in the drawings.
- G. Pedestal or cabinet for the controller shall be of the same manufacturer or as indicated in the drawings.
- H. PVC conduit of adequate size shall be installed under this Section to enclose all control wiring from controller to master control valve and mainline location.
- I. The installer shall provide at least three sets of controller cabinet keys to the Owner's Representative at the time of Final Acceptance
- J. Provide and install type UF 600 volt stranded or solid copper, single conductor wire with PVC insulation and bearing UL approval for direct underground burial.

2.10 Backflow Preventer:

- A. Backflow preventer to be the type, size and manufacturer indicated on the Drawings, and shall be reduced pressure type rated for high hazard application.
 - Provide and install concrete pad and protective enclosure for backflow preventer or as indicated on Drawings.
- B. The installer shall be responsible for coordinating and providing required point-of-connection, tap, meter pit, etc., as needed to complete all work under this Section.
 - Permits, tap fees, and all related fees associated with cross connection needed to complete work under this Section are the installer's responsibility.
 - It is the installer's responsibility to schedule and perform backflow preventer tests that may be required as per local codes. Fees associated with any tests are the installer's responsibility.

PART 3 – EXECUTION

3.1 EARTHWORK

- A. Refer to Division 2 Section "Earthwork" for excavating, trenching, and backfilling.
- B. Install piping and wiring in sleeves under sidewalks, roadways, parking lots, and railroads as indicated on drawings.
 - 1. Install piping sleeves by boring or jacking under existing paving if possible.
- C. Provide minimum cover over top of underground piping according to the following:
 - 1. Irrigation Main Piping: Minimum depth of 24 inches below finished grade.
 - 2. Lateral Piping: **12 inches**.
 - 3. Drain Piping: **12 inches**
 - 4. Sleeves: **24 inches for main line and 12 inches for laterals**
 - 5. As indicated on drawings.
- D. Clean cuts shall be made on all severed tree roots greater than 2-inch diameter. If excavation is within drip line of a public tree, City Forestry and Owner's Representative shall be contacted whenever a tree root greater than 2" is encountered under drip line, work is not proceed until City

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Forester has made a recommendation. Trenches located within five feet of existing tree trunks are to be hand dug. Auguring may be required.

- E. This installer shall provide all necessary excavation required for proper installation of work under this Section.
- F. Mechanical trenchers used for excavation shall be capable of digging smooth, flat bottom trenches regardless of slope conditions.
- G. Sumps for manual drains and control valves shall be over-excavated to facilitate valve installation as shown on drawings.
- H. Sleeves crossing beneath roadways shall be installed to the depth of not less than twenty-four inches below finish grade from top of pipe.
- I. Concrete curbs above sleeve locations shall be painted or stamped with an "S" to permanently locate sleeve location on existing curbs.
- J. Mainline and lateral pipelines shall not be installed in common sleeves. Control wiring must be installed in a separate sleeve.
- K. Generally, piping under existing concrete or asphalt shall be installed by jacking, boring or hydraulic driving. Where any cutting or break of concrete or asphalt is necessary, it shall be removed and replaced by the Contractor. Permission to cut or break paved areas shall be obtained from the Owner's Representative.
- L. Trenches for irrigation lines shall be excavated of sufficient depth and width to permit proper handling and installation of the pipe and fittings, or the piping may be installed by trenchless technique, if approved by the Owner. The backfill shall be thoroughly compacted, and evened off with the adjacent soil level. Approved fill dirt or sand shall be used if soil condition is determined rocky by Owner's Representative. In rocky areas, the trenching depth shall be two inches (2") below normal trench depth to allow for this bedding. The fill dirt or sand shall be used in filling four inches (4") above the pipe. The remainder of the backfills shall contain no lumps or rocks larger than three inches (3"). The top six inches (6") of backfill shall be free of rocks larger than one (1"), and free from subsoil or trash. All trenches that are opened during any particular working day shall be backfilled the same day.
- M. In the event the installer is required to re-route pipe, relocate sprinkler heads, or deviate in any way from the Drawing as a result of encountering consolidated rock or debris, and additional material/labor is required to complete installation, the Owner Representative may issue a change order for additional material and labor costs.
- N. Consolidated material shall be defined as any obstruction occurring in an area normally scheduled to be excavated which runs ten feet or longer in any trench, or is greater than twenty-five square feet in area, both at depths less than thirty inches for irrigation pipelines.
- O. The installer shall provide a unit cost per linear foot for excavation through consolidated material in his bid to be used in determining change order value.
- P. Additional costs for excavating previously known consolidated material shall be the installer's responsibility.
- Q. Provide clean backfill soil free of clods and rocks greater than one inch in size, and debris that could puncture and damage pipelines and equipment installed under this Section.
- R. Clean sand may be provided and installed as bedding material beneath pipelines to facilitate installation.
- S. Backfilling to be done when pipelines are cool to avoid excessive contraction.
- T. Frozen or saturated soil is not to be used as backfill at any time.
- U. Open trenches and other excavations are to be backfilled with suitable material and compacted to not less than eighty five percent density modified in six inch lifts.
- V. Compaction shall only be done with a vibratory plate, jumping jack or trench flooding.
- W. After compaction, backfill shall be precisely flush with surrounding finish grades.
- X. The installer is responsible for the repair to damaged equipment, finish grades, undermined pavements, sod, mulches and underlayments, etc., from settling of one inch or more in any trench or excavation as a result of work under this Section for a period of not less than two years from date of Final Acceptance.

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3.2 PREPARATION

- A. Set stakes to identify locations of proposed irrigation system. Obtain Owner's Representative's approval before excavation.

3.3 PIPING APPLICATIONS

- A. Install components having pressure rating equal to or greater than system operating pressure.
- B. Piping in control-valve boxes and above ground may be joined with flanges instead of joints indicated.
- C. Underground Irrigation Main Piping: As indicated on drawings.
- D. Lateral Piping: As indicated on drawings.
- E. Underground Branches and Offsets at Sprinklers and Devices: Schedule 40, PVC pipe; threaded PVC fittings; and threaded joints.
 - 1. Option: Plastic piping manufactured for this application may be used instead of pipe and fittings specified.
- F. Drain Piping: As indicated on drawings.
- G. Sleeves: Class 200, PVC pipe and socket fittings; and solvent-cemented joints.
- H. Transition Fittings: Use transition fittings for plastic-to-metal pipe connections according to the following:
 - 1. Couplings:
 - a. Underground Piping NPS 1-1/2 and Smaller: Manufactured fitting or coupling.
 - b. Underground Piping NPS 2 and Larger: AWWA transition coupling.
 - 2. Fittings: Underground Piping: Union with plastic end of same material as plastic piping.
 - 3. Transition fittings are specified in "Basic Materials and Methods."
- I. Dielectric Fittings: Use dielectric fittings for dissimilar-metal pipe connections according to the following:
 - 1. Underground Piping:
 - a. NPS 2 and Smaller: Dielectric couplings or dielectric nipples.
 - b. NPS 2-1/2 and Larger: Prohibited except in valve box.
 - 2. Piping in Valve Boxes or Vaults:
 - a. NPS 2 and Smaller: Dielectric unions.
 - b. NPS 2-1/2 to NPS 4 Dielectric flanges.
 - 3. Dielectric fittings are specified in "Basic Materials and Methods".

3.4 VALVE APPLICATIONS

- A. Underground, Shutoff-Duty Valves: Use the following:
 - 1. NPS 2 and Smaller: Curb stop with tee head, curb-stop service box, and shutoff rod.
 - 2. NPS 3 and Larger: AWWA cast-iron gate valve with elastomeric gaskets and stem nut, valve box, and shutoff rod.
- B. Underground, Manual Control Valves: Bronze globe valve with control-valve box and valve key.
- C. Control Valves: As indicated on drawings.
- D. Drain Valves: As indicated on drawings.

3.5 PIPING INSTALLATION

- A. Location and Arrangement: Drawings indicate location and arrangement of piping systems. Install piping as indicated unless deviations are approved by Owner's Representative.
- B. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.
- C. Install piping free of sags and bends.
- D. Install groups of pipes parallel to each other, spaced a minimum of 6 inches to permit valve servicing.
- E. Install fittings for changes in direction and branch connections.
- F. Install dielectric fittings to connect piping of dissimilar metals.
- G. Lay piping on solid subbase, uniformly sloped without humps or depressions.
- H. Install ductile-iron piping according to AWWA C600.

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- I. Install PVC piping in dry weather when temperature is above 40 degree F 5 degree C. Allow joints to cure at least 24 hours at temperatures above 40 degrees F 5 degree C before testing unless otherwise recommended by manufacturer.
- J. All installations are to be made in full accordance with the Drawings. Specifications, Local Codes and Ordinances, etc., with the most stringent requirement prevailing at all times in the event of conflict.
- K. Generally, no deviations from the layout of pipelines, sprinkler heads, control valves, point of connection, controller locations, or other scheduled installations will be considered or accepted by the Owner's Representative from that indicated on the Drawings.
- L. The irrigation installer is not authorized to make minor field adjustments in layout to facilitate minor changes in site layout without prior approval from Owner's Representative.
- M. No direct contact between any equipment installed under this Section and other utilities or structures is permitted.
- N. Open pipe ends are to be taped or plugged closed at all times to keep out dirt and debris during installation.
- O. All pipes are to be flushed with clean water to remove all dirt and debris prior to installing sprinkler heads.

3.6 VALVE INSTALLATION

- A. Underground Gate Valves: Install in valve box that is flush with grade.
- B. Underground Curb Stops: Install in service box with top flush with grade.
- C. Underground, Manual Control Valves: Install in manual control-valve box.
- D. All electrical control valves, gate valves, and wire connections are to be housed in control valve boxes with lock-bolt-equipped covers equal to Ametek 10-170-001 and 10-173-134 or Carson 1419E.
 - Valve boxes shall be adequately sized to allow clearance around all valves for servicing and removal without excavation of box, and shall not bear on valve or system pipes.
 - Valve boxes and covers shall be green or black in color and purple for non-potable systems. Valve coverlid shall be etched with the corresponding valve number, controller zone, and stamped "Irrigation Control Valve".
 - Valves shall have a brass tag labeled with etched corresponding controller zone number, as recorded on the as-built Drawings.
- E. Drain Valves: Install in control valve box.
- F. Electric control valves are to be connected to mainline per the Drawing detail allowing clearance for servicing valve in valve box.
- G. Control valves are to be adjusted for optimum flow to provide coverage as intended by design.
- H. Quick coupling valves to be installed on PVC swing joint riser assemblies, and are to be installed plumb and one inch above adjacent finish grade or bed mulch.
- I. Quick coupling valves and boxes shown next to a control valve on the drawings shall not be installed in same control valve box as control valve. Quick Coupling will be installed in a 6" or 10" round box next to the control valve. As shown on drawings.
- J. Control valves and boxes to be installed above aggregate drainage sumps not less than two cubic feet in size.
 - Aggregate to be separated from soil with filter fabric equal to Mirafi or Trevira.
 - Aggregate sumps to be constructed prior to installation of control valve and box; do not attempt to fill valve boxes with aggregate.
 - Valve box interiors to be completely free of standing water, mud, or other debris at all times.
- K. Provide and install manufactured valve box extensions as needed to result in box cover being precisely one inch above adjacent finish grades, or flush with top of mulches.

3.7 SPRINKLER INSTALLATION/ALTERNATE EQUIPMENT

- A. Flush circuit piping with full head of water and install sprinklers after hydrostatic test is completed.
- B. Install sprinklers at manufacturer's recommended heights.

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- C. Locate part-circle sprinklers to maintain a distance of 6 inches from walls and 2 inches from other boundaries, unless otherwise indicated.
- D. Generally, only the equipment appearing on the Drawings will be considered or accepted for installation. The Owner may approve alternate manufacturers for certain equipment.
- E. Install water regulators with shutoff valve and strainer on inlet and pressure gage on outlet. Install shutoff valve on outlet.
- F. Water Hammer Arresters: As indicated on drawings.
- G. Swing pipe risers to be installed and adjusted to result in all sprinkler heads being flush a plumb with finish grades prior to backfilling around heads.
- H. No sprinkler head is to be pulled into a plumb and flush position after installing backfill.
- I. Backflow preventer to be installed per the Drawings and in full accordance with applicable State and Local code for backflow prevention.
- J. Unless indicated otherwise on the Drawings, all backflow preventers shall be reduced pressure type for high hazard service, equal to the 825Y series manufactured by Febco Backflow Prevention Assemblies.
- K. Other equipment, miscellaneous products, fittings, etc., which are not specifically indicated on the Drawings but which are required to result in a complete and operable system are to be provided and installed under this Section within the base contract sum.

3.8 AUTOMATIC-CONTROL SYSTEM WIRING INSTALLATION

- A. Install control wiring in same trench as irrigation piping. Installer is responsible for sizing all wire in accordance with recognized practice, and shall clearly indicate changes in wire sizes on as-built Drawings. Install wiring in separate sleeve under paved areas if irrigation piping is installed in sleeve.
- B. All control wiring is to be installed in mainline trench when possible. All Main lines shall have a common white wire run with them.
- C. Wiring to be installed at a depth not less than twenty-four inches. Splices are to be made in valve boxes.
- D. No splices are to occur in any sleeve.
- E. Multiple wires in trenches are to be banded together at twenty foot intervals, and banded alongside all mainline piping with duct tape.
- F. Two yellow spare wires for system expansion shall be pulled to the end points of the mainline, labeled with indelible markings for corresponding controller zone, and installed in control valve boxes.
- G. All wire connections to be made with 6T Tan 20111 King wire connectors or approved equal. Wire connection and sealant to be made water-resistant. All splices to be made in a valve box.
- H. All wire splices and connections shall be left with sufficient "slack" so that the wire may be brought to the surface without disconnection.
- I. Installer shall furnish and install indelible wire markers at the end of each control wire and inside controller cabinet with corresponding controller zone number.

3.9 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.10 LABELING AND IDENTIFYING

- A. Equipment Nameplates and Signs: Install engraved plastic-laminate equipment nameplates and signs on each automatic controller.
- B. Operational requirements: Indicate safety and emergency precautions, and warn of hazards and improper operations.

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3.11 FIELD QUALITY CONTROL/TESTING AND INSPECTION

- A. Perform the following field tests and inspections and prepare test reports:
 - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Operational Test: After any electrical circuitry is energized, operate controllers and automatic control valves to confirm proper system operation.
- B. Remove and replace units and retest as specified above.
- C. After completion of all work under this Section, the installer shall activate the water source and pressurize the mainline to not less than 150 psi., or maximum available pressure if less than 150 psi.
- D. The mainline shall remain closed and pressurized for not less than twenty-four hours prior to preparation of the completed system.
- E. The installer shall request Owner's Representative to inspect point of connection, and all equipment installed on the mainline. Twenty-four hours notice must be given to Owner's Representative.
- F. Inspection at this time is mandatory and Owner's Representative upon successful completion of the pressure test will issue a certificate of approval.
- G. After all irrigation piping and risers are connected, and prior to installation of sprinkler heads, control valves shall be opened and a full head of water used to flush out the system. After the system is thoroughly flushed, risers shall be capped and the system pressure tested.
- H. At the conclusion of the pressure test, heads shall be installed and tested for operation in accordance with design requirements under normal operating pressure. Adjustments shall be made to eliminate back splash on any building, structures, or fences.
- I. After successful completion of the pressurized period and repair to any leaks, and when the system is operating at the pressure intended by design, the installer shall adjust and fine-tune all equipment for optimum performance and coverage as intended by design.
- J. When wind conditions are less than five mph, the installer shall adjust all sprinkler head nozzles to provide coverage to areas as intended by design. Over spray onto roadways shall be minimal.
- K. All sprinkler heads are to be fully adjusted to be plumb and flush prior to sodding, seeding, and mulching operations.
- L. The installer shall assume all liability for sod, seed, and mulch that is installed prior to adjustment, fine-tuning, and functional operation of the sprinkler system.
- M. The installer shall assume all liability for manually operating the sprinkler system and furnishing supplemental irrigation to sustain optimum condition of all landscaping should the system not be fully operable prior to installation of landscaping.
- N. After the installer has verified that all adjustments and fine-tuning have been adequately performed, the Owner's Representative shall be given two days notice that an inspection for Substantial Completion is requested.
- O. The entire installed system shall operate automatically via the controller through entire cycles prior to requesting an inspection.
- P. The Owner's Representative inspection for Substantial Completion shall include visually observing the operation of all work provide and installed under this Section.
- Q. Any installation, which does not comply entirely with any part of this Section, will be documented in a written punch list.
- R. All punch list items are to be corrected by the installer prior to re-inspection by Owner's Representative.
- S. Re-inspection for correction of punch list items for consideration of Final Acceptance will be made within five working days from date of Owner's Representative's first inspection and punch list
- T. The installer may be subject to liquidated damages as set forth in the City of Colorado Springs Standard Specifications for any additional inspections which must be made by Owner's Representative to verify complete correction of deficiencies subsequent to second inspection

3.12 STARTUP SERVICE

- A. Engage a service representative to perform startup service.

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- B. Verify that controllers are installed and connected according to the Contract Documents.
- C. Verify that electrical wiring installation complies with manufacturer's submittal and installation requirements.
- D. Complete startup checks according to manufacturer's written instructions.

3.13 ADJUSTING/WINTERIZATION AND START-UP

- A. Adjust settings of controllers.
- B. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.
- C. The installer is responsible for initial programming of controller to operating sequence of all zones shall be per the Drawings.
- D. Unless otherwise approved by the Owner's Representative, the operating sequence of all zones shall be per the Drawings.
- E. During and up until Final Acceptance, the installer is responsible for making any adjustments that may be required to equipment installed under this Section.
- F. It shall be the contractor's responsibility to shut down and winterize the completed irrigation system on a date to be agreed upon by the Parks and Recreation Department and the contractor.
- G. It shall be the contractor's responsibility to activate the irrigation in the spring after the first winter on a date agreed upon by the Parks and Recreation Department and the contractor. Contractor shall verify the correct functioning of the system and repair any leaks at this time.

3.14 CLEANING AND JOB SITE RESTORATION

- A. Flush dirt and debris from piping before installing sprinklers and other devices.
- B. Prior to Final Acceptance, all areas on the job site in which work under this Section has occurred will be thoroughly cleaned of dirt, unused material, and the installer's installation equipment.
- C. Work by other trades, which is damaged or destroyed because of work under this Section, shall be fully restored by this installer as a condition of Final Acceptance.
- D. Damage caused by water from the sprinkler system because of incorrect adjustment and controller programming is this installer's responsibility.
- E. Sod, trim edges, mulches, pavements, and other existing work which is damaged as a result of work under this Section is to be completely restored as a condition of Final Acceptance of all work completed under this Section.

3.15 DEMONSTRATION/ENACTMENT

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain controller and automatic control valves. Refer to Division 1 Section "Close Out Procedures Demonstration and Training."
- B. During the warranty period, the installer is responsible for all the following:

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1. Winterization: Shut off all water sources to system, drain all pipelines, and provide air injection as required to prevent freeze damages to all equipment.
2. Activation: Turn on all water sources to system, charge all pipelines, repair damaged equipment not caused by vandalism, snow removal, or unauthorized winter-use of system, adjust and fine tune all equipment to provide optimum performance.
3. Controller programming: Program controller at frequencies deemed necessary to sustain and promote establishment of landscaping until time of Final Acceptance, shut down controller at winterization, re-program controller at time of activation
4. It is this installer's responsibility to perform seasonal service at the time he deems appropriate to protect his warranty interests.
5. The installer is responsible for damages caused to equipment installed under this Section as a result of his failure to provide seasonal maintenance at the appropriate times

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6. The installer may be back charged if the services of others are employed to perform seasonal maintenance, as determined necessary by Owner's Representative.
7. During the warranty period, the installer is responsible for providing labor and material as needed to keep the system completely operable as intended by design.
8. Equipment, which fails to operate as intended by design, shall be repaired and/or replaced by the installer at his expense within twenty-four hours after Owner's notice.
9. Equipment, which is removed from the system for repair, shall be replaced immediately with equal equipment capable of providing uninterrupted operation of the system as intended by design.
10. Should at any time during the warranty period the installer fail to repair/replace equipment after being given reasonable notice from Owner to do so, he may be back charged for any costs incurred by the Owner for needed repairs which must be made by others.

3.16 EXCLUSIONS FROM WARRANTY

- A. The following do not constitute valid warranty claims:
- B. Vandalism to equipment.
- C. Damage to the installed system because of work performed by others in the work area after Final Acceptance.
- D. Unauthorized use of the system after installer's completion of winterization.

3.17 REQUIREMENTS AT SUBSTANTIAL COMPLETION

- A. At Owner's Representative's inspection for Substantial Completion the installer shall provide Owner's Representative with all of the following:
 1. Reproducible full-scale Mylar as-built drawing.
 2. Blue line fifty percent reduction of the as-built drawing, enclosed in an envelope for installation inside the controller cabinet.
 3. Black one inch size three-ringed binders, indexed and including the following type written data:
 4. Warranty statement on installer's letterhead, including date of enactment, emergency contact name and phone number, and FAX telephone number if available.
 5. Recommended routine and seasonal maintenance procedures.
 6. Operating instructions for automatic controller.
 7. Operating Schedule for the initial program entered into the controller at the time of inspection for Substantial Completion.
 8. Copies of equipment warranties provided by manufacturers of products installed which are transferable to the Owner.
 9. Statement of names and addresses of all local suppliers to the project from which replacement equipment can be obtained.
 10. The owner's copy of the current cross connection control device test report.

END OF SECTION 02810 – IRRIGATION SYSTEMS (REVISED 2013)

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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. Trees.
 - 2. Shrubs.
 - 3. Ground cover.
 - 4. Plants.
 - 5. Edgings.
 - 6. Planters.
- B. Related Sections include the following:
 - 1. Division 2 Section "Site Clearing" for protection of existing trees and planting, topsoil stripping and stockpiling, and site clearing.
 - 2. Division 2 Section "Earthwork" for excavation, filling, and rough grading and for subsurface aggregate drainage and drainage backfill materials.
 - 3. Division 2 Section "Subdrainage" for below-grade drainage of landscaped areas, paved areas, and wall perimeters.

1.3 DEFINITIONS

- A. Balled and Burlapped Stock: Exterior plants with firm, natural balls of earth in which they are grown, with ball size not less than, diameter and depth recommended by Colorado Nursery Act – 2003 for type and size of tree or shrub required; wrapped, tied, rigidly supported, and drum-laced as recommended by Colorado Nursery Act – 2003.
- B. Balled and Potted Stock: Exterior plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than, diameter and depth recommended by Colorado Nursery Act – 2003 for type and size of exterior plant required.
- C. Bare-Root Stock: Exterior plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to Colorado Nursery Act – 2003 for kind and size of exterior plant required.
- D. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to Colorado Nursery Act – 2003 for kind and size of exterior plants required. No trees shall be container grown.
- E. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted exterior plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by Colorado Nursery Act – 2003 for kind and size of exterior plant.
- F. Finish Grade: Elevation of finished surface of planting soil.
- G. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- H. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- I. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

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1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each of the following:
 - 1. Five (5) lb. of mineral mulch for each color and texture of stone required, in labeled plastic bags. Edging materials and accessories, of manufacturer's standard size, to verify color selected.
 - 2. Edging materials and accessories, of manufacturer's standard size, to verify color selected.
- C. Product Certificates: For each type of manufactured product, signed by product manufacturer, and complying with the following:
 - 1. Manufacturer's certified analysis for standard products.
 - 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- D. Qualification Data: For landscape installer.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Maintenance schedule and winter watering schedule.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of exterior plants.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when exterior planting is in progress.
- B. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in Colorado Nursery Act – 2003, "American Standard for Nursery Stock."
 - 1. Selection of exterior plants purchased under allowances will be made by Owner's Representative, who will tag plants at their place of growth before they are prepared for transplanting.
- C. Tree and Shrub Measurements: Measure according to Colorado Nursery Act – 2003 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
- D. Observation: Owner's Representative may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Owner's Representative retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
- E. Notify Owner's Representative of sources of planting materials seven days in advance of delivery to site. Plant materials will be subject to inspection on the site prior to planting. Owner's Representative reserves the right to reject material on site. Contractor must notify Owner's Representative forty eight (48) hours prior to planting.
- F. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver exterior plants freshly dug.
 - 1. Immediately after digging up bare-root stock, heel in with wood chip mulch, hay, or other suitable material to keep root system moist until planting.
- B. Do not prune shrubs before delivery, except as approved by Owner's Representative. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.
- C. Handle planting stock by root ball.

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- D. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
 - 1. Heel-in bare-root stock. Soak roots in water for two hours if dried out.
 - 2. Set balled stock on ground and cover ball with mulch, peat moss, sawdust, or other acceptable material.
 - 3. Do not remove container-grown stock from containers before time of planting.
 - 4. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.7 CONDITION

- A. Planting Restrictions: Planting to occur April 15th through October 15th unless otherwise approved by the Owner's Representative. Coordinate planting period with maintenance period to provide required maintenance from date of Substantial Completion.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit. No planting operations shall take place when the site is excessively wet or without Owner's Representative approval during freezing temperatures.
- C. Installation of plant materials: Shall not be undertaken until adjacent site improvements and pavements are complete.
- D. Coordination with Turf: Plant trees and exterior plants after finish grades are established and before planting lawns, unless otherwise acceptable to Owner's Representative.

1.8 WARRANTY

- A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except from incidents that are beyond Contractor's control.
- B. Upon completion of all planting 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 planting areas as specified according to the following length of time:
 - 1. Warranty period for plant materials (trees, shrubs, perennials, and ground covers).
- C. A (2) year period from date of Substantial Completion or to the end of May following the (2) year period. At the end of May all plant materials must be alive and in as good a condition as when initially accepted.
 - 1. Warranty Period for Trees and Shrubs: Two years from date of Substantial Completion.
 - 2. Warranty Period for Ground Cover and perennial Plants: Two years from date of Substantial Completion.
 - 3. Remove dead exterior plants within seven days after notification by Owner's Representative. Replace immediately unless required to plant in the succeeding planting season.
 - 4. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.

1.9 MAINTENANCE

- A. Trees and Shrubs: All planting shall be protected and maintained until the end of the two year warranty period. Maintenance shall include watering, to include winter watering, cultivating, mulching, tightening and repairing of guys, removal of dead and broken branches, resetting plants to proper grade or upright position and restoration of the planting saucer, and other necessary operations. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings.
 - 1. Maintenance Period: Two years from date of Substantial Completion, or replacement of plant.
- B. Ground Cover and Perennial Plants: Maintain for the following maintenance period by watering, weeding, fertilizing, and other operations as required to establish healthy, viable plantings:

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1. Maintenance Period: Two years from date of Substantial Completion, or replacement of plant.
- C. The maintenance for this work shall begin immediately after each area is planted and shall continue to accordance with the following requirements:
- D. Minor vandalism or damage to the trees or shrubs shall be the responsibility of the Contractor until all work is finally accepted by the Owner's Representative. Major vandalism or damage caused by others, through no fault of the Contractor or his subcontractors, shall be immediately brought to the attention of the Owner's Representative who will notify the City Forester who will be the sole judge as to the extent of such damage. If such damage is deemed to be major by the City Forester, any work necessary to repair or replace the damaged plant material shall be paid for by the Owner under the provisions of "extra work" stated in General Conditions, if such work is authorized by the City Forester.
- E. Final acceptance of all planting work will be made upon the completion of all work under this section.
- F. Any time during the warranty period following final acceptance of all work, and at no additional cost to the Owner, the Contractor is to replace any trees or shrubs, ground covers and perennials that are dead or that are, in the sole opinion of the City Forester and City Horticulturist or their designated representative, in unhealthy or unsightly condition. All replacement planting is to be done no later than the next succeeding planting season. Replacement of planting is to be in accordance with the original specifications and its cost to be included in the bid price. All areas damaged by tree, shrub ground cover or perennials planting or replacement operations are to be fully restored to their original condition as specified.

PART 2 – PRODUCTS

2.1 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with Colorado Nursery Act – 2003, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades complying with Colorado Nursery Act – 2003 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Owner's Representative, with a proportionate increase in size of roots or balls.
- C. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.
- D. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- E. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.
- F. Plants shall have a habit of growth that is normal for the species shall be sound, healthy, vigorous and free from insects, pests, diseases and injuries. All plants shall equal or exceed the measurements specified in the plant list, which are minimum acceptable sizes. They shall be measured and approved by the City Forester or designated representative, the Landscape Architect and at the Contractor's holding area or nursery. Any necessary pruning shall be done at the time of planting. Requirements for the measurement, branching, grading, quality, balling and burlapping of plants shall equal or exceed the code of standards currently recommended by the American Nurserymen Standards, Colorado Nursery Act – 2003.
- G. All trees shall be of suitable species for growing and surviving in Colorado Springs. The source of trees for this project shall be from either Colorado or from nurseries located in USDA hardiness zones 2, 3, 4, or 5.

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- H. Deciduous tree caliper in inches shall be measured at a height of six inches (6") above the normal soil level at which the tree was originally growing. Deciduous trees involved in this bid shall be only those with a single straight trunk unless otherwise specified. The trees shall have their trunks free of side branches and sucker growth to a height of at least four feet (4") above the ground before planting.

2.2 SHADE AND FLOWERING TREES

- A. Shade Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with Colorado Nursery Act – 2003 for type of trees required.
 - 1. Provide balled and burlapped trees.
 - 2. Branching Height: One-third to one-half of tree height.
- B. Small Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to Colorado Nursery Act – 2003; stem form as follows:
 - 1. Stem Form: [Single Stem]
 - 2. Provide balled and burlapped trees.
- C. Multistem Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to Colorado Nursery Act – 2003; stem form as follows:
 - 1. Stem Form: Clump
 - 2. Provide balled and burlapped trees.

2.3 DECIDUOUS SHRUBS

- A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to Colorado Nursery Act – 2003 for type, shape, and height of shrub.
 - 1. Provide balled and burlapped or container grown shrubs.

2.4 CONIFEROUS EVERGREENS

- A. Form and Size: Normal-quality, well-balanced, coniferous evergreens, of type, height, spread, and shape required, complying with Colorado Nursery Act – 2003.
 - 1. Provide balled and burlapped trees or container-grown shrubs.

2.5 BROADLEAF EVERGREENS

- A. Provide balled and burlapped or container-grown shrubs.

2.6 GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with Colorado Nursery Act – 2003 and the following requirements:

2.7 PLANTS

- A. Annuals: Provide healthy, disease-free plants of species and variety shown or listed. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud but not yet in bloom.
- B. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed.
- C. Fast-Growing Vines: Provide vines of species indicated complying with requirements in Colorado Nursery Act – 2003 as follows:
 - 1. Two-year plants with heavy, well-branched tops, with not less than 3 runners 18 inches or more in length, and with a vigorous well-developed root system.
 - 2. Provide field-grown vines. Vines grown in pots or other containers of adequate size and acclimated to outside conditions will also be acceptable.

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2.8 TOPSOIL

- A. Topsoil: ASTM D5268, pH range of 5.5 to 7, a minimum 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 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.

2.9 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 deisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or 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, unleached, stable 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.

2.10 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 urea formaldehyde, 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 50 percent water-insoluble nitrogen, phosphorous, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

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2.11 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - 1. Type: Ground or shredded bark, wood chips.
- B. Compost is widely used as bulk organic mulch and a recycled product. Because it is applied at much heavier rates than fertilizers, compost has a significant cumulative effect on nutrient availability and may reduce or eliminate top-dressed fertilizers.
- C. 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 exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- D. Rock Mulch: Hard, durable stone, washed free of loam, sand, clay, and other foreign substances, of following type, size range, and color: As shown on drawings.
 - 1. Type: As shown on drawings.

2.12 WEED-CONTROL BARRIERS

- A. Non-woven Fabric: Polypropylene or polyester fabric, 3oz. /sq. yd. Minimum.
- B. Composite Fabric: Woven, needle-punched polypropylene substrate bonded to a non-woven polypropylene fabric, 4.8 oz. /sq. yd.

2.13 STAKES AND GUYS

- A. Upright and Guy Stakes: Refer to detail as specified on drawings. Minimum 5' tall steel posts, Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.
- B. Guy and Tie Wire: Refer to detail as specified on drawings.
- C. Guy Cable: Refer to detail as specified on drawings.
- D. Hose Chafing Guard: Refer to detail as specified on drawings.
- E. Flags: Refer to detail as specified on drawings.

2.14 LANDSCAPE EDGINGS

- A. Steel Edging: Standard commercial-steel edging, rolled edge, fabricated in sections of standard lengths, with loops stamped from or welded to face of sections to receive stakes.
 - 1. Edging Size: As shown on drawings.
 - 2. Stakes: As shown on drawings.
 - 3. Accessories: As shown on drawings.
 - 4. Finish: As shown on drawings.
 - 5. Paint Color: As shown on drawings.
- B. Available Manufacturers: As shown on drawings
- C. Manufacturers: As shown on drawings
- D. Concrete Edging: As shown on drawings

2.15 MISCELLANEOUS PRODUCTS

- A. Tree Grates and Frames: As specified on drawings.

2.16 PLANTING SOIL MIX

- A. Planting Soil Mix: See planting detail.

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PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Loosen structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.
- 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. Lay out individual tree and shrub locations and areas for multiple exterior plantings. Stake locations, outline areas, adjust locations when requested, and obtain Owner's Representative acceptance of layout before planting. Make minor adjustments as required.
- D. Lay out exterior plants at locations directed by Owner's Representative. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

3.3 PLANTING BED ESTABLISHMENT

- A. Loosen subgrade of planting beds to a minimum depth of **6 inches**. Remove stones larger than **3/4 inch** in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off owner's property.
 - 1. Spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - 2. Spread planting soil mix to a depth of **6 inches** but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - 3. 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.
- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Rake and remove ridges, and fill depressions to meet finish grades.
- C. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

3.4 TREE AND SHRUB EXCAVATION

- A. Pits and Trenches: Excavate circulate pits with sides sloped inward. Trim base area leaving center slightly elevated to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 - 1. Excavate as shown on drawings.
 - 2. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
 - 3. If drain tile is shown or required under planted areas, excavate to top of porous backfill over tile.
- B. Subsoil removed from excavations may be used as backfill.
- C. Obstructions: Notify Owner's Representative unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
- D. Drainage: Notify Owner's Representative if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.

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3.5 PLANTERS

- A. Planters: Place a layer of gravel at least 4 inches thick in bottom of planters, cover with non-woven fabric, and fill with planter soil mix. Place soil in lightly compacted layers to an elevation of 1-1/2 inches below top of planter, allowing natural settlement.
 - 1. Planter Soil Mix: As specified on drawings.

3.6 GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants as indicated on drawings or by Owner's Representative. Dig holes large enough to allow spreading of roots, and backfill with planting soil.
- B. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- C. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- D. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.7 PLANTING BED MULCHING

- A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched; overlapping edges a minimum of 6 inches.
- B. Mulch backfilled surfaces of planting beds and other areas indicated.
 - 1. Organic Mulch: Apply 4-**inch** average thickness of organic mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.
 - 2. Rock Mulch: As indicated on drawings.

3.8 EDGING INSTALLATION

- A. Steel Edging: Install steel edging where indicated according to drawings. Anchor with steel stakes spaced approximately 30 inches apart, driven below top elevation of edging.
- B. Concrete Edging: As specified on drawings.

3.9 TREE GRATE INSTALLATION

- A. Tree Grates: Set grate segments flush with adjoining surfaces as shown on Drawings. Shim from supporting substrate with soil-resistant plastic. Maintain a 3-inch minimum growth radius around base of tree; break away units of casting, if necessary, according to manufacturer's written instructions.

3.10 CLEANUP AND PROTECTITON

- A. During exterior planting, keep adjacent pavings and construction clean and work area in an orderly condition.
- B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

3.11 DISPOSAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 02930 – EXTERIOR PLANTS – (REVISED 2005)

SCHEDULE E – MINIMUM INSURANCE REQUIREMENTS

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.

1. ☒ Commercial General Liability for limits not less than \$1,000,000 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include blanket contractual, broad form property damage, products and completed operations.
2. ☒ Workers' Compensation and Employers Liability as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$100,000.
3. ☒ Automobile Liability covering any auto (including owned, hired, and non-owned autos) with a minimum of \$1,000,000 each accident combined single limit.
4. ☐ Excess Liability for limits not less than \$1,000,000 combined single limit for bodily injury and property damage for each occurrence.
5. ☐ Builders Risk or Installation Floater Insurance: Contractor shall purchase and maintain property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property.
6. ☐ Professional Liability Insurance covering any damages caused by an error, omission or any negligent Acts with limits of not less than \$1,000,000 per occurrence and in the aggregate. The coverage shall have an extended reporting period of 2 years following the date of substantial completion of the project for reporting of claims.
7. ☐ Pollution Legal Liability Insurance shall apply to sudden and gradual pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants (including asbestos). If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning from the time that work under this contract is completed. Policy limits shall be no less than \$1,000,000 per loss with \$2,000,000 aggregate coverage.

8. ☐ Technology Errors and Omissions Liability including Network Security and Privacy Liability not less than \$3,000,000 per loss with a \$3,000,000 aggregate.
- a. The policy shall provide a waiver of subrogation.
 - b. The insurance shall provide coverage for liability arising from theft, dissemination and/or use of confidential information stored or transmitted in electronic form.
 - c. Network Security Liability arising from the unauthorized access to, use of or tampering to gain access to your services including denial of service, unless caused by a mechanical or electrical failure
 - d. Liability arising from the introduction of a computer virus into, or otherwise causing damage to, a customer's or third person's computer, computer system, network or similar computer related property and the data, software, and programs thereon.
9. ☐ Employee Crime Coverage shall include employee dishonesty, forgery or alteration and computer fraud. If Contractor is physically located on CITY premises, third party fidelity coverage extension shall apply. The policy shall include coverage for all directors, officers, agents and employees of the Contractor. Coverage limit will be not less than \$1,000,000 per loss.
- a. The bond or policy shall include coverage for extended theft and mysterious disappearance.
 - b. The bond or policy shall not contain a condition requiring an arrest and conviction.
10. ☐ Liquor Legal Liability Insurance: If the event producer is a business that manufactures, distributes, sells, or serves alcoholic beverages, and intends to serve or sell alcoholic beverages at an event, they must also submit a Certificate of Insurance providing proof of a liquor legal liability insurance policy or properly endorsed general liability policy.
- a. If this event producer hires a vendor to serve or sell alcoholic beverages, rather than providing the alcohol themselves, they must submit a Certificate of Insurance from the vendor providing proof of a liquor legal liability insurance policy or properly endorsed general liability policy.
 - b. In either case, the minimum acceptable limit of liability per claim and aggregate is \$1,000,000. This requirement applies to the business or group which serves or sells the alcohol.

Except for workers' compensation and employer's liability insurance, the City of Colorado Springs 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)

SCHEDULE F – NOTIFICATION OF UTILITIES

General Information

It is the responsibility of the Contractor to notify all applicable utilities (including, but not limited to Colorado Springs Utilities) for utility locations at least two business days or twenty-four hours prior to commencing any work. Should any street be closed off for any amount of time, the Contractor must notify the Traffic Department. See the City of Colorado Springs Standard Specifications General Provisions for more information regarding utilities.

The City of Colorado Springs Standard Specifications and General Provisions indicated on the RFP for this project are included by reference. The above document may be reviewed or purchased at the City Administration Building, Engineering Division, at 30 South Nevada, Suite 403, Colorado Springs, Colorado, between the hours of 8:00 A.M. and 5:00 P.M., Monday through Friday, except holidays.

Telephone References

- | | |
|---|----------------|
| 1. Utility Notification Center of Colorado | 1-800-922-1987 |
| 2. Colorado Springs Utilities Electric | (719) 448-4811 |
| 3. Colorado Springs Utilities Water, Wastewater | (719) 448-4200 |
| 4. Traffic Department | (719) 385-5908 |
| 5. Colorado Springs Utilities Gas Emergencies | (719) 520-0100 |
| 6. Cable Television | (719) 633-6616 |
| 7. Telephone | 1-800-954-0211 |

Standard Utility Color Code

- | | | |
|----------------|---|--------|
| 1. Natural Gas | - | Yellow |
| 2. Electric | - | Red |
| 3. Water | - | Blue |
| 4. Wastewater | - | Green |

Contractor Responsibilities

1. Contact Colorado Springs Utilities, and/or other applicable utilities company or provider, at least twenty four hours prior to starting the project so that our service inspector can make contact on the job site.
2. All replacement taps will have to be coordinated and notification must be given to Colorado Springs Utilities twenty four hours prior to scheduling.
3. Any water interruption to properties involved must be notified at least twenty-four hours prior to shut down and coordinated with a service inspector.
4. 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 shut down is in effect.

5. If for any reason when water is restored after the shut down 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.
6. All services which would be replaced will have to meet our water specifications and be approved by the Water service inspector.
7. All materials pertaining to lowering or replacing water service lines, regardless of size, will be the responsibility of the Contractor unless otherwise specified in Engineering Specifications and Plans.
8. If for any reason it would not be feasible to shut down and notify affected properties, it would be the responsibility of the Contractor to provide temporary water for the houses or businesses involved.

Pre-excavation Checklist

1. Indicate all gas and other utility lines a set of construction plans.
2. Notify City of Colorado Springs Underground Utility Line Locators at least two business days in advance at the division numbers listed above.
3. Utilities locations should be marked on the ground by City Locators.
4. All employees should be briefed on the marking and the standard utility color codes.
5. Employees should be trained on excavation and safety procedures for natural gas lines.
6. When excavation approaches gas lines, employees should expose lines by careful hand digging and probing.
7. Contact the City Forester for any tree protection requirements that may be included on contract specifications