



REQUEST FOR PROPOSAL

Construction

R24-084SL

Date issued: June 26, 2024

IRRIGATION SYSTEM IMPROVEMENTS AT EVERGREEN CEMETERY

THE CITY OF COLORADO SPRINGS

THIS PROJECT IS FEDERALLY FUNDED BY ARPA GRANT



The City of Colorado Springs requests Firm Fixed Price (FFP) proposals, as detailed in this Request for Proposal (RFP), Irrigation System Improvements at Evergreen Cemetery

This RFP is posted to Rocky Mountain E-Purchasing BidNet Direct and the City of Colorado Springs' Procurement Services Website. It is available for all vendors free of charge, following free registration, at the Rocky Mountain E-Purchasing BidNet Direct website.

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

Estimated Project Magnitude: \$2,000,000 - \$3,000,000



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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 BidNet Direct under the Rocky Mountain E-Purchasing Group (www.BidNetDirect.com). All addenda or amendments shall be issued through BidNet Direct 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	June 26, 2024
Pre-Proposal Conference	July 8, 2024 at 2:00PM MST

We will hold a pre-proposal conference via Microsoft Teams. This meeting is not mandatory. However all Offerors are encouraged to attend.

Microsoft Teams [Need help?](#)

[Join the meeting now](#)

Meeting ID: 295 539 591 257

Passcode: 8FhFtt

Dial in by phone

[+1 720-617-3426,,379164409#](tel:+17206173426379164409) United States, Denver

[Find a local number](#)

Phone conference ID: 379 164 409#

Cut Off Date for Questions July 15, 2024 by 2:00PM MST

All questions shall be submitted electronically via the BidNet Direct Procurement Platform (www.bidnetdirect.com) to the following Contract Specialist. All questions must be received no later than **July 15, 2024 by 2:00PM MST.**

Requests for Information, support and questions shall be directed to:

Sarah M. Lagunas,
Sarah.Lagunas@coloradosprings.gov

DO NOT CONTACT ANY OTHER INDIVIDUAL AT THE CITY OF COLORADO SPRINGS REGARDING THIS SOLICITATION.
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The only acceptable method of submitting questions is electronically via BidNet Direct. Faxes or physical mail delivery are not acceptable.

Proposal Due Date	July 29, 2024 by 2:00PM MST
Interviews (if applicable)	TBD
Award of Contract	Tentatively August 2024
Notice to Proceed	Tentatively August 2024

1.2 SUBMISSION OF PROPOSAL

Proposals are to be submitted electronically on BidNet Direct (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 all required proposal documents are uploaded and submitted correctly, and that a **confirmation number** is obtained upon successful submission. Customer support for BidNet Direct may be reached at (800) 835-4603.

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

Date/Time: Proposals shall be received on or before July 29, 2024 by 2:00PM MST.

Identification of Proposal:

Proposals must be submitted to the BidNet Direct Procurement Platform (www.bidnetdirect.com). The solicitation number and Offeror name must be clearly marked within the proposal.

Proposal No.: R24-084SL
Due Date and Time: July 29, 2024 by 2:00PM MST

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

1.3 NUMBER OF COPIES

Offerors shall submit **one (1)** softcopy to the BidNet Direct platform. Upon submission, all proposal documents shall become and remain the property of the City of Colorado Springs.

1.4 SPECIAL TERMS

Please note the following definitions of terms as used herein:

The term "City" means the City of Colorado Springs.



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

The term “Offer” means the proposal.

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

The term “Project” refers to Irrigation System Improvements at Evergreen Cemetery.

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 BidNet Direct under the Rocky Mountain E-Purchasing Group (www.BidNetDirect.com). It is the Offeror's responsibility to check



the website for posted amendments or contact the Contracts Specialist listed in RFP §1.1 to confirm the number of amendments which have been issued.

1.8 WITHDRAWAL OR MODIFICATION OF OFFERS

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

1.9 ACCEPTANCE

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

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

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

1.10 PROPOSAL PREPARATION COST

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

1.11 AWARD

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

1.12 PERFORMANCE PERIOD

The performance period for the project detailed in this RFP will be established as **November 1, 2024 through December 15, 2025.**

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 1 – Qualifications Document.

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
- F. Detailed Plans
- G. Standard Drawings
 - a. Calculated dimensions will govern over scaled dimensions.
- H. Special Specifications
- I. 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>. 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

- A. 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	Qualifications Document
Exhibit 4	Federal Forms
Schedule A	Price Sheet

2.2 COVER LETTER

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

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

2.3 PROPOSAL CERTIFICATION

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

2.4 ORGANIZATIONAL BACKGROUND AND OVERVIEW

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

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

A. Understanding of and Compliance with Technical Requirements

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

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

B. Project Approach

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

The Offeror must at least address the following areas:

1. Construction phasing and traffic control for the project. Explain the phases, traffic control for each phase, and the logic in the construction phasing.
2. Erosion and sediment control during all phases of construction as well as post construction efforts through permit closure.
3. Coordination with utilities. Discuss Offeror's understanding of the key utility relocations required for this project and how Offeror will coordinate and phase construction to both facilitate and accommodate those relocations and the constraints that they impose.
4. Schedule Management. Discuss Offeror's approach to schedule management including updating and reporting progress of the work.



5. Quality Control. Discuss Offeror's quality control plan, processes and approach to ensure that the City receives a quality product.
6. Safety. Discuss Offeror's approach and commitment to safety for both construction workers and the public traveling through the construction site.
7. Potential issues that Offeror foresees with this project and how Offeror would make adjustments if encountered. Describe factors limiting construction phasing flexibility and potential remedies.

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

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

2.5.2 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. An organization chart which demonstrates clear and effective lines of authority, responsibility, and communication for management, supervisory, and technical personnel. The plan should address which job classification or personnel will be assigned to each task and how that determination is made. Basic human resource management concepts should be addressed, including hiring, firing, discipline, incentive plans, etc.
3. If the Offeror plans to subcontract more than 10% of the work, include information on how the Offeror plans to manage its subcontractors.
4. 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 November 1, 2024.

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

1. Does the proposal address the issues above in sufficient detail to demonstrate a



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

B. Past Performance/Relevant Experience 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. Are the references or past performance citations relevant to the requirements of the Statement of Work of the RFP?
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?

C. 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?
4. List any Irrigation Specific Certifications.

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 Exceptions Form which is located in Exhibit 1 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 Minimum Insurance Requirements which is located in Exhibit 1 and return with their proposal. Lack of responsiveness in this area may be grounds for rendering the proposal unacceptable without further discussions.



SECTION III – EVALUATION FACTORS

3.0 EVALUATION AND AWARD

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

3.1 EVALUATION CRITERIA

3.1.1 TECHNICAL AREA – UNDERSTANDING OF AND COMPLIANCE WITH TECHNICAL REQUIREMENTS

See Section II - Item 2.5.1A

3.1.2 TECHNICAL AREA – PROJECT APPROACH

See Section II - Item 2.5.1B

3.1.3 MANAGEMENT AREA – PROGRAM MANAGEMENT CONTROLS

See Section II - Item 2.5.2A

3.1.4 MANAGEMENT AREA – PAST PERFORMANCE/RELEVANT EXPERIENCE/KEY PERSONNEL

See Section II – Item 2.5.2B

3.1.5 PRICE/COST AREA – PRICE/COST

See Section II – Item 2.6

3.1.6 PROPOSAL PRESENTATION AREA – PROPOSAL PRESENTATION

See Section II – Item 2.7

3.1.7 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: Technical Area
Second: Management Area
Third: Price/Cost Area
Fourth: 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:

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.

D. Area Scoring

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

Technical Area: .35
Management Area: .30
Price/Cost Area: .25
Proposal Presentation Area: .10

E. Final/Overall Scoring

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

3.3 SELECTION COMMITTEE

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



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

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

3.4 AWARD OF CONTRACT

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



SECTION IV – SPECIAL CONTRACT TERMS AND CONDITIONS

4.0 SPECIAL CONTRACT TERMS AND CONDITIONS/SPECIAL SOLICITATION PROVISIONS

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

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

5.0 EXHIBITS

Exhibit 1	Qualifications Document
Exhibit 2	Sample Contract
Exhibit 3	Evaluation Scoresheet
Exhibit 4	Federal Forms



EXHIBIT 1 QUALIFICATIONS DOCUMENTS

Will follow this page.



SOLICITATION QUALIFICATIONS DOCUMENTS

Please complete all sections of this document including the Solicitation Certification, Representations and Certifications, Qualification Statement, Exceptions, Minimum Insurance Requirements, and Signature Page.

Please submit all completed documents with your bid/ proposal and sign the Minimum Insurance Requirements and Signature Page.

Solicitation:

Solicitation Number:

Firm Name:

Date:

Address:

Federal Tax ID #:

Tax Classification:

Sole Proprietorship

Partnership

C Corporation

S Corporation

LLC

Nonprofit

DUNS Number:

OFFEROR REPRESENTATIVE

Offeror has appointed the following as the offeror's representative and contact for all questions or clarifications in regard to this offeror.

Name:

Telephone:

E-mail:



SOLICITATION CERTIFICATION

PLACE OF BUSINESS

Company'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 from principal place of business.

Year Facility Was Established

Percent of Work to be performed from principal place of business.

Percent of Work to be performed from Colorado Springs Facility

INSURANCE

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.)

Initial Here

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

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

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

FINANCIAL STATEMENTS

Current Financial Statements are not required for this solicitation.

Current Financial Statements are required for this solicitation. Please include financial statements as a separate document with your proposal.

Initial Here

COMPLETED PROPOSAL

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

Initial Here



REPRESENTATIONS AND CERTIFICATIONS

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.

Initial Here #1

2. ETHICS VIOLATIONS

- a) The Offeror shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in this clause in its own operations and direct business relationships.
- b) Offeror certifies the Offeror has not violated or caused any person to violate, and shall not violate or cause any person to violate, the City’s Code of Ethics contained in Article 3, of Chapter 1 of the City Code and in the City’s Procurement Rules and Regulations
- c) When the Offeror has reasonable grounds to believe that a violation described in this clause may have occurred, the Offeror shall promptly report the possible violation to the City Contracts Specialist in writing.
- d) The Offeror must disclose with the signing of this proposal, the name of any officer, director, or agent who is also an employee of the City and any City employee who owns, directly or indirectly, an interest of ten percent (10%) or more in the Offeror’s firm or any of its branches.
- e) In addition, the Offeror must report any conflict or apparent conflict, current or discovered during the performance of the Contract, to the City Contracts Specialist.
- f) The Offeror shall not engage in providing gifts, meals or other amenities to City employees. The right of the Offeror to proceed may be terminated by written notice issued by City Contracts Specialist if Offeror offered or gave a gratuity to an officer, official, or employee of the City and intended by the gratuity to obtain a contract or favorable treatment under a contract.
- g) The Offeror shall cooperate fully with the City or any agency investigating a possible violation on behalf of the City. If any violation is determined, the Offeror will properly compensate the City.
- h) The Offeror agrees to incorporate the substance of this clause (after substituting “Contractor” for “Offeror”) in all subcontracts under this offer.

Initial Here #2



3. 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.

Initial Here #3

4. 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 contact.

Initial Here #4

5. 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.

Initial Here #5

6. CONTRACTOR'S REGISTRATION INFORMATION

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

Large Business (i.e. do not qualify as a small business or non-profit)

Nonprofit

Small Business

Minority Owned Business/Small Disadvantaged Business

Woman Owned Business



Veteran Owned Business

Service-Disabled Veteran Owned Business

HUBZone Business

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

Initial Here #6

7. 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.

Name:

Telephone:

E-mail:

Initial Here #7

8. 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.

Initial Here #8

9. 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

Are Are Not

Presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency.

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

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.

Initial Here #9

10. 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.

Initial Here #10

11. 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>

Initial Here #11

12. 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>

Initial Here #12



13. 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>.

Initial Here #13



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 solicitation. Please complete this form in its entirety. If a request in the Qualification Statement is contained in the proposal, indicate the section in the proposal where that information can be found.

1. TYPE OF LICENSE(S) HELD

2. TYPE OF SERVICE TO BE PROVIDED FOR THIS SOLICITATION

3. NUMBER OF YEARS IN BUSINESS

4. FIRM HISTORY & STAFF QUALIFICATIONS

In your proposal 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.

5. WHAT OTHER NAME(S) HAS YOUR COMPANY OPERATED UNDER

My Firm has not operated under any other names

6. HAVE YOU OR YOUR FIRM EVER FAILED TO COMPLETE ANY WORK AWARDED TO YOU?

Yes No

If Yes, Please Explain



7. HAS ANY OFFICER OF PARTNER OF YOUR ORGANIZATION EVER BEEN AN OFFICER OR PARTNER OF ANOTHER ORGANIZATION THAT FIALED TO COMPLETE A CONTRACT WITHIN THE LAST FIVE (5) YEARS?

Yes No

If Yes, Please Explain

8. HAS YOUR FIRM OR ANY PARTNERS OR OFFICERS EVER BEEN INVOLVED IN ANY BANKRUPTCY ACTION?

Yes No

If Yes, Please Explain

9. ARE YOU PRESENTLY INVOLVED IN ANY LITIGATION WITH ANY GOVERNMENT AGENCY?

Yes No

If Yes, Please Explain Type, Kind, Plaintiff, Defendant, etc. and state the current status:

10. BANK REFERENCE

Bank Name:

Address:

Contact:

Phone #:

E-mail:



11. SIMILAR PROJECTS

List Three similar projects (local or state-wide) from the last five (5) years. Include the location of the project, size of project (contract amount), contract name and information.

NOTE: Detailed information on these projects may also be requested in the solicitation package

Indicate here if this information is provided within your proposal and identify where in the proposal it is located.

1. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided and how your firm was successful carrying out the scope of work of the contract.

2. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:



Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided and how your firm was successful carrying out the scope of work of the contract.

3. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided and how your firm was successful carrying out the scope of work of the contract.



12. SIMILAR PROJECTS CURRENTLY UNDER CONTRACT

list three projects currently under contract and in progress (local or state-wide) from the last five (5) years. Include the location of the project, size of project (contract amount), contract name and information. NOTE: Detailed information on these projects may also be requested in the solicitation package

Indicate here if this information is provided within your proposal and Identify where in the proposal it is located.

1. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided.

2. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:



Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided.

3. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided.



13. ADDITIONAL QUALIFICATION REQUIREMENTS

There are no additional qualification requirements for this solicitation.

There are additional qualification requirements as follows:



EXCEPTIONS

Please Indicate below if there are any 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 an additional document attached to this exhibit 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.

Please indicate below:

My Firm has no exceptions.

My Firm does have exceptions. (Attach Exceptions to this exhibit)



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.

- Commercial General Liability for limits not less than \$1,000,000 combined single limit with \$2,000,000 aggregate for bodily injury and property damage for each occurrence. Coverage shall include blanket contractual, broad form property damage, products and completed operations.
- Workers' Compensation and Employers Liability as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$1,000,000.
- Automobile Liability covering any auto (including owned, hired, and non-owned autos) with a minimum of \$1,000,000 each accident combined single limit.
- Professional Liability Insurance covering any damages caused by an error, omission or any negligent acts with limits of not less than \$2,000,000 per occurrence and in the aggregate.
 - In the event that any professional liability insurance required by this Contract is written on a claims-made basis, Consultant warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning at the time work under this Contract is completed
 - Policy shall contain a waiver of subrogation against the CITY.
- 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.

Except for workers' compensation and employer's liability insurance and Professional Liability, 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.

Name of Company

Signature

Date



SIGNATURE PAGE

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.

The undersigned additionally declares that it has carefully examined the Bid/Proposal information and the complete Solicitation prior to submitting a Bid / Proposal. The Offeror's signature will be considered the Offeror's acknowledgement of understanding and ability to comply with all items in the solicitation.

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.

Signature

Name (Printed)

Company 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		City Dept Rep	
NOT TO EXCEED Contract Amount:		City Account #	
Contract Type:	Fixed Unit Price	Period of Performance:	

1. INTRODUCTION

THIS Fixed Unit Price CONTRACT ("Contract") is made and entered into this XXX day of XXX, 2022 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: XXXX.

The Contractor did on the XXX day of XXX, 2022 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 Sheet
3. Schedule B – General Construction Terms and Conditions
4. Schedule C – Special Contract Terms and Conditions
5. Schedule D – General Specifications
6. Schedule E – Special and Technical Specifications
7. Schedule F – Scope of Work
8. Exhibit 1 – Performance, Labor and Material Payment, and Maintenance Bonds
9. Exhibit 2 – Minimum Insurance Requirements



2. COMPENSATION/CONSIDERATION

THIS FIRM FIXED PRICE CONTRACT is established at the Not to Exceed amount of \$xxxxxxx.

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

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

3. TERM OF CONTRACT

Contractor will start work promptly after the Notice to Proceed and continue to work diligently until completed. The Contractor shall complete all work on an as ordered basis throughout the Contract period which is **XXX calendar days from Issuance of Notice to Proceed** ("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 Exhibit 2, which includes Property, Liability, and as otherwise listed in Exhibit 2. 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 Department Manager: up to \$149,999.99

The City of Colorado Springs Deputy Chief of Staff: \$150,000.00 to \$499,999.99

The City of Colorado Springs Chief of Staff: \$500,000.00 to \$1,999,999.99

The Mayor of Colorado Springs: Unlimited

12. ECONOMIC PRICE ADJUSTMENT

- A. The Contractor shall notify the City of Colorado Springs Procurement Services Division if, at any time during contract performance, the rate of pay for labor or the unit prices for material shown in Schedule A experiences a significant increase. A change in price shall be considered significant when the unit price of an item increases by 10% from the execution date of this Contract. The Contractor shall furnish notice of this increase within 60 days after the increase, or within any additional period that the City Procurement Services Division may approve in writing, but not later than the date of final payment under this Contract. The notice shall include the Contractor's proposal for an adjustment in the Contract unit prices to be negotiated under paragraph (b) of this clause, and shall include, in the form required by the City Procurement Services Division, supporting data explaining the cause, effective date, and amount of the increase and the amount of the Contractor's adjustment proposal.
- B. Promptly after the City Procurement Services Division receives the notice and data under paragraph (a) of this clause, the City Procurement Services Division and the Contractor shall negotiate a price adjustment in the contract unit prices and its effective date. However, the City Procurement Services Division may postpone the negotiations until an accumulation of increases in the labor rates (including fringe benefits) and unit prices of material shown in Schedule A results in an adjustment allowable under paragraph (c)(3) of this clause. The City Procurement Services Division shall modify this contract (1) to include the price adjustment and its effective date and (2) to revise the labor rates (including fringe benefits) or unit prices of material as shown in Schedule A to reflect the increases resulting from the adjustment. The Contractor shall continue performance at current rates pending agreement on, or determination of, any adjustment and its effective date.
- C. Any price adjustment under this clause is subject to the following limitations:
1. Any adjustment shall be limited to the effect on unit prices of the increases in the rates of pay for labor (including fringe benefits) or unit prices for material shown in Schedule A. There shall be no adjustment for:
 - (i) Supplies or services for which the production cost is not affected by such changes;
 - (ii) Changes in rates or unit prices other than those shown in Schedule A; or
 - (iii) Changes in the quantities of labor or material used from those shown in Schedule A for each item.



2. No upward adjustment shall apply to supplies or services that are required to be delivered or performed before the effective date of the adjustment, unless the Contractor's failure to deliver or perform according to the delivery schedule results from causes beyond the Contractor's control and without its fault or negligence, within the meaning of the Default clause.
3. There shall be no adjustment for any change in rates of pay for labor (including fringe benefits) or unit prices for material which would not result in a net change of at least 3 percent of the then-current total contract price. This limitation shall not apply, however, if, after final delivery of all line items, either party requests an adjustment under paragraph (b) of this clause.
4. The aggregate of the increases in any contract unit price made under this clause shall not exceed 10 percent of the original unit price.

13. 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.

14. 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.

15. 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.



16. 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.

17. 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.

18. 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.

19. 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.



20. 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.

21. 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.

22. 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.

23. TERMINATION

A. Termination for Convenience.

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

B. Termination for Cause: The occurrence of any one or more of the following events (“Event of Default”) will justify termination for cause:

1. Contractor’s failure to perform the work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule as adjusted from time to time.
2. Contractor’s disregard of the laws or regulations of any public body having jurisdiction.
3. Contractor’s disregard of the authority of Project Manager.
4. Contractor’s violation in any material provision of the Contract Documents.
5. Contractor’s failure to make prompt payments to its subcontractors, and suppliers of any tier, or laborers or any person working on the work by, through, or under the Contractor or any of them, any all of their employees, officers, servants, members, and agents.
6. Contractor files a petition commencing a voluntary case under the U.S. Bankruptcy Code, or for liquidation, reorganization, or an arrangement pursuant to any other U.S. or state bankruptcy Laws, or shall be adjudicated a debtor or be declared bankrupt or insolvent under the U.S. Bankruptcy Code, or any other federal or state laws relating to bankruptcy, insolvency, winding-up, or adjustment of debts, or makes a general assignment for the benefit of creditors, or admits in writing its inability to pay its debts generally as they become due, or if a petition commencing an involuntary case under the U.S. Bankruptcy Code or an answer proposing the adjudication of Contractor as a debtor or bankrupt or proposing its liquidation or reorganization pursuant to the Bankruptcy Code or any other



U.S. federal or state bankruptcy laws is filed in any court and Contractor consents to or acquiesces in the filing of that pleading or the petition or answer is not discharged or denied within sixty (60) Calendar Days after it is filed.

7. A custodian, receiver, trustee or liquidator of Contractor, all or substantially all of the assets or business of Contractor, or of Contractor's interest in the Work or the Contract, is appointed in any proceeding brought against Contractor and not discharged within sixty (60) Calendar Days after that appointment, or if Contractor shall consent to or acquiesces in that appointment.
8. Contractor fails to commence correction of defective work or fails to correct defective work within a reasonable period of time after written notice.

If one or more of the events identified in Paragraphs 1-8 above occur, City may give Contractor written notice of the event and direct the event be cured. Any such Notice to Cure will provide Contractor a minimum of ten (10) calendar days to prepare and submit to the Project Manager a plan to correct the Event of Default. If such plan to correct the Event of Default is not submitted to the Project Manager within ten (10) days after the date of the written notice or such plan is unacceptable to the City, the City may, give Contractor (and the Surety, if any) written notice that Contractor's services are being terminated for cause. Upon delivery of the termination notice, City may terminate the services of Contractor in whole or in part, exclude Contractor from the site, and take possession of the work and of all Contractor's tools, appliances, construction equipment, and machinery at the project site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion), incorporate in the work all materials and equipment stored at the site or for which City has paid Contractor but which are stored elsewhere, and finish the work as City may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until Certificate of Completion of the work. In the event City terminates this Contract for Cause and the cost of completing the work exceeds the unpaid balance of the Contract price, Contractor shall pay City for any costs of completion which exceed the Contract price when combined with all amounts previously paid to Contractor. When exercising any rights or remedies under this paragraph City shall not be required to obtain the lowest price for the work performed. Should the cost of such completion, including all proper charges, be less than the original Contract price, the amount so saved shall accrue to the City. Neither the City nor any officer, agent or employee of the City shall be in any way liable or accountable to the Contractor or the Surety for the method by which the completion of the said work, or any portion thereof, may be accomplished or for the price paid.

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

- C. Termination Notice. Upon receipt of a termination notice, whether for convenience or cause, the Contractor shall immediately: discontinue all services affected (unless the notice directs otherwise), and deliver to the City all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this Contract, whether completed or in process.
- D. Removal of Equipment. Except as provided above, in the case of termination of this Contract before completion from any cause whatever, the Contractor, if notified to do so by the City,



shall promptly remove any part or all of Contractor's equipment and supplies from the property of the City, failing which the City shall have the right to remove such equipment and supplies at the expense of the Contractor.

24. 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.

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., Title VII of the Civil Rights Act of 1964, Americans with Disabilities Act of 1990 as amended, all applicable federal and state laws, the Contractor will not discriminate against any employee or applicant for employment because of disability, race, creed, color, sex, sexual orientation, gender identity, gender expression, religion, age, national origin, or ancestry.
- 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, sex, sexual orientation, gender identity, gender expression, religion, age, national origin, or ancestry.

29. ORDER OF PRECEDENCE

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

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

30. HEADINGS

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



31. DISPUTES

- A. All administrative and contractual disputes arising from or related to this Contract other than those arising under Unanticipated Circumstances provisions (in section 107.27 of Schedule B General Construction Terms and Conditions) shall be addressed in the following manner:
1. If either Party disputes or disagrees with a Contract term or the other Party's interpretation of a Contract term or has any other administrative or contractual dispute not addressed in the Unanticipated Circumstances provisions, such Party shall promptly give the other Party written notice of said dispute.
 2. The Parties shall hold a meeting as soon as reasonably possible, but in no event later than thirty (30) calendar days from the initial written notice of the dispute, attended by persons with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute; provided, however, that no such meeting shall be deemed to vitiate or reduce the obligations and liabilities of the Parties or be deemed a waiver by a Party of any remedies to which such Party would otherwise be entitled unless otherwise agreed to by the Parties in writing.
 3. If, within thirty (30) calendar days after such meeting, the Parties have not succeeded in negotiating a resolution of the dispute, they agree to submit the dispute to non-binding mediation and to bear equally the costs of the mediation.
 4. The Parties will jointly appoint a mutually acceptable mediator. If they fail to do so within twenty (20) calendar days from the conclusion of the negotiation period, they shall each select a mediator. The two mediators will then appoint a third mediator who shall conduct mediation for the Parties as the sole mediator.
 5. The Parties agree to participate in good faith in the mediation and negotiations for a period of thirty (30) calendar days. The substantive and procedural law of the State of Colorado shall apply to the proceedings. If the Parties are not successful in resolving the dispute through mediation, then the Parties shall be free to pursue any other remedy afforded by the laws of the State of Colorado.
 6. Until final resolution of any dispute hereunder, the Contractor shall diligently proceed with the performance of this Contract as directed by the City. For purposes of this Contract, termination for convenience shall not be deemed a dispute. The City of Colorado Springs and the Contractor agree to notify each other in a timely manner of any claim, dispute, or cause of action arising from or related to this Contract, and to negotiate in good faith to resolve any such claim, dispute, or cause of action. To the extent that such negotiations fail, the City of Colorado Springs and the Contractor agree that any lawsuit or cause of action that arises from or is related to this Contract shall be filed with and litigated only by the Colorado District Court for El Paso County, CO.

32. DELIVERY

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

33. PAYMENTS

All invoices shall be sent to the Project Manager identified in this Contract.



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

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

Each invoice must contain at least the following information:

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

34. INSPECTION OF SERVICES

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

- A. Definition of "services", as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.
- B. The Contractor shall provide and maintain an inspection system acceptable to the City covering the services under this Contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the City during Contract performance and for as long afterwards as the Contract requires.
- C. The City has the right to inspect and test all services called for by the Contract, to the extent practicable at all times and places during the term of the Contract. The City will perform inspections and tests in a manner that will not unduly delay the work.
- D. If the City performs inspections or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in Contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

35. SECURITY

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



36. TIME IS OF THE ESSENCE

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

37. EMPLOYMENT OF LABOR

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

38. SALES TAX

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

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

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

Note: For all equipment, materials and supplies incorporated into the work purchased from vendors or suppliers not licensed to collect City Sales Tax (i.e. out of state suppliers, etc.), City Use Tax is due and payable to the City. The Contractor shall execute and deliver and shall cause the Contractor's subcontractors to execute and deliver to the City Sales Tax Office, the appropriate ST forms as designated by the City Sales Tax Office. These forms shall list 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>. Questions can be directed to the City Sales Tax Division at (719) 385-5903.

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



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

39. SEVERABILITY

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

40. LIABILITY OF CITY EMPLOYEES

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

41. USE OF CITY NAME OR LOGO

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

42. TRAVEL

If travel expenses are included as a line item in this Contract, all travel expenses incurred and billable by the Contractor are subject to City approval. Air travel shall be limited to the round trip "economy coach" fare. Travel from the Colorado Springs Airport is encouraged. Unless there are extenuating circumstances, the Contractor 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 SIGNATURE

This Agreement and all other documents contemplated hereunder may be executed using electronic signature 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 Sheet
2. Schedule B – General Construction Terms and Conditions
3. Schedule C – Special Contract Terms and Conditions
4. Schedule D – General Specifications
5. Schedule E – Special and Technical Specifications
6. Schedule F – Scope of Work
7. Exhibit 1 – Performance, Labor and Material Payment, and Maintenance Bonds
8. Exhibit 2 – Minimum Insurance Requirements



CONTRACT SIGNATURE PAGE

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:
Corporate Name
Signature Date
Title



EXHIBIT 3 – EVALUATION SCORESHEET

RFP EVALUATION CRITERIA DESCRIPTION	SCORE
<p>1. TECHNICAL AREA</p> <p>The Offeror must explain its overall solution, considering the scope of work or statement of work provided. The content must include, but not necessarily be limited to, the following information.</p>	
<p>A. Understanding of and compliance with technical requirements</p>	
<p>In the Technical Area, the Offeror should address each work area in sufficient detail to demonstrate a clear and full understanding of the work. The proposal should not merely parrot the requirements of the RFP. Further, the Offeror should provide evidence of sufficient planning to ensure the work is completed on schedule and within budget.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal demonstrate a firm understanding of the requirements and goals of the Statement of Work, as well as industry standards and reasonable expectations for a company in the industry? 2. Does the proposal fully and completely address each requirement and goal of the Statement of Work? 3. Does the proposal provide solutions to indicate that requirements and goals will be met on schedule? 4. Does the technical solution seem realistic? 5. Does it generally appear that the Offeror knows and thoroughly understands the business and requirement? <p>COMMENTS:</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p>
<p>B. Project Approach</p>	
<p>In the Technical Area, the Offeror should clearly present proposed solutions and indicate that it has performed adequate planning to accomplish tasks as defined in the Statement of Work. Innovations, efficiencies, and detailed specifics are all encouraged.</p> <p>The Offeror must at least address the following areas:</p> <ol style="list-style-type: none"> 1. Construction phasing and traffic control for the project. Explain the phases, traffic control for each phase, and the logic in the construction phasing. 2. Erosion and sediment control during all phases of construction as well as post construction efforts through permit closure. <p>D.</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p>



<p>E.</p> <p>3. Coordination with utilities. Discuss your understanding of the key utility relocations required for this project and how you will coordinate and phase your construction to both facilitate and accommodate those relocations and the constraints that they impose.</p> <p>F.</p> <p>4. Schedule Management. Discuss your approach to schedule management including updating and reporting progress of the work.</p> <p>G.</p> <p>5. Quality Control. Discuss your quality control plan, processes and approach to ensure that the City receives a quality product.</p> <p>H.</p> <p>6. Safety. Discuss the contractor's approach and commitment to safety for both construction workers and the public traveling through the construction site.</p> <p>I.</p> <p>7. Potential issues that your firm foresees with this project and how you would make adjustments if encountered. Describe factors limiting construction phasing flexibility and potential remedies.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal include a complete plan to accomplish each requirement, including subcontracting (if applicable)? 2. Does the proposal demonstrate that appropriate and qualified personnel and equipment will be provided to carry out the requirement? 3. Is the proper level of effort directed toward each requirement? Does the level of effort look unrealistically low or unreasonably high? <p>COMMENTS:</p>	
<p>Sum of Ratings in Technical Area (Add numbers in Section 1.A. and 1.B):</p>	
<p>Evaluation Factor:</p>	<p>.35</p>
<p>Technical Area Evaluation Score (Multiply the sum of ratings in Technical Area by the evaluation factor):</p>	
<p>2. MANAGEMENT AREA</p>	
<p>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.</p>	
<p>A. Program Management Controls</p>	
<p>In the Management Area, the Offeror should provide a plan of operation, to include management of personnel, workload, schedule, and budget. It should also include</p>	<p>5 – Exceptional 4 – Very Good</p>



<p>an organization chart which demonstrates clear and effective lines of authority, responsibility, and communication for management, supervisory, and technical personnel. The plan should address which job classification or personnel will be assigned to each task and how that determination is made. Basic human resource management concepts should be addressed, including hiring, firing, discipline, incentive plans, etc. 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 July 2024.</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. Are program management controls consistent with the technical portion of the proposal, especially regarding schedule and level of effort? 3. Does the plan and controls indicate that the Offeror will obtain, keep, and efficiently utilize high quality personnel? 4. Does the offer address corrective actions? 5. Does the proposal explain how the Offeror will remain within schedule and budget? <p>COMMENTS:</p>	<p>3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p>
<p>B. Past Performance/Relevant Experience and Key Personnel</p>	
<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 relevant to the requirements of the Statement of Work of the RFP? 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>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p>



<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? 4. List any Irrigation Specific Certifications. <p>COMMENTS:</p>	
<p>Sum of Ratings in Management Area (Add numbers in Sections 2.A. and 2. B.)</p>	
<p>Evaluation Factor:</p>	<p>.30</p>
<p>Management Area Evaluation Score (Multiply the sum of ratings in Management Area by the evaluation factor):</p>	
<p>3. PRICE/COST AREA</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? 	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p> <p>Rating: _____</p>



<p>4. Can you see how the price was built? If so, do the costs look appropriate for the task?</p> <p>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.</p> <p>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> <p>COMMENTS:</p>	
<p>Total Price/Cost Area (Insert number from Section 3 evaluation above):</p>	
<p>Evaluation Factor:</p>	.25
<p>Price/Cost Area Evaluation Score (Multiply the Total Price/Cost Area by the evaluation factor):</p>	
4. PROPOSAL PRESENTATION	
<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>	
<p>Evaluation Factor:</p>	.10
<p>Proposal Presentation Area Evaluation Score (Multiply the Total Proposal Presentation Area score by the evaluation factor):</p>	
EXCEPTIONS PROPOSED	
<p>What (if any) exceptions (redlines to our terms and conditions) were proposed? Are they acceptable?</p> <p>COMMENTS:</p>	Pass/Fail
<p>TOTAL SCORE – Add Evaluation Scores from Sections 1-4 and location bonus (if applicable). The sum is the total score.</p>	<p>Total Score:</p>



EXHIBIT 4 – FEDERAL FORMS

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The undersigned duly authorized official of the proposer certifies to the best of its knowledge and belief, that it and its principals:

A. Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency.

B. Have not within a three-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements or receiving stolen property.

C. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in paragraph (B) of this certification; and

D. Have not within a three-year period preceding this application/proposal had one or more public transaction (federal, state or local) terminated for cause or default.

E. Are not on the Comptroller General’s List of Ineligible Bidders or any similar list maintained by any other governmental entity.

Where the proposer is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

(Check One)

I DO CERTIFY (____)

I DO NOT CERTIFY (____)

Date: _____

Signature: _____

Title: _____



RESTRICTIONS ON LOBBYING CERTIFICATION

Pursuant to United States Public Law 101-121, Section 319, the undersigned duly authorized official of the proposer hereby certifies, to the best of her/his knowledge and belief, that:

1. No Federal appropriated funds have paid or will be paid, by or on behalf of the undersigned, to any person for the purpose of influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress, in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person or agency for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress, in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit a Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.
3. The undersigned duly authorized official shall require and ensure that the language of this certification be included in any award documents for subcontracts, grants, loans, and cooperative agreements, and that all subcontractors shall so certify and disclose accordingly.

This Certification is a material representation of fact, upon which reliance was placed when this transaction was made or entered into. The submission of this Certification is a prerequisite for making or entering into this transaction, imposed by Title 31 USC Section 1352. Any proposer (person) who fails to file the required certification shall be subject to civil penalty of not less than ten thousand dollars (\$10,000) and not more than one hundred thousand dollars (\$100,000) for each such failure to file.

Proposer: _____

Signature: _____

Title: _____

Date: _____



NON-COLLUSION AFFIDAVIT

The undersigned duly authorized official of the proposer hereby certifies, to the best of her/his knowledge and belief, that:

1. That I am an officer or employee of the _____ (proposing entity) having the authority to sign on behalf of the corporation, and,

2. That the prices in the attached proposal were arrived at independently by _____ (proposing entity) without collusion, consultation, communication, or any agreement, for the purpose of restricting competition as to any matter relating to such prices with any other proposer or with any other competitor regarding an understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or service described in the RFP/IFB designed to limit independent proposals or competition; and

3. That unless otherwise required by law, the contents and prices contained in the proposal have not been communicated by _____ (proposing entity) or its employees or agents to any person not an employee or agent of _____ (proposing entity), or its surety on any bond furnished with the proposal, and will not be communicated to any such person prior to the official opening of the proposal; and,

4. That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Proposer: _____

Signature: _____

Title: _____

Date: _____



EQUAL EMPLOYMENT STATUS REPORT

Contractor's Name _____

Street Address _____

City _____ State _____ Zip Code _____

This firm is:

<input type="checkbox"/>	Independently owned and operated
<input type="checkbox"/>	An affiliate parent company
<input type="checkbox"/>	A subsidiary of address
<input type="checkbox"/>	A division City and State

#	Statement	Has	Has Not
1	Developed and has on file an affirmative action program in conformance with 41 CFR 60-2		
2	Participated in any previous contract or subcontract subject to the equal opportunity clause either with the City of any Federal Agency		
3	Filed with the City, or where applicable, joint Reporting Committee, or other Federal Agency, all reports due under the applicable contract(s) or subcontract(s)		
4	Contractor's Equal Employment Opportunity Program been subject to a Federal Equal Opportunity Compliance Review, If so state date of Review: _____		

Signature _____

Date _____

Title _____



BUILD AMERICA, BUY AMERICA (BABAA) (if applicable)

The undersigned certifies, to the best of their knowledge and belief, that:

The Build America, Buy America Act (BABAA) requires that no federal financial assistance for “infrastructure” projects is provided “unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.” Section 70914 of Public Law No. 117-58, §§ 70901-52.

The undersigned certifies that for the _____ (Project Name and Location) _____ the iron, steel, manufactured products, and construction materials used in this contract are in full compliance with the BABAA requirements including:

1. All iron and steel used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
2. All manufactured products purchased with federal financial assistance must be produced in the United States. For a manufactured product to be considered produced in the United States, the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55% of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.
3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

“The, _____ [Contractor or Subcontractor] ____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the [Contractor or Subcontractor] understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.”

Signature of [Contractor’s or Subcontractor’s] Authorized Official

Name and Title of [Contractor’s or Subcontractor’s] Authorized Official

Date



SECTION IV – SCHEDULES

6.0 SCHEDULES

Schedule A	Price Sheet
Schedule B	General Construction Terms and Conditions
Schedule C	Special Specifications
Schedule D	Clauses for Contracts Subject to Federal Requirements
Schedule E	Construction Plan Set



SCHEDULE A – PRICE SHEET

Price Sheet is provided in Excel Format uploaded separately to BidNet.



SCHEDULE B – GENERAL CONSTRUCTION TERMS AND CONDITIONS

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

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

The referenced General Construction Terms and Conditions will be incorporated in the resultant Contract.



SCHEDULE C – SPECIAL SPECIFICATIONS

Will follow this page.

SECTION 32 84 00

PLANTING IRRIGATION

PART 1: GENERAL

1.01 SCOPE:

Furnish all labor, materials, supplies, equipment, tools, and transportation, and perform all operations in connection with and reasonably incidental to the complete installation of the irrigation system, and guarantee/warranty as shown on the drawings, the installation details, and as specified herein. The specifications herein are intended to be all inclusive, there may be equipment cited that is not part of this project. Items of work specifically included are:

- I. Procurement of any applicable licenses, permits, and fees as required by City Standards.
- II. Install per City of Colorado Springs Utilities Non Potable Water Standards.
- III. Coordination of Utility Locates ("Utility Notification Center").
- IV. Connection of electrical power and cell modem communication for irrigation control system.
- V. Sleeving for irrigation pipe and wire.
- VI. Preparation of Record Drawings.
- VII. Spring start-up and fall winterization.
- VIII. Maintenance period.
- IX. Tree Protection.
- X. Traffic Control.
- XI. Asphalt Removal and Patching.

1.02 SUBMITTALS:

- I. Deliver one (1) copy of all submittals to the Owner's Representative within 10 working days from the date of Notice to Proceed. Provide a PDF copy with table of contents and index sheet. Provide sections that are indexed for different components and labeled with the specification section number and the name of the component. Submittals must be made for all the components on the material list. Indicate which items are being supplied on the catalog cut sheets when multiple items are shown on one sheet. Submittal package must be complete

prior to being reviewed by the Owner's Representative. Incomplete submittals will be returned without review.

- II. Materials List: Include sleeving, pipe, fittings, mainline components, sprinkler, control system, shop drawings and all other components shown on the drawings and installation details or described herein. Components such as pipe sealant, wire, wire connectors, ID tags, etc. must be included. Quantities of materials need not be included.
 - III. Manufacturers' Data: Submit manufacturers' catalog cuts, specifications, and operating instructions for equipment shown on the materials list.
 - IV. Shop Drawings: Submit shop drawings called for in the installation details. Show products required for proper installation, their relative locations, and critical dimensions. Note modifications to the installation detail.
 - V. HDPE Pipe Bore Pits: Contractor is responsible for final determination of bore pit locations. Submit final bore pit locations as a shop drawing.
- 1.03 RULES AND REGULATIONS:
- I. Work and materials shall be in accordance with the latest edition of the National Electric Code, the Uniform Plumbing Code as published by the Western Plumbing Officials Association, and applicable laws and regulations of the governing authorities. When publications are referenced in the text, it is assumed to be the latest version.
 - II. When the contract documents call for materials or construction of a better quality or larger size than required by the above-mentioned rules and regulations, provide the quality and size required by the contract documents.
 - III. If quantities are provided either in these specifications, on the drawings or in bid documents, these quantities are provided for information only. It is the Contractor's responsibility to determine the actual quantities of all material, equipment, and supplies required by the project and to complete an independent estimate of quantities and wastage.
- 1.04 QUALITY ASSURANCE:
- I. Irrigation Contractor must have demonstrated, using persons directly employed by the Contractor, experience with the installation of at least five (5) cemetery, golf course or large commercial irrigation system installations that have used large diameter HDPE pipe (6-inch and larger), horizontal directional boring, two-wire decoder cloud based control system, large radius sprinklers and electrically operated remote control valves.

- II. Irrigation Contractor and project superintendent must be certified by control system manufacturer as a certified Contractor. Provide documentation from control system manufacturer regarding certification.
 - III. Irrigation Contractor and project superintendent must currently be an Irrigation Association Certified Irrigation Contractor (CIC) and in good standing.
 - IV. Irrigation Contractor personnel who are fusing HDPE pipe, must be trained and certified by the HDPE pipe or fusing equipment manufacturer in proper fusing methods for HDPE pipe and proper use of fusing equipment. Training to be per ASTM F3190-21. Provide documentation of training and certification with both the bid submittal and equipment submittals.
 - V. Installer's Field Supervision: Field supervision shall be on site, full time during installation. Field supervisor shall have at least 5 years' experience in two-wire decoder control system installation.
 - VI. Irrigation Contractor must be licensed in the State of Colorado.
 - VII. Provide documentation of all Contractor qualifications with equipment submittals.
- 1.05 DEMOLITION:
- I. Remove existing irrigation components per the drawings and as specified herein.
 - II. Existing Filter Enclosure: Remove and protect. Existing enclosure will be reused for new filter.
 - III. Existing Controllers:
 - A. Remove existing controllers including concrete base and grounding.
 - B. Protect existing power and control wire and conduits.
 - C. Prior to removal of control wire, label all control wiring with existing station number. Control wiring is to be reinstalled to the same station number.
 - D. Prior to removal of controller, record operating program including start time(s) and station run times. Contractor is responsible for programming new controller with existing operating program.
 - IV. Legally dispose of removed items off site. Backfill, compact, replace existing turf and/or repair road as directed on the drawings.
- 1.06 TESTING:
- I. Notify the Owner's Representative three days in advance of testing.
 - II. Subject pipelines joined with fusion welded or threaded connections to a pressure test after partial completion of backfill. Pipelines jointed with solvent-welded PVC joints will be allowed to cure at least 24 hours before testing.

- III. Subsections of mainline pipe may be tested independently, subject to the review of the Owner's Representative.
- IV. Furnish clean, clear water, pumps, labor, fittings, and equipment necessary to conduct tests or retests. Pressure gauge resolution must be suitable for recording losses less than 5 psi.
- V. Testing Documentation:
 - A. Submit a written report of all tests to Owner. Each test must list name of test, date of test, name of the individual completing the test, name of the company completing the test. Submit test documentation to Owner within three (3) days of completing test.
 - B. Control System Grounding-Include identification of each grounding equipment by the remote control valve number and the ohms resistance to ground.
 - C. Sensor Cable-Include ohm reading to ground.
- VI. Bent Strap Test - HDPE Mainline Pipe
 - A. Prior to installation of HDPE pipe, demonstrate that HDPE pipe is being fused properly by performing a bent strap test on a fusion joint for each size of HDPE pipe being used.
 - B. Test must be performed with Contractor's on-site fusion personnel and equipment.
 - C. Perform test per Plastic Pipe Institute Handbook of Polyethylene Pipe Chapter 2.
 - D. Perform test in presence of Owner's Representative.
 - E. Any disbondment at fusion joint is unacceptable and indicates poor fusion quality. If failure occurs, fusion procedures and/or machine set-up must be changed, and a new trial fusion and bent strap test performed. Field fusion should not proceed until a test joint has passed the bent strap test for all pipe sizes being used.
- VII. Hydrostatic Pressure Test – HDPE Pipe:
 - A. Subject pipe to a constant hydrostatic pressure and measure pressure loss. Test with mainline components installed.
 - B. Backfill to prevent pipe from moving under pressure. Expose couplings and fittings.
 - C. Expose all remote control valves, their riser pipe and service tee fittings.
 - D. Purge air from mainline pipe before test. Attach pressure gauge to mainline pipe in test section.
 - E. Pressurize pipe to a minimum of 120 PSI. Shut off water/pressure source. Hold for two (2) hours.
 - F. Observe pressure loss on pressure gauge. If pressure loss is greater than 5 PSI, identify reason for pressure loss. Replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until pressure loss is equal to or less than 5 PSI.

- G. Visually inspect irrigation pipe for leakage and replace defective pipe, fittings, joint, valve, or appurtenance. Repeat test until pipe passes test.
- H. Cement or caulking to seal leaks is prohibited.

VIII. Operational Test:

- A. Activate each remote control valve in sequence from controller. Owner's Representative will visually observe operation, water application patterns, and leakage.
- B. Replace defective remote control valve, solenoid, wiring, or appurtenance to correct operational deficiencies.
- C. Replace, adjust, or move Sprinkler(s) to correct operational or coverage deficiencies.
- D. Replace defective pipe, fitting, joint, valve, sprinkler, or appurtenance to correct leakage problems. Cement or caulking to seal leaks is prohibited.
- E. Repeat test(s) until each lateral passes all tests. Repeat tests, replace components, and correct deficiencies at no additional cost to the Owner.

IX. Control System Acceptance Test:

- A. Upon completion of construction, Owner's Representative will administer a System Acceptance Test.
- B. Following construction completion and a review by the Owner's Representative, an evaluation period will begin. After 30 days of continuous service without major system problems, the system will be accepted, and the guarantee/warranty period will begin. If at any time during the 30-day evaluation period, a major system problem occurs, the source of the problem will be determined and corrected, and the 30-day evaluation period will start again. Equipment will not be accepted until such time as the System Acceptance Test is passed.
- C. If successful completion of the System Acceptance Test is not attained within 90 days following commencement of the evaluation period, the Project Manager has the option to request replacement of equipment, terminate the order, or portions thereof, or continue with the System Acceptance Test. These options will remain in effect until such time as a successful completion of the System Acceptance Test.
- D. Final payment will be made after successful completion of the System Acceptance Test.

XI. Sensor Cable:

- A. Test for leaks to ground per manufacturer's recommendations. Test results must meet or exceed manufacturer's guidelines for acceptance.
- B. Replace defective wire, underground splices, or appurtenances. Repeat the test until the manufacturer's guidelines are met.

1.07 CONSTRUCTION REVIEW:

The purpose of on-site reviews by the Owner's Representative is to periodically observe the work in progress, the Contractor's interpretation of the construction documents, and to address questions with regard to the installation.

- I. Scheduled reviews such as those for irrigation system layout or testing must be scheduled with the Owner's Representative as required by these specifications.
- II. Impromptu reviews may occur at any time during the project.
- III. A review will occur at the completion of the irrigation system installation and Project Record Drawing submittal.

1.08 COORDINATION AND SCHEDULING:

- I. The irrigation construction schedule is to be provided at the Pre-Construction meeting depicting the dates the various stages of the project will start and when they will be completed. Update the schedule weekly throughout the project.

1.09 GUARANTEE/WARRANTY AND REPLACEMENT:

The purpose of this guarantee/warranty is to ensure that the Owner receives irrigation materials of prime quality, installed and maintained in a thorough and careful manner.

- I. For a period of one year from commencement of the formal maintenance period, guarantee/warranty irrigation materials, equipment, and workmanship against defects. Fill and repair depressions. Restore landscape or structural features damaged by the settlement of irrigation trenches or excavations. Repair damage to the premises caused by a defective item. Make repairs within seven days of notification from the Owner's Representative.
- II. Contract documents govern replacements identically as with new work. Make replacements at no additional cost to the contract price.
- III. Guarantee/warranty applies to originally installed materials, equipment, and replacements made during the guarantee/warranty period.

1.10 GENERAL CONSTRUCTION REQUIREMENTS:

- I. Non-potable water is used for irrigation. All components including pipe, sprinklers, quick couple valves, remote control valves, valve boxes, etc., are to have purple markings, caps or lids to signify the use of non-potable water. Non-potable water facilities to be installed per Colorado Springs Utilities Water Standards and Specifications.
- II. Coordinate construction of irrigation system with Cemetery Staff. See irrigation plans and installation details for required coordination efforts related to the installation of specific irrigation components.

- III. Control of Excavations: See drawings and Section 3.3 for safety and access directions.
- IV. Construction cannot proceed unless staking of irrigation mainline, remote control valve locations, and sprinkler locations are reviewed and accepted by the Owner's Representative.
- V. Provide tree protection per Tree Protection Plan.
- VI. Provide erosion control per City Standards.
- VII. Provide traffic control per City Standards.
- VIII. Remove and patch asphalt per City Standards.
- IX. Repair, restore or compensate Owner for any damage to monumentation, walls, fences or other structural features damaged by the construction activities.

PART 2: MATERIALS

2.01 QUALITY:

Use materials that are new and without flaws or defects of any type, and which are the best of their class and kind.

2.02 SUBSTITUTIONS:

- I. Unless noted otherwise, use specified equipment to match existing. Alternative equipment must be approved by the Owner and Engineer prior to bidding. The Contractor is responsible for making any changes to the design to accommodate alternative equipment.
- II. Pipe sizes referenced in the construction documents are minimum sizes and may be increased at the option of the Contractor.

2.03 SLEEVING:

- I. Install a separate sleeve beneath paved areas to route lateral pipe or wiring bundle.
- II. Sleeving material beneath pedestrian pavements shall be PVC C-900/905 pipe.
- III. Sleeving beneath drives and streets shall be PVC C-900/905 pipe.
- IV. Sleeving diameter: A minimum of twice the nominal diameter of pipe or wiring bundle, or as indicated on drawings.

- V. All sleeving located under concrete, pavement or other hard surfacing shall be notched on both sides to mark the sleeve location.

2.04 PIPE AND FITTINGS:

I. Existing Pipe and Fittings:

- A. Mainline: PVC C-900 with ductile iron fittings.
- B. Submainline: PVC Class 200 with ductile iron fittings.

II. HDPE Mainline Pipe and Fittings:

- A. Use high density, extra high molecular weight polyethylene pipe (HDPE), extruded from material meeting the specifications of cell classification on PE 4710, ASTM standard D 3350, DR 11, rated at 200 PSI, conforming to the dimensions and tolerances established by ASTM F 714 for mainline pipe.
- B. Join pipe lengths using butt-fusion technique as recommended by pipe manufacturer. Join HDPE to dissimilar pipe materials using HDPE (butt-fusion) x flange adapter with ductile iron back-up ring.

III. PVC Lateral Pipe and Fittings:

- A. Use rigid, un-plasticized polyvinyl chloride (PVC) 1120, 1220 National Sanitation Foundation (NSF) approved pipe, extruded from material meeting the requirements of Cell Classification 12454-A or 12454-B. ASTM Standard D1784, with an integral belled end suitable for solvent welding.
- B. Use Class 200, SDR-21, rated at 200 PSI, conforming to the dimensions and tolerances established by ASTM Standard D2241. Use PVC pipe rated at higher pressures than Class 200 in the cases where small nominal diameters are not manufactured in Class 200.
- C. Use solvent weld pipe for lateral pipe. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standards D2466 and D1784 for PVC pipe. Use primer approved by the pipe manufacturer. Solvent cement to conform to ASTM Standard D2564, of a type approved by the pipe manufacturer.

III. Specialized Pipe and Fittings:

- A. Assemblies calling for flanged connections shall utilize stainless steel studs and nuts and rubber gaskets.
- B. Assemblies calling for threaded pipe connections shall utilize PVC Schedule 80 and 40 threaded fittings and Spears pre-manufactured swing-joint assemblies. Use PVC Schedule 80 nipples.
- C. Joint sealant: Use non-hardening, nontoxic pipe thread sealant formulated for use on threaded connections and approved by the pipe fitting and valve manufacturers. Where directed by valve manufacturers, use thread tape for threaded connections at valves instead of thread paste.

2.05 MAINLINE COMPONENTS:

- I. Backflow Assembly: As presented in the drawings and details.
- II. Filter Assembly: As presented in the drawings and details.

- III. Master Valve Assembly: As presented in the drawings and details.
- IV. Flow Sensor Assembly: As presented in the drawings and details.
- V. Winterization Assembly: As presented in the drawings and details.
- VI. Isolation Gate Valve Assembly: As presented in the drawings and details. Use ductile iron gasketed repair coupling. Use C900 pipe to make existing.
- VII. Quick Coupling Valve Assembly: As presented in the installation details.
- VIII. Air Vacuum Relief Valve Assembly: as presented in the drawings and details.

2.06 SPRINKLER IRRIGATION COMPONENTS:

- I. Remote Control Valve (RCV) Assembly for Sprinkler Laterals: as presented in the installation details. Use wire connectors and waterproofing sealant to join control wires to solenoid valves. Use standard Christy I.D. tags with hot-stamped black letters on a yellow background. Install a separate valve box over a 3-inch depth of 3/4-inch gravel for each assembly. Install two-wire decoder on each control valve.
- II. Sprinkler Assembly: As presented in the drawings and installation details.

2.07 CONTROL SYSTEM COMPONENTS:

- I. Control Unit: As presented in drawings and details.
 - A. Controller Assembly: All incidental parts which are not specified herein and are necessary to complete the system shall be furnished and installed as though such parts were shown on plans or specified. All systems shall be in satisfactory operation at the time of completion. Contractor is responsible to meet with designated Owner's Representative as well as authorized Distributor to verify cell modem communication. Contractor to provide designated Owner's Representative with a final Package System sales order from an authorized Distributor for approval BEFORE ordering system.
 - B. Lightning protection: Provide one 4" x 96" x 0.0625" ground plate, one 5/8"x10 foot copper clad UL listed grounding rod, 30 feet of #6 AWG bare copper grounding wire, and one CADWELD connector, and two 6-inch round valve boxes at each controller. Contractor responsible for adding to the grounding path until test measures 10 ohms or less.
 - C. Wire markers: Pre-numbered or labeled with indelible nonfading ink, made of permanent, nonfading material.
- II. Power Wire:
 - A. Reuse existing electric power wire at control unit. Splice and extend to power terminals if needed. If extension is needed, use AWG 14 wire solid or

- stranded copper, Type UF single conductor cable or multi-conductor with ground cable, UL approved for direct underground burial.
- B. Splices: Use 3M 82-A series connectors.
- C. Conduit: PVC Schedule 40.

III. Control Wiring:

- A. Reuse existing control wiring at control unit. Splice and extend to terminal strip if needed. If extension is needed, use AWG No. 14-1 solid copper, 600 volt, Type UF or PE cable, UL approved for direct underground burial. Color to match existing. Replace any conduit damaged by demolition.
- B. Splices: Use 3M DBR/Y-6 wire connector and waterproof sealant.
- C. Conduit: PVC Schedule 40.

2.08 OTHER COMPONENTS SUPPLIED BY CONTRACTOR:

- I. Tools and Spare Parts: Provide operating keys, servicing tools, spare parts and other items indicated in the General Notes of the drawings.
- II. Other Materials: Provide other materials or equipment shown on the drawings or installation details that are part of the irrigation system, even though such items may not have been referenced in these specifications.

PART 3: EXECUTION

3.01 INSPECTIONS AND REVIEWS:

- I. Site Inspections:
 - A. Verify construction site conditions and note irregularities affecting the work of this section. Report irregularities to the Owner's Representative prior to beginning work.
 - B. Beginning work of this section implies acceptance of existing conditions.
- II. Utility Locates ("Utility Notification Center of Colorado"):
 - A. Arrange for and coordinate the location of all underground utilities.
 - B. Repair any underground utilities damaged during construction. Make repairs at no additional cost to the contract price.
 - C. Irrigation System Layout Review: Irrigation system layout review will occur after the staking has been completed. Notify the Owner's Representative one week in advance of review. Modifications will be identified by the Owner's Representative at this review.

3.02 LAYOUT OF WORK:

- I. Stake out the irrigation system. Items staked include sprinklers, mainline and lateral pipe, mainline components, control valves, quick coupling valves, controller, and bore pits.
- II. Install all mainline pipe and mainline components inside of project property lines.

- 3.03 EXCAVATION, TRENCHING, AND BACKFILLING:
- I. Excavate to permit the pipes to be laid at the intended elevations and to permit workspace for installing connections and fittings.
 - II. Minimum cover (distance from top of pipe or control wire to finish grade):
 - A. When connecting to existing pipe, depth to match existing.
 - B. 36-inches over mainline pipe.
 - C. 30-inches over submainline pipe to remote control valve assemblies.
 - B. 18-inches over lateral pipe to sprinklers.
 - D. Note: In cases where the pipe depth has to be adjusted, the maximum allowable cover over mainline and lateral pipe is 42-inches.
 - III. Protect tree(s) near excavations per Tree Protection Plan.
 - IV. Pipe pulling is allowed for control wire conduit only.
 - V. Excavated material is generally satisfactory for backfill. Backfill shall be free from rubbish, vegetable matter, and stones larger than 2-inches in maximum dimension. Remove material not suitable for backfill. Backfill placed next to pipe shall be free of sharp objects that may damage the pipe.
 - VI. Backfill unsleeved pipe in either of the following manners:
 - A. Backfill and puddle the lower half of the trench. Allow to dry 24 hours. Backfill the remainder of the trench in 6-inch layers. Compact to density of surrounding soil.
 - B. Backfill the trench by depositing the backfill material equally on both sides of the pipe in 6-inch layers and compacting to the density of surrounding soil.
 - VII. Enclose pipe and wiring beneath roadways, walks, curbs, etc., in sleeves. Minimum compaction of backfill for sleeves shall be 95% Standard Proctor Density, ASTM D698-78. Use of water for compaction around sleeves, "puddling", will not be permitted.
 - XI. Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades.
 - XII. Where utilities conflict with irrigation trenching and pipe work, contact the Owner's Representative for trench depth adjustments.
 - XIII. Horizontal Boring:
 - A. Replacing Existing Mainline: Use horizontal directional drilling pipe bursting techniques as recommended by Plastic Pipe Institute Polyethylene Pipe Handbook, Chapter 16 and in accordance with accepted industry practices. Use a pneumatic pipe bursting system.
 - B. Use horizontal directional drilling techniques as recommended by NASTT, ASTM F1962 and in accordance with accepted industry practices.

- C. Locate and stake bore pit locations. Prior to construction, contact Owner's Representative to confirm that bore pit locations are acceptable.
- D. Legally dispose of excess direction boring slurry off site.
- E. Backfill bore pits to original grade. Backfill by depositing the backfill material in 6-inch layers and compacting to 95% Standard Proctor Density, ASTM D698-78.
- F. Resod bore pit if located in existing turf area.

3.04 SLEEVING AND BORING:

- I. Install sleeving at a depth that permits the encased pipe or wiring to remain at the specified burial depth.
- I. Extend sleeve ends six inches beyond the edge of the paved surface. Cover pipe ends and mark with stakes.
- II. Bore for sleeves under obstructions that cannot be removed. Employ equipment and methods designed for horizontal boring. Hand excavating under sidewalks and hardscapes will not be allowed.

3.05 ASSEMBLING PIPE AND FITTINGS:

- I. General:
 - A. Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends.
 - B. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.
 - C. Trenches may be curved to change direction or avoid obstructions within the limits of the curvature of the pipe. Minimum radius of curvature and offset will be based on manufacturers recommendations. Contractor is required to provide chart of allowable deflection with pipe submittals. No deflection will be allowed at a pipe joint.
- II. HDPE Mainline Pipe and Fittings:
 - A. Join pipe lengths using butt-fusion technique as recommended by pipe manufacturer and per ASTM 2620.
 - B. Join HDPE pipe to dissimilar pipe materials using HDPE (butt-fusion) x flange adapter with ductile iron back-up ring. Provide flanged transition fitting as required for connection to dissimilar pipe material.
 - C. Provide a bend back test on the first joint of the day per ASTM 2620 and with every operator change.
 - D. Replacing Existing Mainline:
 - 1. Remove existing ductile iron fittings and mainline components.
 - 2. Install new HDPE mainline in annulus of existing pipe using horizontal directional drilling pipe bursting techniques.
 - 3. Backfill bore pits and other excavations, and patch asphalt.
- III. PVC Lateral Pipe and Fittings:

- A. Use only strap-type friction wrenches for threaded plastic pipe.
- B. PVC Solvent Weld Pipe:
 - 1. Use primer and solvent cement. Join pipe in the manner recommended by the manufacturer and in accordance with accepted industry practices.
 - 2. Cure for 30 minutes before handling and 24 hours before allowing water in the pipe.
 - 3. Snake pipe from side to side within the trench.
- C. Fittings: The use of cross type fittings is not permitted.

IV. Specialized Pipe and Fittings:

- A. Flanged connections: Install stainless steel studs and nuts and rubber gaskets per manufacturer's recommendations.
- B. PVC Threaded Connections:
 - 1. Use only factory-formed threads. Field-cut threads are not permitted.
 - 2. Use only non-hardening, nontoxic thread sealant.
 - 3. When connection is plastic-to-metal, the plastic component shall have male threads and the metal component shall have female threads.
- C. Make metal-to-metal, threaded connections with non-hardening, nontoxic pipe sealant applied to the male threads only.

3.06 INSTALLATION OF MAINLINE COMPONENTS:

- I. Backflow Assembly: Install where indicated on the drawings according to manufacturer's installation guidelines.
- II. Filter Assembly: Install where indicated on the drawings according to manufacturer's installation guidelines. Reinstall existing enclosure.
- III. Master Valve Assembly: Install where indicated on the drawings according to manufacturer's installation guidelines. Paint "MVA" on valve box lid in 2-inch high letters using a stencil and Krylon Professional Striping spray paint.
- IV. Flow Sensor Valve Assembly: Install where indicated on the drawings. Paint "FS" on valve box lid in 2-inch high letters using a stencil and Krylon Professional Striping spray paint.
- V. Winterization Assembly: Install where indicated on the drawings. Paint "WA" on valve box lid in 2-inch high letters using a stencil and Krylon Professional Striping spray paint.
- VI. Isolation Gate Valve Assembly:
 - A. Install where indicated on the drawings.
 - B. Locate at least 12-inches from and align with adjacent walls or edges of paved areas.
 - C. Paint "IGV" on valve box lid in 2-inch high letters. For valve boxes with metal lids, paint "IGV" on lid using a stencil and Krylon Professional Striping spray paint.

VII. Quick Coupling Valve Assembly: Install where indicated on the drawings. Paint "QC" on valve box lid in 2-inch high letters using a stencil and Krylon Professional Striping spray paint.

VIII. Air Vacuum Relief Valve Assembly: Install where indicated on the drawings. Paint "AVR" on valve box lid in 2-inch high letters using a stencil and Krylon Professional Striping spray paint.

3.07 INSTALLATION OF SPRINKLER IRRIGATION COMPONENTS:

I. Remote Control Valve (RCV) Assembly for Sprinkler Laterals:

- A. Flush mainline before installation of RCV assembly.
- B. Install where indicated on the drawings. Connect control wires to remote control valve wires using 3M DBR/Y-6 waterproof connectors. Install connectors per the manufacturer's recommendations.
- C. Install only one RCV to a valve box. Locate valve box at least 12-inches from and align with nearby walls or edges of paved areas. Group RCV assemblies together where practical. Arrange grouped valve boxes in rectangular patterns. Allow at least 12-inches between valve boxes.
- D. Attach ID tag with controller station number to control wiring.
- E. Install two-wire decoder, per manufacturer's standards and recommendations.
- F. Paint valve box lid with appropriate controller letter and station number for each remote control valve. Paint in 2-inch high letters using a stencil and Krylon Professional Striping spray paint.

II. Sprinkler Assembly:

- A. Flush lateral pipe before installing sprinkler assembly.
- B. Install per the installation details at locations shown on the drawings.
- C. Locate rotary sprinklers 6-inches from adjacent walls, fences, or edges of paved areas.
- D. Install sprinklers perpendicular to the finish grade.
- E. Supply appropriate nozzle or adjust arc of coverage of each sprinkler for best performance.
- F. Adjust the radius of throw of each sprinkler for best performance.

3.08 INSTALLATION OF CONTROL SYSTEM COMPONENTS:

I. Control Unit:

- A. Install at the location(s) of the existing controller(s).
- B. Pour a new concrete pad as required for footprint of new controller(s).
- C. Lightning protection: As presented in drawings and details in order to achieve 10 ohms or less upon testing. Connection of grounding wire to the controller must be per controller manufacturer or distributor's recommendations.
- D. Program controller with same program documented prior to removal of existing controller.

- II. Power Wire:
 - A. Reuse existing power wire. Connect to power terminals in new controller.
 - B. If power wire must be spliced to reach terminals, make splice with wire connectors, installed per the manufacturer's instructions.

- III. Control Wire:
 - A. Reuse existing control wire.
 - B. Connect to terminal strip in new controller. Connect to same station as existing controller.
 - C. If control wire must be spliced to reach terminal strip, make splice with wire connectors and waterproof sealant, installed per the manufacturer's instructions.

3.09 INSTALLATION OF OTHER COMPONENTS:

- I. Tools and Spare Parts: Prior to the Review at completion of construction, supply to the Owner operating keys, servicing tools, spare parts, and any other items indicated in the General Notes on the drawings.
- II. Other Materials: Install other materials or equipment shown on the drawings or installation details that are part of the irrigation system, even though such items may not have been referenced in these specifications.

3.10 PROJECT RECORD DRAWINGS:

- I. The Contractor is responsible for documenting changes to the design. Maintain on-site and separate from documents used for construction, one complete set of contract documents as Project Documents. Keep documents current. Do not permanently cover work until as-built information is recorded.
- II. Survey piping, valves, sprinklers, controller(s), sleeve ends, stub-out(s) for future pipe or wiring connections, and all irrigation components enclosed within a valve box.
- III. Prior to construction completion, obtain from the Owner's Representative an AutoCAD data file for this project. Using CAD, the survey coordinates, and information contained on the project drawings maintained on site, create "Record Drawings" of the project. Label each sheet "Record Drawing".
- IV. Turn over the "Record Drawings" to the Owner's Representative for review and acceptance. Completion of the Record Drawings will be a prerequisite for the Review at the completion of the irrigation system installation.
- V. Turn over a list of RCV and corresponding decoder numbers installed in field.

3.11 WINTERIZATION AND SPRING START-UP:

- I. Winterize the irrigation system in the fall after the installation, and start-up the

irrigation system the following spring for each construction phase. Repair any damage caused by improper winterization at no additional cost to the Owner. Coordinate the winterization and start-up with the cemetery personnel.

3.12 MAINTENANCE:

- I. Upon completion of construction and Review by the Owner's Representative, maintain irrigation system for a duration of 30 calendar days. Make periodic examinations and adjustments to irrigation system components so as to achieve the most desirable application of water.

- II. Following completion of the Contractor's maintenance period, the Owner will be responsible for maintaining the system in working order during the remainder of the guarantee/warranty period, for performing necessary minor maintenance, for trimming around sprinklers, for protecting against vandalism, and for preventing damage after the landscape maintenance operation.

3.13 CLEANUP:

- I. Upon completion of work, remove from the site all machinery, tools, excess materials, and rubbish.

END OF SECTION



SCHEDULE D – CLAUSES FOR CONTRACTS SUBJECT TO FEDERAL REQUIREMENTS

1. EQUAL EMPLOYMENT OPPORTUNITY

To view the City of Colorado Springs EEOP (Equal Employment Opportunity Plan) Utilization Report, the link is www.coloradosprings.gov/eeop.

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

A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, 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, 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 setting forth the provisions of this nondiscrimination clause.

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

C. 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 to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. 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.

E. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

F. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, 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 procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless



exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 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 administering agency 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 by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

H. Subcontracts. Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.

I. Incorporation by reference. The equal opportunity clause may be incorporated by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Deputy Assistant Secretary may designate.

J. Incorporation by operation of the order. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.

K. Adaptation of language. Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings. [43 FR 49240, Oct. 20, 1978, as amended at 62 FR 66971, Dec. 22, 1997]

2. EQUAL EMPLOYMENT OPPORTUNITY REPORTS AND OTHER REQUIRED INFORMATION

A. Requirements for prime contractors and subcontractors.

1. Each prime contractor and subcontractor shall file annually, on or before the September 30, complete and accurate reports on Standard Form 100 (EEO-1) promulgated jointly by the Office of Federal Contract Compliance Programs, the Equal Employment Opportunity Commission and Plans for Progress or such form as may hereafter be promulgated in its place if such prime contractor or subcontractor (i) is not exempt from the provisions of these regulations in accordance with § 60-1.5; (ii) has 50 or more employees; (iii) is a prime contractor or first tier subcontractor; and (iv) has a contract, subcontract or purchase order amounting to \$50,000 or more or serves as a depository of Government funds in any amount, or is a financial institution which is an issuing and paying agent for U.S. savings bonds and savings notes: *Provided*, That any subcontractor below the first tier which performs construction work at the site of construction shall be required to file such a report if it meets requirements of paragraphs (a)(1) (i), (ii), and (iv) of this section.

2. Each person required by § 60-1.7(a)(1) to submit reports shall file such a report with the contracting or administering agency within 30 days after the award to him of a contract or subcontract, unless such person has submitted such a report within 12 months preceding the date of the award. Subsequent reports shall be submitted annually in



accordance with § 60-1.7(a)(1), or at such other intervals as the Deputy Assistant Secretary may require. The Deputy Assistant Secretary may extend the time for filing any report.

3. The Deputy Assistant Secretary or the applicant, on their own motions, may require a contractor to keep employment or other records and to furnish, in the form requested, within reasonable limits, such information as the Deputy Assistant Secretary or the applicant deems necessary for the administration of the order.

4. Failure to file timely, complete and accurate reports as required constitutes noncompliance with the prime contractor's or subcontractor's obligations under the equal opportunity clause and is ground for the imposition by the Deputy Assistant Secretary, an applicant, prime contractor or subcontractor, of any sanctions as authorized by the order and the regulations in this part.

B. Requirements for bidders or prospective contractors—

1. Certification of compliance with Part 60-2: Affirmative Action Programs. Each agency shall require each bidder or prospective prime contractor and proposed subcontractor, where appropriate, to state in the bid or in writing at the outset of negotiations for the contract: (i) Whether it has developed and has on file at each establishment affirmative action programs pursuant to Part 60-2 of this chapter; (ii) whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; (iii) whether it has filed with the Joint Reporting Committee, the Deputy Assistant Secretary or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements.

2. Additional information. A bidder or prospective prime contractor or proposed subcontractor shall be required to submit such information as the Deputy Assistant Secretary requests prior to the award of the contract or subcontract. When a determination has been made to award the contract or subcontract to a specific contractor, such contractor shall be required, prior to award, or after the award, or both, to furnish such other information as the applicant or the Deputy Assistant Secretary requests.

C. Use of reports. Reports filed pursuant to this section shall be used only in connection with the administration of the order, the Civil Rights Act of 1964, or in furtherance of the purposes of the order and said Act.[43 FR 49240, Oct. 20, 1978, as amended at 62 FR 66971, Dec. 22, 1997]

3. CONSTRUCTION WAGE RATE REQUIREMENTS (DAVIS BACON) (RESERVED)

4. CONTRACT WORK HOURS AND SAFETY STANDARDS (from FAR 52.222-4)

The term “Contracting Officer” herein shall refer to the City of Colorado Springs Contracting Specialist assigned to this contract.

The term “Government” herein shall refer to the City of Colorado Springs and any interested federal or state entity.



A. *Overtime requirements.* No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

B. *Violation; liability for unpaid wages; liquidated damages.* The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards statute (found at 40 U.S.C. chapter 37).

C. *Withholding for unpaid wages and liquidated damages.* The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards statute

D. Payrolls and basic records.

1. The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Construction Wage Rate Requirements statute.

2. The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

E. *Subcontracts.* The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts that may require or involve the employment of laborers and mechanics and require subcontractors to include these provisions in any such lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

5. CLEAN AIR ACT

By signing this Contract, the Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the



Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Further, the Contractor agrees to include this clause in all subcontracts in excess of \$150,000.

6. DEBARMENT AND SUSPENSION

By signing this Contract, the Contractor certifies to the best of its knowledge and belief that it and its principals:

A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

B. Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, falsification or destruction of records, making false statements, or receiving stolen property;

C. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

D. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

7. BYRD ANTI-LOBBYING AMENDMENT

By signing this Contract, the Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Further, the Contractor certifies that it has not engaged in lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. The Contractor must require the same certification from all subcontractors with subcontracts valued in excess of \$100,000 under this Contract.

8. SMALL BUSINESS REQUIREMENTS

The Contractor must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

Affirmative steps must include:

A. Placing qualified small and minority businesses and women's business enterprises on subcontract solicitation lists.

B. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources for subcontracting.



C. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises.

D. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises.

E. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

9. PROCUREMENT OF RECOVERED MATERIALS

The Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

10. ANTI-KICKBACK PROCEDURES

A. Definitions.

1. "Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

2. "Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

3. "Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

4. "Prime Contractor" as used in this clause, means a person who has entered into a prime contract with the United States.

5. "Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

6. "Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.



7. "Subcontractor," as used in this clause,

- a. Means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and
- b. Includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

8. "Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

B. The 41 U.S.C. chapter 87, Kickbacks, prohibits any person from --

1. Providing or attempting to provide or offering to provide any kickback;
2. Soliciting, accepting, or attempting to accept any kickback; or
3. Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

C. The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Attorney General.

The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

The Contracting Officer may

1. offset the amount of the kickback against any monies owed by the United States under the prime contract and/or
2. direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

The Contractor agrees to incorporate the substance of this clause, including subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$150,000.



11. ENERGY EFFICIENCY IN ENERGY CONSUMING PRODUCTS

A. Definition. As used in this clause--

1. "Energy-efficient product"—

a. Means a product that—

i. Meets Department of Energy and Environmental Protection Agency criteria for use of the Energy Star trademark label; or

ii. Is in the upper 25 percent of efficiency for all similar products as designated by the Department of Energy's Federal Energy Management Program.

2. The term "product" does not include any energy-consuming product or system designed or procured for combat or combat-related missions (42 U.S.C. 8259b).

B. The Contractor shall ensure that energy-consuming products are energy efficient products (i.e., ENERGY STAR® products or FEMP-designated products) at the time of contract award, for products that are—

1. Delivered.

2. Acquired by the Contractor for use in performing services at a Federally controlled facility.

3. Furnished by the Contractor for use by the Government.

4. Specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.

C. The requirements of paragraph (b) apply to the Contractor (including any subcontractor) unless:

1. The energy-consuming product is not listed in the ENERGY STAR® Program or FEMP; or

2. Otherwise approved in writing by the Contracting Officer.

D. Information about these products is available for—

1. ENERGY STAR® at <http://www.energystar.gov/products>; and

2. FEMP at http://www1.eere.energy.gov/femp/procurement/eep_requirements.html.

12. BUY AMERICAN—CONSTRUCTION MATERIALS



A. Definitions. As used in this clause—

1. “Commercially available off-the-shelf (COTS) item”—
 - a. Means any item of supply (including construction material) that is—
 - i. A commercial item (as defined in paragraph (1) of the definition at FAR [2.101](#));
 - ii. Sold in substantial quantities in the commercial marketplace; and
 - iii. Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
 - b. Does not include bulk cargo, as defined in [46 U.S.C. 40102\(4\)](#), such as agricultural products and petroleum products.
2. “Component” means an article, material, or supply incorporated directly into a construction material.
3. “Construction material” means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.
4. “Cost of components” means—
 - a. For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
 - b. For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.
5. “Domestic construction material” means—
 - a. An unmanufactured construction material mined or produced in the United States;
 - b. A construction material manufactured in the United States, if—
 - i. The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components.



Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

b. The construction material is a COTS item.

6. “Foreign construction material” means a construction material other than a domestic construction material.

7. “United States” means the 50 States, the District of Columbia, and outlying areas.

a. Domestic preference.

i. This clause implements [41 U.S.C. chapter 83](#), Buy American, by providing a preference for domestic construction material. In accordance with [41 U.S.C. 1907](#), the component test of the Buy American statute is waived for construction material that is a COTS item. (See FAR [12.505\(a\)\(2\)](#)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

ii. This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

b. The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that—

i. The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

ii. The application of the restriction of the Buy American statute to a particular construction material would be impracticable or inconsistent with the public interest; or

iii. The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

8. Request for determination of inapplicability of the Buy American statute.

a. Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including—

i. A description of the foreign and domestic construction materials

ii. Unit of measure

iii. Quantity

iv. Price



- v. Time of delivery or availability
- vi. Location of the construction project
- vii. Name and address of the proposed supplier
- viii. A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

b. A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON

Construction Material Description	Unit of Measure	Quantity	Price (Dollars)*
Item 1:			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
Item 2:			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]



[Include other applicable supporting information.]

[* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]

13. INFRASTRUCTURE INVESTMENT AND JOBS ACT, BUILD AMERICA, BUY AMERICA

THIS SECTION ONLY APPLIES TO PROJECTS THAT HAVE A TOTAL COST OF \$250,000 OR MORE AND THAT INCLUDE THE USE OF IRON OR STEEL.

Recipients of an award of Federal financial assistance from a program for infrastructure are hereby notified that none of the funds provided under this Agreement may be used for a project for infrastructure unless:

A. All iron and steel used in the PROJECT are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

B. All manufactured products used in the PROJECT are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.

C. All construction materials (excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives) are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

D. The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

E. Definitions:

“Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives 46—that is or consists primarily of:



1. Non-ferrous metals
2. Plastic and polymer-based products (including polyvinyl/chloride, composite building materials, and polymers used in fiber optic cables)
3. Glass (including optic glass)
4. Lumber; or drywall



SCHEDULE E – CONSTRUCTION PLAN SET

Will follow this page.

CITY OF COLORADO SPRINGS MUNICIPAL CEMETERY EVERGREEN IRRIGATION RENOVATION

1005 HANCOCK EXPY
COLORADO SPRINGS
COLORADO 80903

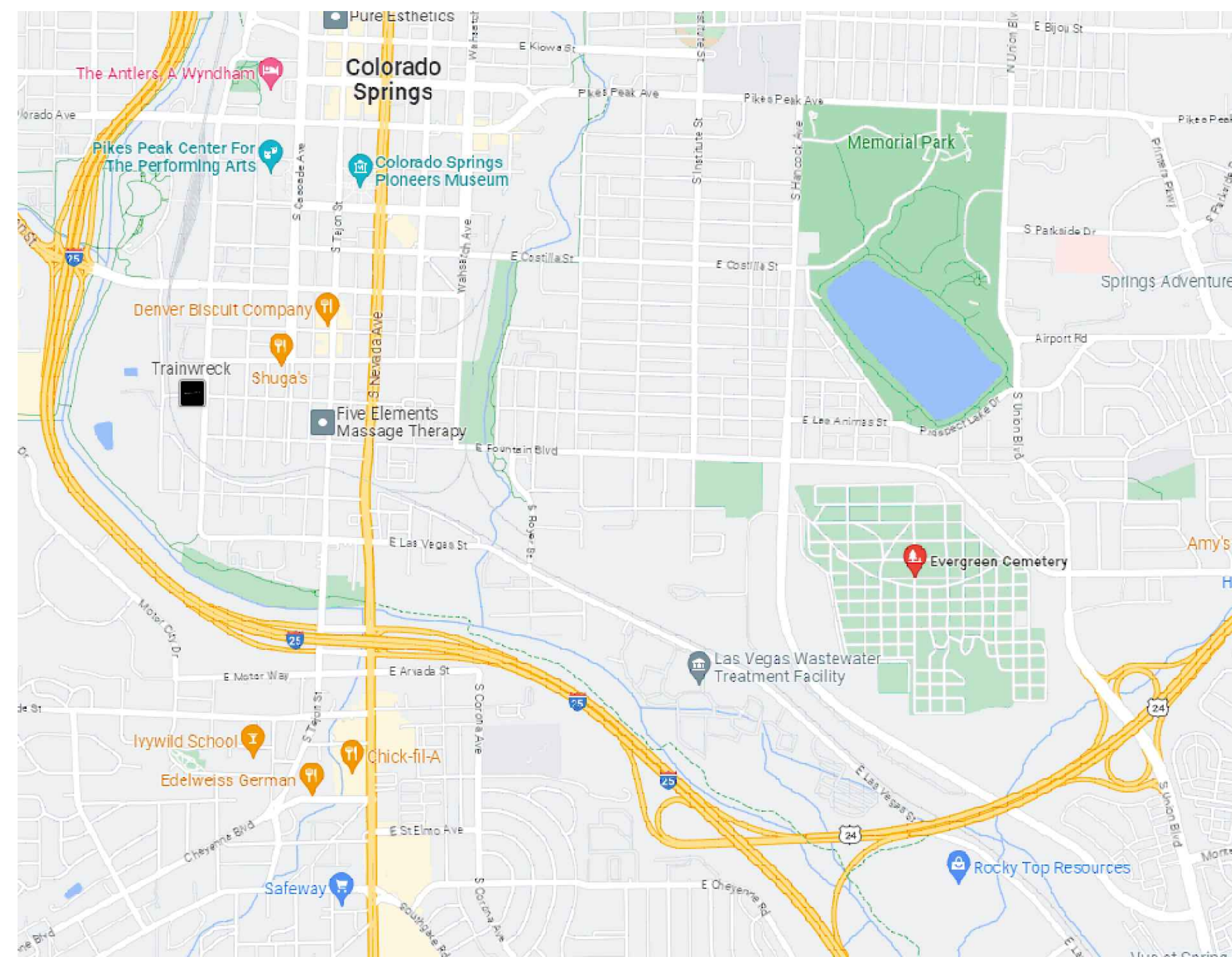
FIMS MAP NUMBER: I-36, J-36, I-37, J-37
TSN:6420100007, 6420400001, 6421300026, 6421300026, 642040000, 6420401008
TAX SCHEDULE NO.: N/A
PRESSURE ZONE: LOWLINE
STATIC PRESSURE AT MDD: 90 PSI
UTILITY DESIGN CAD FILE NO.: N/A
UAP FILE NO.: N/A
DEVELOPMENT PLAN NO.: N/A
APPROVAL DATE:
PLAT REC. NO.: N/A
PUBLIC UTILITY EASEMENT REC. NO.: N/A
NOTICE OF PRIVATE WASTEWATER SYSTEM REC. NO.: N/A
NOTICE OF PRIVATE WATER SYSTEM REC. NO.: N/A

**COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL**

APPROVED
05/16/2024 10:13:24 AM
mgackle
Water

PROJECT NUMBER: 2023-N2217
WDK ORDER NUMBER: 4076767
CSU SHEET 1 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



REGIONAL MAP (NTS)

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY COLORADO SPRINGS UTILITIES' LINES EXTENSION AND SERVICE STANDARDS.

PUBLIC WATER MAIN PROPOSED PUBLIC WASTEWATER MAIN PROPOSED PRIVATE WATER SERVICE LINE (4") AND/OR PRIVATE WASTEWATER SERVICE LINE (4")

SIGNED: *Jarod Clayton*
OWNER/DEVELOPER
Jarod Clayton
OWNER/DEVELOPER (PRINT NAME)

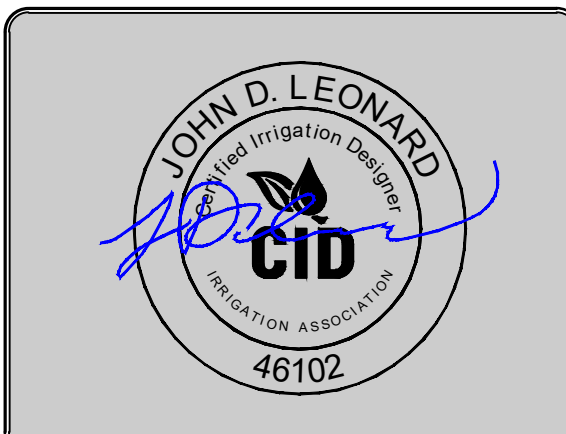
DATE: 5/17/24

DBA:
ADDRESS: 1401 Recreation Way
Colorado Springs, CO 80905
PHONE: 719-385-6507
EMAIL: Jarod.Clayton@coloradosprings.gov

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NO.	SHEET NO.	SHEET TITLE
1	IR0.0	IRRIGATION COVER SHEET
2	IR0.1	BID ITEM DESCRIPTIONS
3	IE1.0	ENTRY IRRIGATION PLAN
4	IE3.0	ENTRY IRRIGATION DETAILS
5	IE3.1	ENTRY IRRIGATION DETAILS
6	IP1.0	IRRIGATION POINT OF CONNECTION COVER SHEET
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25	IM2.12	IRRIGATION MAINLINE REPLACEMENT PLAN
26	IM3.0	IRRIGATION MAINLINE REPLACEMENT DETAILS
27	IV1.0	IRRIGATION MAINLINE VALVE REPLACEMENT COVER SHEET
28	IV1.1	IRRIGATION MAINLINE VALVE REPLACEMENT OVERALL SHEET
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52	IR2.5	IRRIGATION COMPREHENSIVE PLAN
53	IR2.6	IRRIGATION COMPREHENSIVE PLAN
54	IR2.7	IRRIGATION COMPREHENSIVE PLAN
55	IR2.8	IRRIGATION COMPREHENSIVE PLAN
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EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COVER SHEET

100% FOR REVIEW
NOT FOR CONSTRUCTION



DATE: 05/08/2024
DESIGNED BY: CCT
DRAWN BY: CCT
CHECKED BY: RWB

REVISIONS

SHEET NO. IR0.0
PAGE 1 OF 65



ENTRY IRRIGATION SYSTEM DESIGN APPROACH

A NEW AUTOMATED IRRIGATION SYSTEM WILL BE INSTALLED TO PROVIDE AUTOMATED IRRIGATION TO THE ENTRY AREA. NEW MAINLINE PIPE, LATERAL PIPE, ISOLATION GATE VALVES, SPRAY SPRINKLERS, AND ROTOR SPRINKLERS WILL BE INSTALLED.

THE NEW HDPE IRRIGATION MAINLINE PIPE WILL USED FOR CONTINUOUSLY PRESSURIZED PIPE PVC PIPE WILL BE USED REMOTE CONTROL VALVE LATERALS.

A NEW TWO WIRE DECODER BASED CONTROLLER COMPATIBLE WITH THE PROPOSED WEATHERTRAK CENTRAL CONTROL SYSTEM WILL BE USED FOR THE RENOVATED AREA.

NEW QUICK COUPLING VALVE ASSEMBLIES WILL BE INSTALLED TO FACILITATE HAND WATERING.

ISOLATION GATE VALVES WILL BE INSTALLED TO PROVIDE FOR MAINTENANCE AND TO MINIMIZE THE DISRUPTION TO THE EXISTING SYSTEM DURING CONSTRUCTION.

FLAG NOTES

- 1 EXCAVATE AND EXPOSE EXISTING 6-INCH MAINLINE PIPE IN APPROXIMATE LOCATION SHOWN. CONNECT NEW MAINLINE PIPE TO EXISTING MAINLINE PIPE USING NECESSARY FITTINGS. BACKFILL AND COMPACT TO MATCH EXISTING CONDITIONS AND PATCH ROAD PER SPECIFICATIONS. COORDINATE EXACT LOCATION OF MAINLINE PIPING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 2 INSTALL WALL MOUNTED IRRIGATION CONTROLLERS IN THE APPROXIMATE LOCATION INDICATED ADJACENT TO THE EXISTING IRRIGATION CONTROLLER. CONTRACTOR TO PROVIDE 120V ELECTRICAL POWER TO CONTROLLER. COORDINATE LOCATION OF ELECTRICAL POWER SOURCE WITH THE OWNER'S REPRESENTATIVE. IT IS ANTICIPATED THAT POWER SOURCE IS AVAILABLE WITHIN 10' OF THE CONTROLLER LOCATION. PROVIDE ALL NECESSARY CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL POWER SOURCE AND THE IRRIGATION CONTROLLER AND MAKE ALL NECESSARY CONNECTIONS. COORDINATE EXACT PLACEMENT OF CONTROLLER WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION. INSTALL TWO-WIRE PATH FROM THE CONTROLLER TO THE MAINLINE AS SHOWN ON PLAN.
- 3 CUT AND REMOVE EXISTING ASPHALT FOR INSTALLATION OF HDPE MAINLINE PIPING AS SHOWN ON PLAN. COORDINATE EXACT PIPE ROUTING WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. INSTALL A 2" HDPE WIRE SLEEVE ADJACENT TO MAINLINE PIPE. BACKFILL/COMPACT TRENCH AND INSTALL 4" OF ROAD BASE AT TOP OF TRENCH. COMPACT TO 95% STANDARD PROCTOR DENSITY.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE OF 131 PSI AT THE POINTS OF CONNECTION. POC 1 HAS A CAPACITY OF 700 GPM AND POC 2 HAS A DESIGN CAPACITY OF 1,200 GPM FOR A COMBINED TOTAL OF 1,900 GPM, THE TWO POINTS OF CONNECTION ARE NOT CONNECTED.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. CONFIRM EXACT LIMITS OF IRRIGATED AREA AND ALL EXISTING AND FUTURE HARDSCAPE AND BURIAL AREAS PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND CONDITIONS BEFORE EXCAVATING.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNERS REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY.
 - B. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - C. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
6. USE EXISTING ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM.
7. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
8. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - A. FOUR OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
 - B. FOUR OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
 - C. TEN VALVE IN HEAD SPRINKLERS TO INCLUDE NOZZLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION. DISTURBED AREAS INCLUDE THE FOLLOWING BUT ARE NOT LIMITED TO: TRENCHING, SPOILS LEFT ADJACENT TO THE TRENCH THAT DAMAGES EXISTING TURF, CONSTRUCTION EQUIPMENT WEAR ON EXISTING TURF, STAGING AREA DISTURBANCE, AND ANY OTHER DAMAGE INCURRED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST INSTALL SOD (TO MATCH EXISTING CONDITIONS) IN ALL EXISTING TURF AREAS DISTURBED BY CONSTRUCTION. BACKFILLED AREAS MUST BE RETURNED TO ORIGINAL GRADE USING A CLEAN NATIVE LOAM TOPSOIL APPROVED BY CITY OF REPRESENTATIVES PRIOR TO INSTALLATION. CONFIRM WITH OWNER'S REPRESENTATIVE THAT ALL DISTURBED AREAS MEET OR EXCEED REPAIR REQUIREMENTS PRIOR TO SUBSTANTIAL COMPLETION.
10. TREE PROTECTION NOTE: REFER TO TREE PROTECTION PLAN.
11. INSTALL AND MAINTAIN SAFETY FENCING AROUND ALL UNATTENDED EXCAVATION. PLACE SAFETY SIGNS ADJACENT TO CONSTRUCTION AREA TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ALL EXCAVATIONS MUST BE BACKFILLED BY THE END OF EACH WORKDAY. DO NOT LEAVE ANY OPEN TRENCHES OVERNIGHT, ON WEEKENDS OR ON HOLIDAYS. IF TRENCHING OPERATION RESTRICTS ACCESS TO A BURIAL SECTION, PROVIDE PLYWOOD AND SAFETY FENCING ACROSS OPEN TRENCH TO ALLOW ACCESS TO BURIAL SECTION. PROVIDE ACCESS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. THE BURIAL ACTIVITIES AT THE CEMETERY TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITIES. COOPERATION AND COORDINATION WITH THE OWNER'S REPRESENTATIVE AND CEMETERY MANAGER ARRANGING CONSTRUCTION SCHEDULE TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH CEMETERY ACTIVITIES IN ACTUAL BURIAL AREAS IS REQUIRED. CONSTRUCTION NOISE DURING THE INTERMENT SERVICES MUST NOT DISTURB THE SERVICE. COORDINATION OF WORK MAY REQUIRE THAT EQUIPMENT THAT IS HEARD FROM THE SERVICE LOCATION BE SHUT OFF, OR MOVED OUT OF THE AREA PRIOR TO THE SERVICE, AS ACCEPTABLE TO THE CEMETERY MANAGER. CONSTRUCTION VEHICLES AND WORKERS MUST NOT PASS THROUGH THE SERVICE AREA DURING THIS PERIOD.
 - A. DISCONTINUE WORK SUFFICIENTLY IN ADVANCE OF EASTER SUNDAY, MOTHER'S DAY, FATHER'S DAY, MEMORIAL DAY, VETERAN'S DAY AND/OR FEDERAL HOLIDAYS, AND CLEAN UP ALL AREAS OF OPERATION ADJACENT TO FUNCTIONING AREAS OF THE CEMETERY INCLUDING EXISTING BURIAL SECTIONS AND ANY OTHER AREAS IDENTIFIED BY THE OWNER'S REPRESENTATIVE AND CEMETERY DIRECTION BEFORE THESE DATES.
 - B. CLEAN UP ACTIVITIES INCLUDE THE REMOVAL OF ALL EQUIPMENT, TOOLS, MATERIALS AND DEBRIS AND LEAVING THE AREAS IN A CLEAN, NEAT CONDITION.
 - C. SHORT NOTICE SERVICES TYPICALLY ONLY PROVIDE 12-HOURS NOTICE. WEEKLY CONSTRUCTION MEETINGS WILL PROVIDE PRELIMINARY SCHEDULE TO THE CONTRACTOR, HOWEVER, THERE MAY BE INSTANCES WHERE SHORT NOTICE SERVICES MUST BE ACCOMMODATED.
13. SPRINKLER LOCATIONS WERE STAKED PRIOR TO IRRIGATION DESIGN AND LOCATIONS WERE COLLECTED VIA GPS. AUTOCAD FILES WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING OF THE SPRINKLERS.

LEGEND

- SLEEVING: HDPE SIZE: 2 WIRE SLEEVE 2-INCH.
- MAINLINE PIPE: DIRECTIONALLY BORED AT 36-INCHES DEEP 4170 HDPE DR-11, SIZE AS INDICATED ON DRAWINGS
- POINT-OF-CONNECTION (P.O.C.)
- STUB-OUT FOR FUTURE IRRIGATION
- LATERAL PIPE REMOTE CONTROL VALVE SPRINKLERS : CLASS 160 PVC (1-INCH SIZE UNLESS OTHERWISE INDICATED)
- UNCONNECTED PIPE CROSSING
- ⊗ ISOLATION GATE VALVE ASSEMBLY, MAINLINE NIBCO P-619-RW SIZED TO MAIN
- ⊙ QUICK COUPLING VALVE ASSEMBLY RAIN BIRD 44RC
- ⊕ REMOTE CONTROL VALVE ASSEMBLY RAINBIRD PESB-PRS-D
- POP-UP ROTOR SPRINKLER: RAIN BIRD 8005-NP-SS PRESSURE 80 PSI

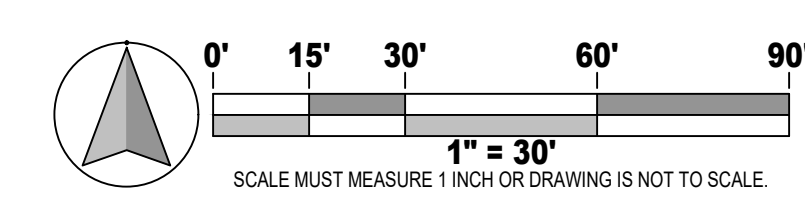
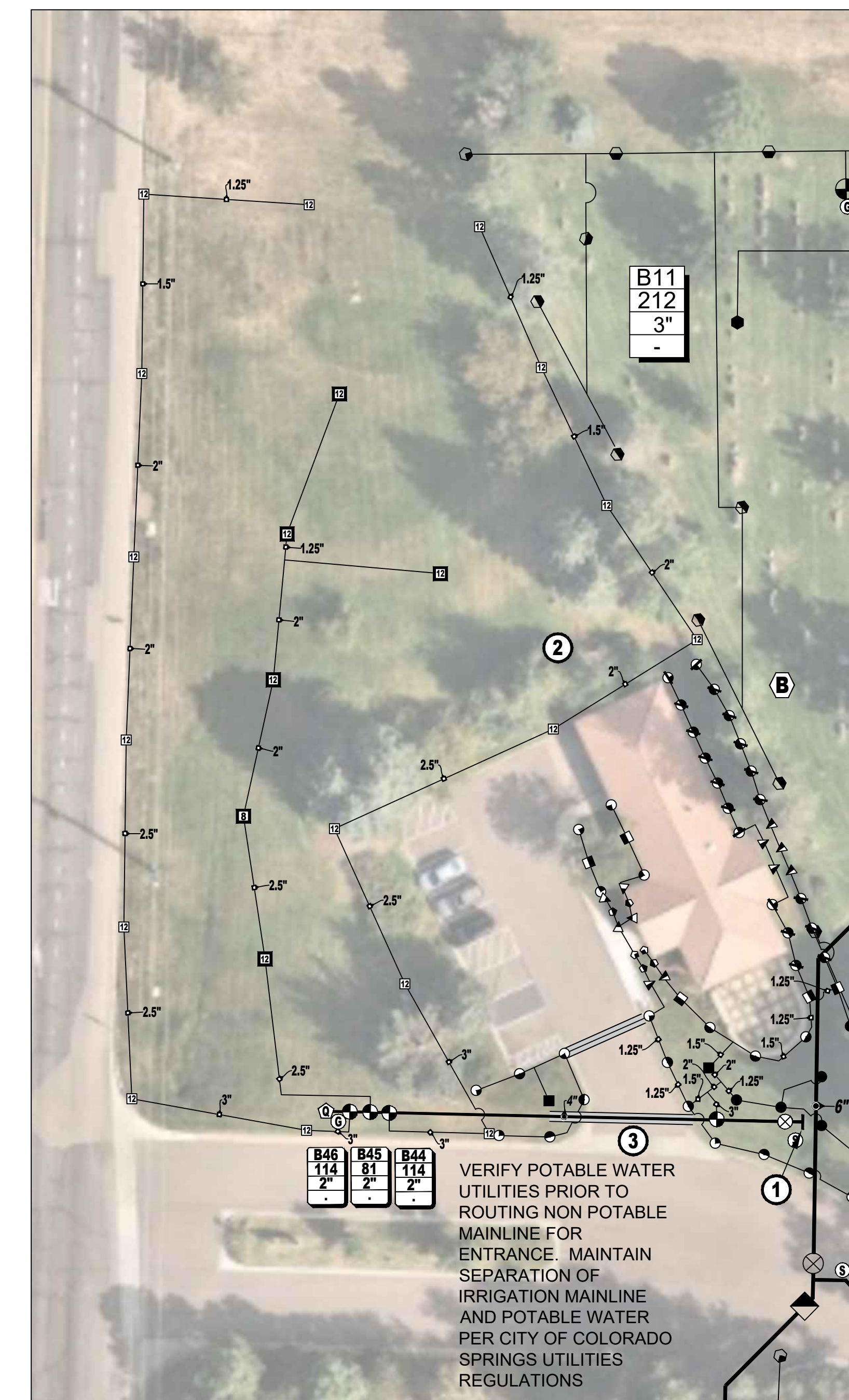
NOZZLE	FLOW(GPM)	RADIUS(FEET)
8	9.8	49
12	14.2	61

NOTE: FC=FULL CIRCLE, PC=PART CIRCLE

- POP-UP SPRINKLER: RAIN BIRD 1804-MPR @ 30 PSI

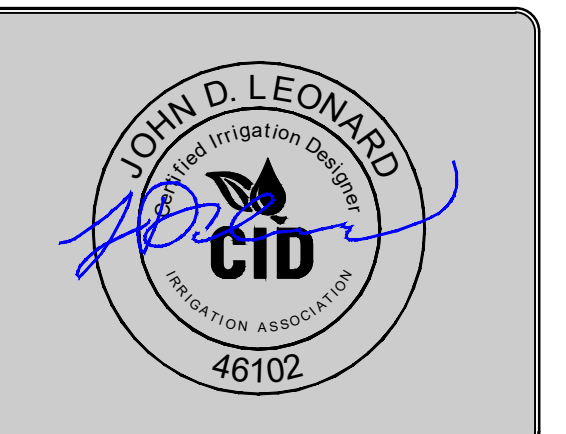
RADIUS:	FLOW (GPM):	Q	H	F
5'	0.10	0.20	0.41	0.41
8'	0.26	0.52	1.05	1.05
10'	0.39	0.79	1.58	1.58
12'	0.65	1.30	2.60	2.60
15'	0.92	1.85	3.70	3.70

 - Ⓜ VALVE CONTROLLER AND STATION NUMBER
 - Ⓜ FLOW (GPM)
 - Ⓜ VALVE SIZE (INCHES)
 - Ⓜ IRRIGATION CONTROLLER



EVERGREEN CEMETERY
COLORADO SPRINGS, CO
ENTRY IRRIGATION PLAN

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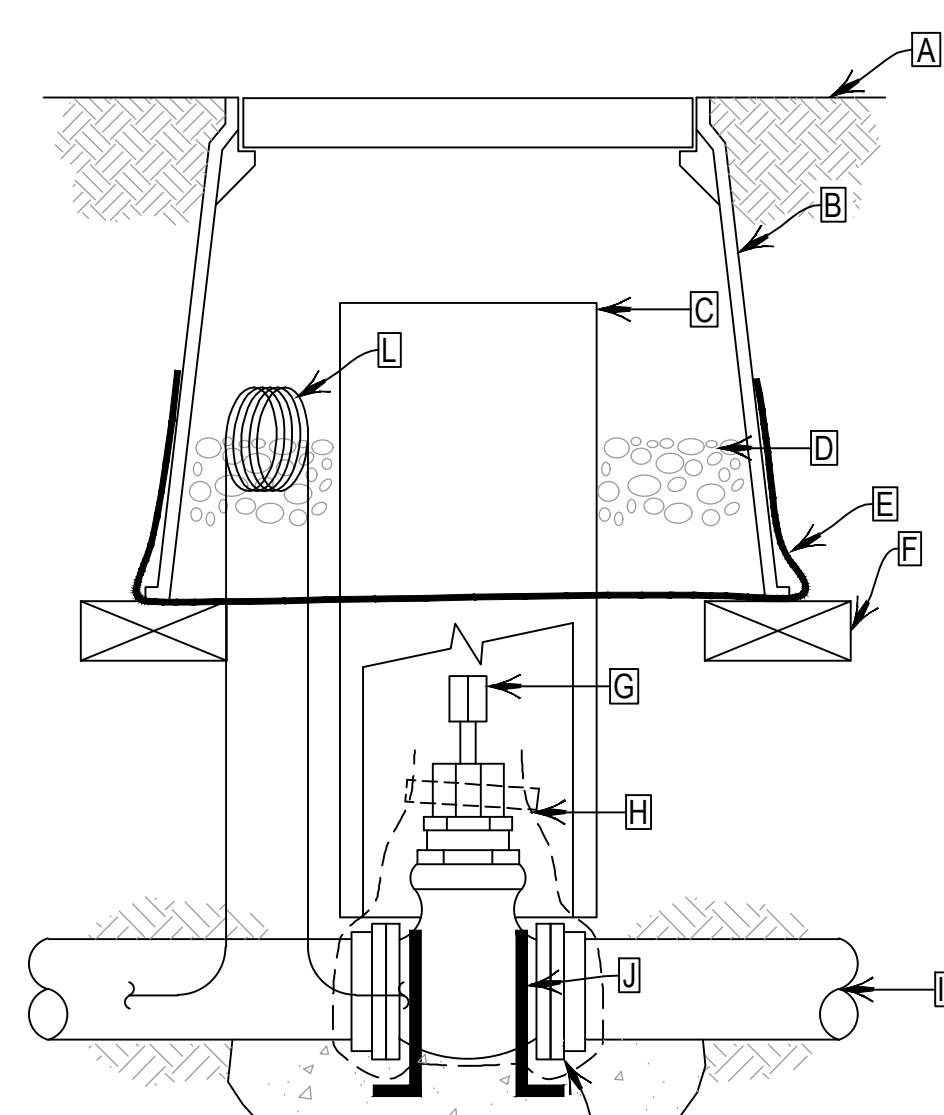
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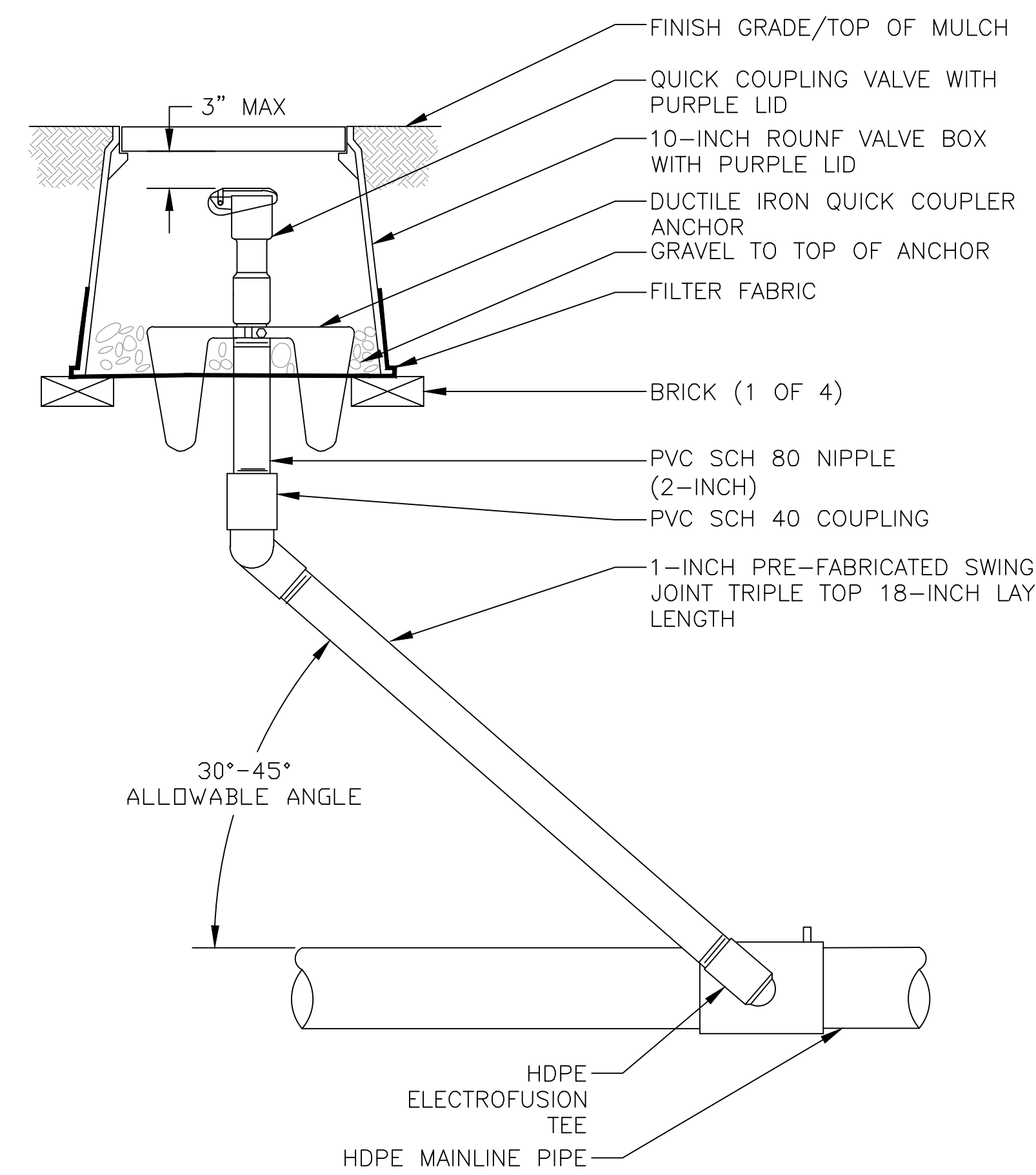


- A. FINISH GRADE
- B. 10" ROUND VALVE BOX WITH PURPLE LID
- C. 6" CLASS 200 PVC PIPE (LENGTH AS REQUIRED)
- D. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- E. FILTER FABRIC
- F. BRICK (1 OF 4)
- G. RESILIENT WEDGE GATE VALVE CONFORMING TO AWWA C-515 STANDARDS
- H. 3 MIL. PLASTIC WRAP WITH TAPED ENDS
- I. HDPE MAINLINE PIPE
- J. #4 REBAR, TWO BARS WRAPPED OVER VALVE AND SECURED BY CONCRETE BLOCK
- K. HDPE FLANGE ADAPTER, DUCTILE IRON BACKUP RING, BOLTED TO FLANGED GATE VALVE
- L. TRACING WIRE

- NOTES:
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.
 2. THE OPERATOR IS A WRENCH NUT.
 3. ANCHOR ISOLATION VALVE TO CONCRETE BY BENDING REBAR OVER EACH END OF VALVE AND EXTENDING A MINIMUM OF 6-INCHES INTO CONCRETE SUPPORT BLOCK.
 4. WRAP VALVE ENDS AND BODY IN 3 MIL. PLASTIC PRIOR TO POURING CONCRETE.
 5. CONCRETE SUPPORT BLOCK IS TO BE POURED UNDER ISOLATION GATE VALVE. ONLY THE BOTTOM OF THE ISOLATION GATE VALVE TO BE IN CONTACT WITH CONCRETE.
 6. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.

1 ISOLATION GATE VALVE ASSEMBLY

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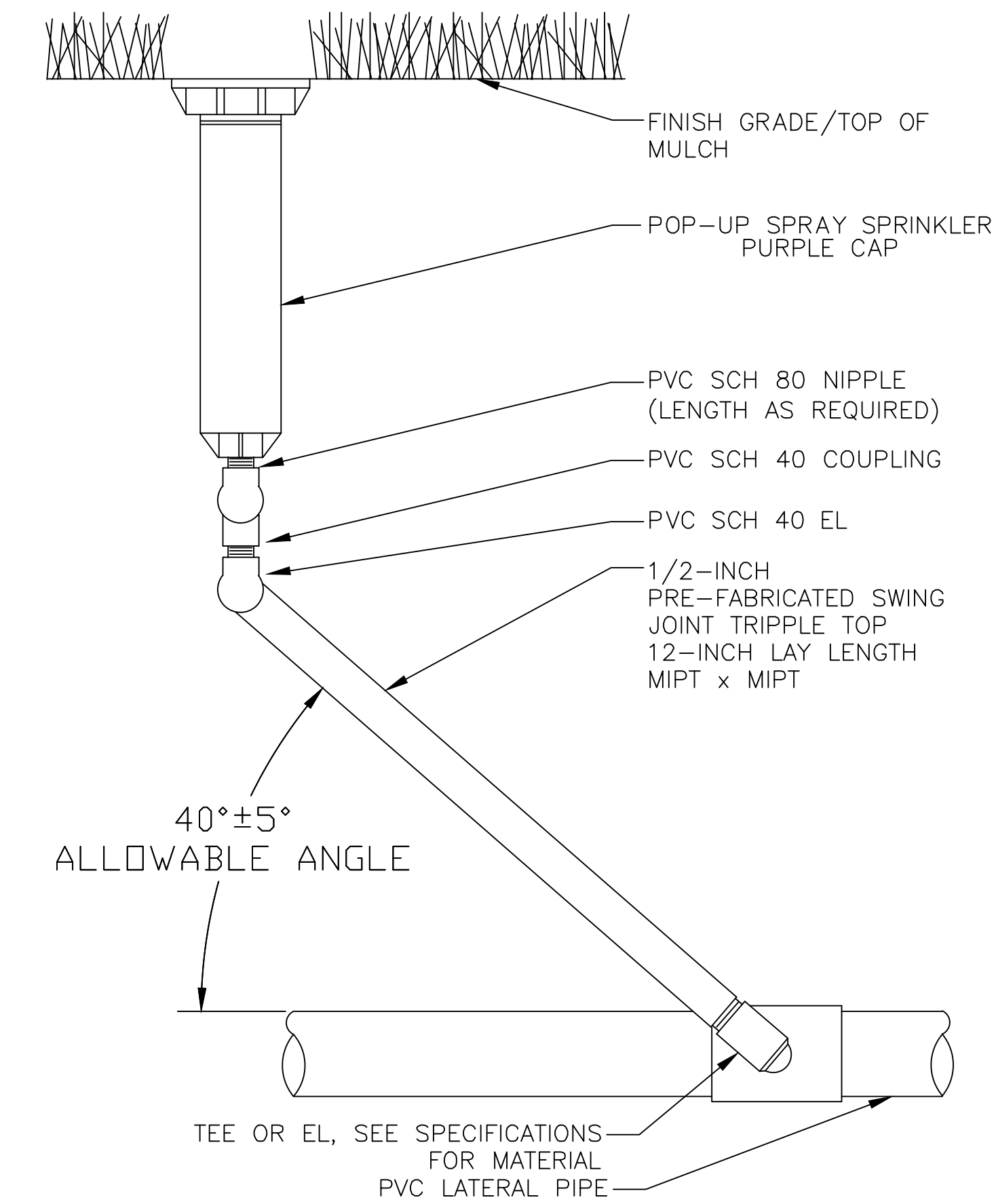


- FINISH GRADE/TOP OF MULCH
- 3" MAX
- QUICK COUPLING VALVE WITH PURPLE LID
- 10-INCH ROUND VALVE BOX WITH PURPLE LID
- DUCTILE IRON QUICK COUPLER
- ANCHOR
- GRAVEL TO TOP OF ANCHOR
- FILTER FABRIC
- BRICK (1 OF 4)
- PVC SCH 80 NIPPLE (2-INCH)
- PVC SCH 40 COUPLING
- 1-INCH PRE-FABRICATED SWING JOINT TRIPLE TOP 18-INCH LAY LENGTH
- 30°-45° ALLOWABLE ANGLE
- HDPE ELECTROFUSION TEE
- HDPE MAINLINE PIPE

- NOTES:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.
 2. INSTALL SWING JOINT LAY ARM BETWEEN 30° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT.
 3. BRAND VALVE BOX LID PER SPECIFICATIONS.

2 QUICK COUPLER VALVE ASSEMBLY

N.T.S.

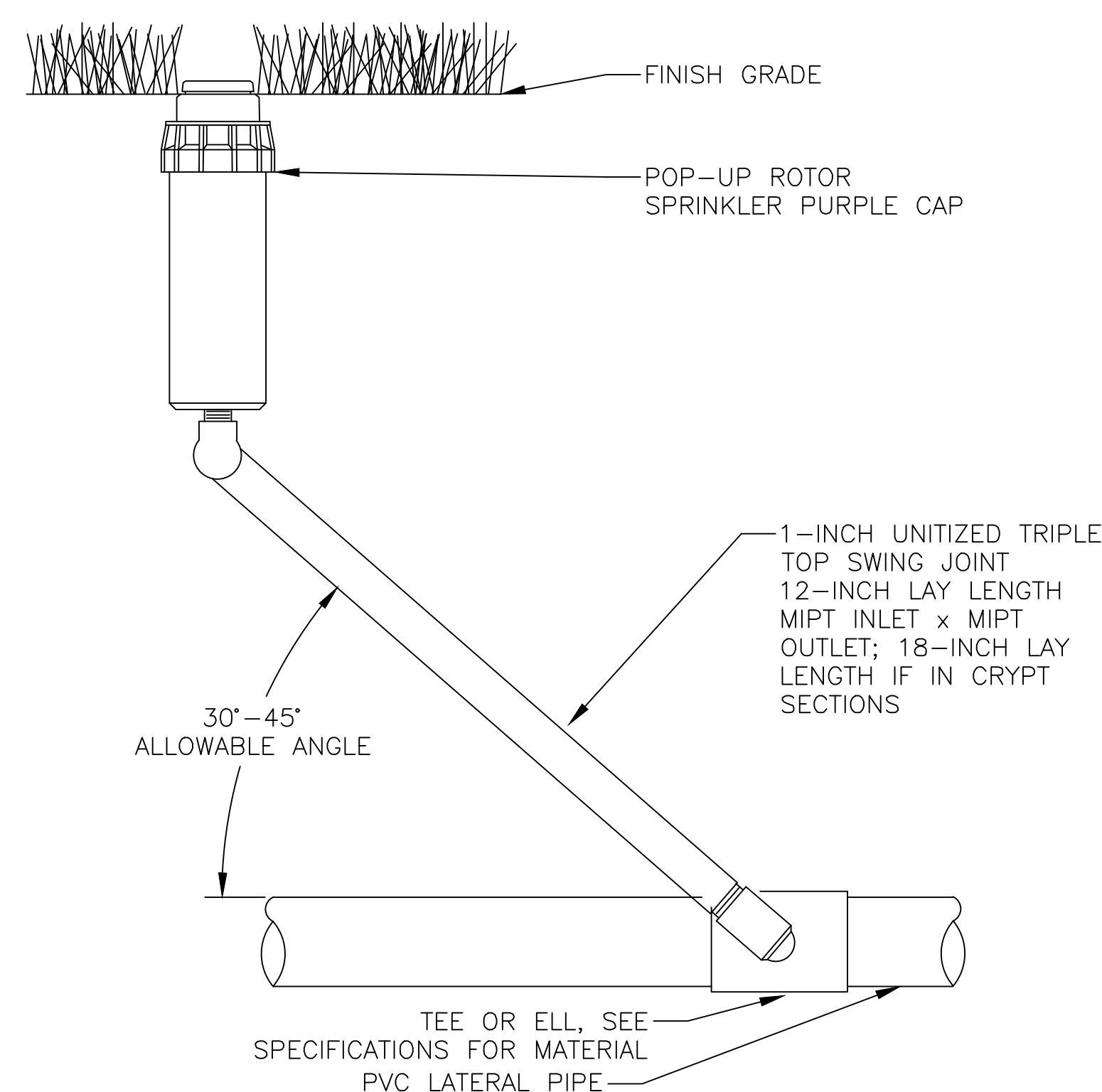


- FINISH GRADE/TOP OF MULCH
- POP-UP SPRAY SPRINKLER PURPLE CAP
- PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- PVC SCH 40 COUPLING
- PVC SCH 40 EL
- 1/2-INCH PRE-FABRICATED SWING JOINT TRIPLE TOP 12-INCH LAY LENGTH MIPT x MIPT
- 40°±5° ALLOWABLE ANGLE
- TEE OR EL, SEE SPECIFICATIONS FOR MATERIAL
- PVC LATERAL PIPE

- NOTES:
1. INSTALL SWING JOINT LAY ARM BETWEEN 30° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT. IF SWING JOINT CAN NOT BE INSTALLED AT SPECIFIED ANGLE, CONSULT RESIDENT ENGINEER PRIOR TO INSTALLATION OF SWING JOINT.

3 SPRAY SPRINKLER ASSEMBLY

N.T.S.

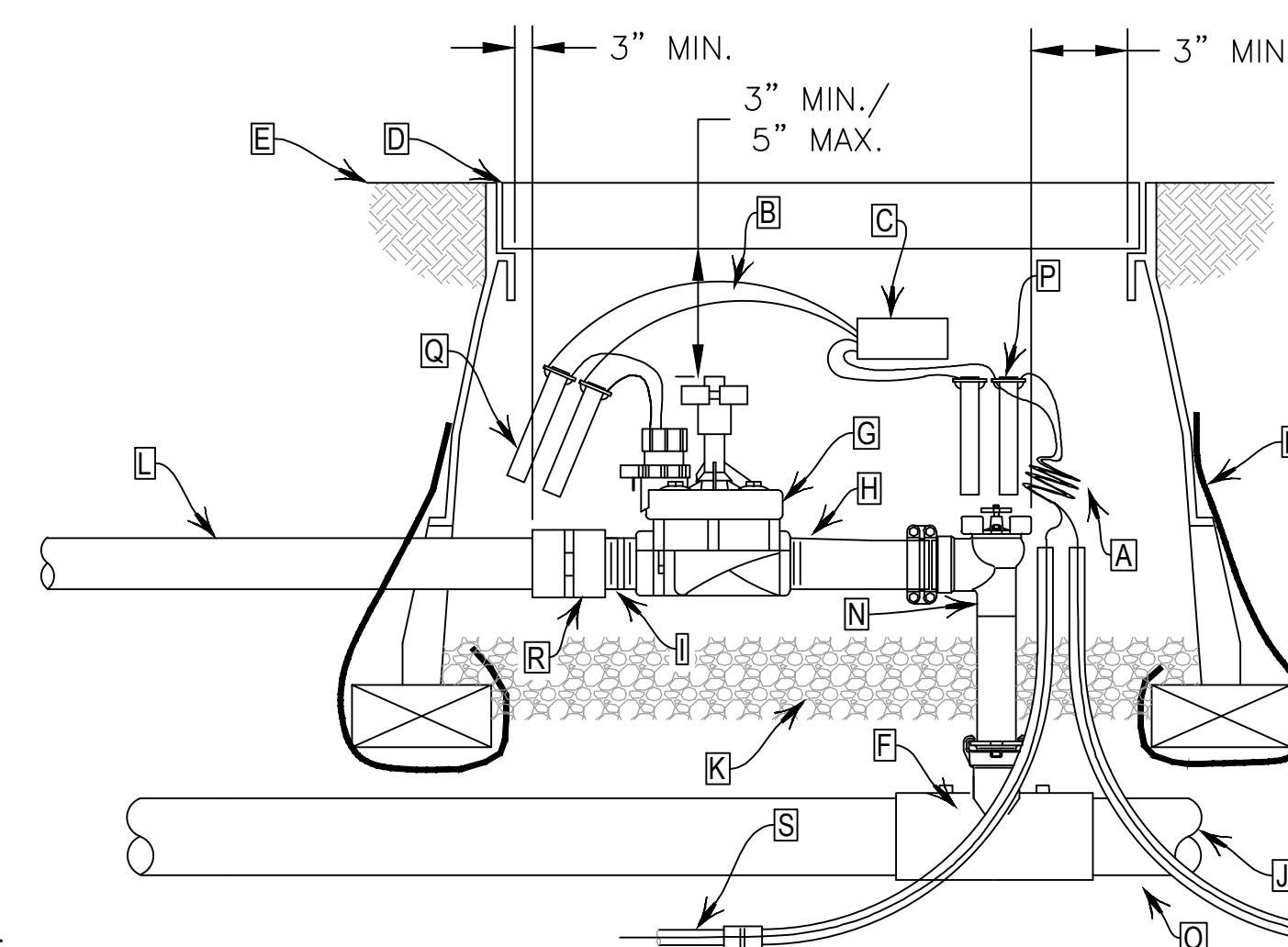


- FINISH GRADE
- POP-UP ROTOR SPRINKLER PURPLE CAP
- 1-INCH UNITIZED TRIPLE TOP SWING JOINT 12-INCH LAY LENGTH MIPT INLET x MIPT OUTLET; 18-INCH LAY LENGTH IF IN CRYPT SECTIONS
- 30°-45° ALLOWABLE ANGLE
- TEE OR ELL, SEE SPECIFICATIONS FOR MATERIAL
- PVC LATERAL PIPE

- NOTES:
1. INSTALL SWING JOINT LAY ARM BETWEEN 30° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT. IF SWING JOINT CAN NOT BE INSTALLED AT SPECIFIED ANGLE, CONSULT COR/SRE PRIOR TO INSTALLATION OF SWING JOINT.
 2. INSTALL SPRINKLER 12-INCHES OFF OF BACK OF CURB.

4 ROTOR SPRINKLER ASSEMBLY

N.T.S.



- 3" MIN.
- 3" MIN./5" MAX.
- 3" MIN.
- A. TWO-WIRE CABLE
- B. WIRE FROM BICODER TO VALVE SEE SPECIFICATIONS
- C. DECODER ATTACH TO VALVE BOX WITH ZIP TIE
- D. JUMBO VALVE BOX WITH PURPLE LID
- E. FINISH GRADE
- F. HDPE ELECTROFUSION WELD SERVICE TEE AND ADAPTOR FOR LEEMCO LV-200
- G. REMOTE CONTROL VALVE
- H. LEEMCO LMNP SERIES ADAPTER, OUTLET SIZE TO MATCH REMOTE CONTROL VALVE SIZE.
- I. PVC SCH 80 NIPPLE
- J. HDPE MAINLINE PIPE
- K. 3-INCH DEPTH OF 3/4-INCH WASHED GRAVEL
- L. PVC LATERAL PIPE
- M. FILTER FABRIC
- N. 2-INCH DUCTILE IRON ANGLE VALVE- LEEMCO LV-200. SECURE ANGLE VALVE POSITION WITH LEEMCO LV CLIPS PER MANUFACTURER'S GUIDELINES.
- O. NOT USED
- P. WIRE SPLICE FROM TWO-WIRE CABLE TO BICODER (1 OF 2, REFER TO SPECIFICATIONS)
- Q. WIRE CONNECTOR FROM BICODER TO SOLENOID VALVE (1 OF 2)
- R. PVC SCH40 FEMALE ADAPTER
- S. 1" PVC SCH 40 CONDUIT AND LONG RADIUS SWEEP EL. (TYPICAL)

- NOTES:
1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
 2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
 3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
 4. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
 5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
 6. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID AND PROPER OPERATION OF BALL VALVE.
 7. INSTALL SO THAT NO GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.
 8. COIL 3-FEET OF WIRE FOR EACH BICODER FOR SERVICE PURPOSES.

5 REMOTE CONTROL VALVE ASSEMBLY

N.T.S.

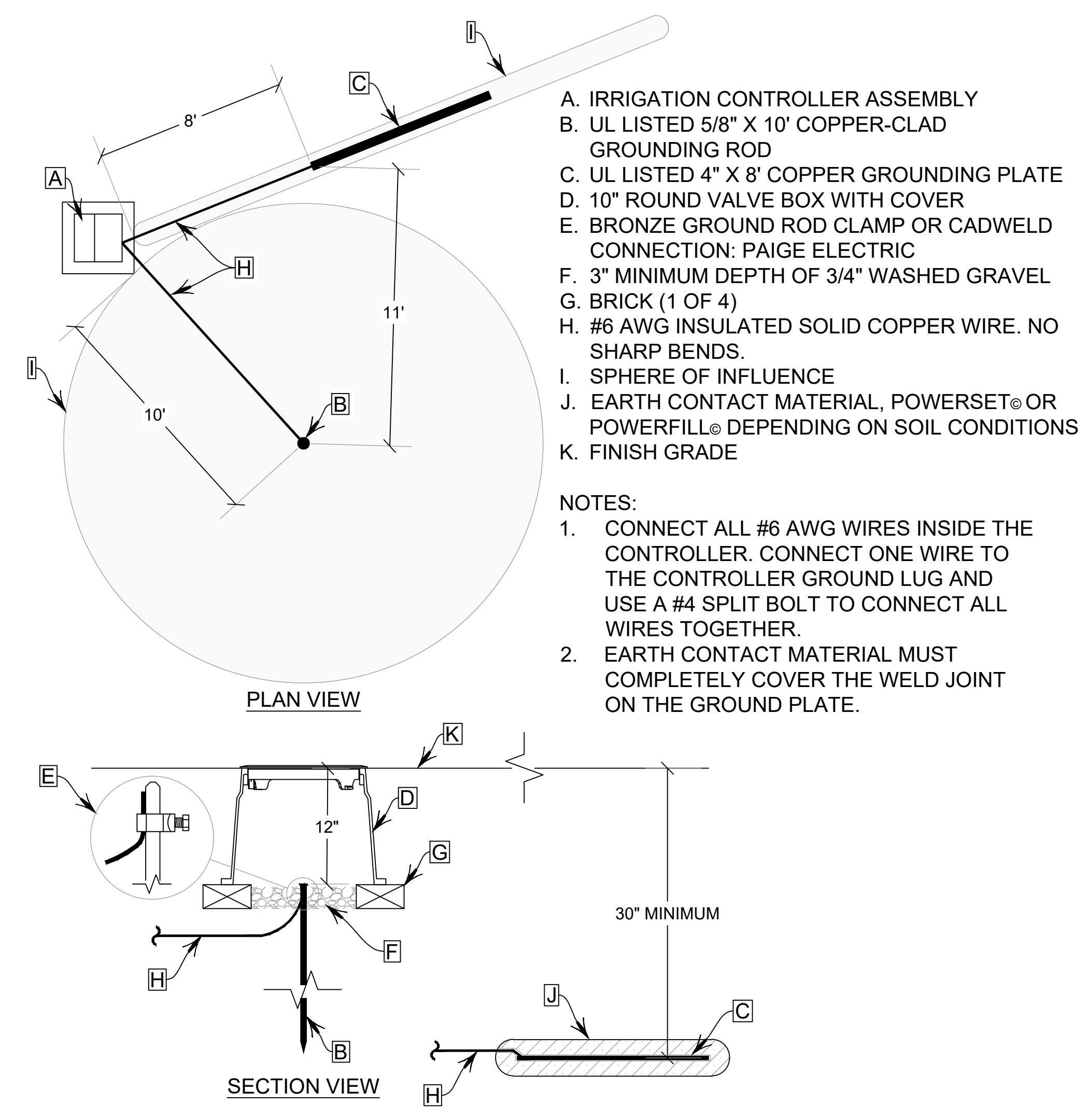
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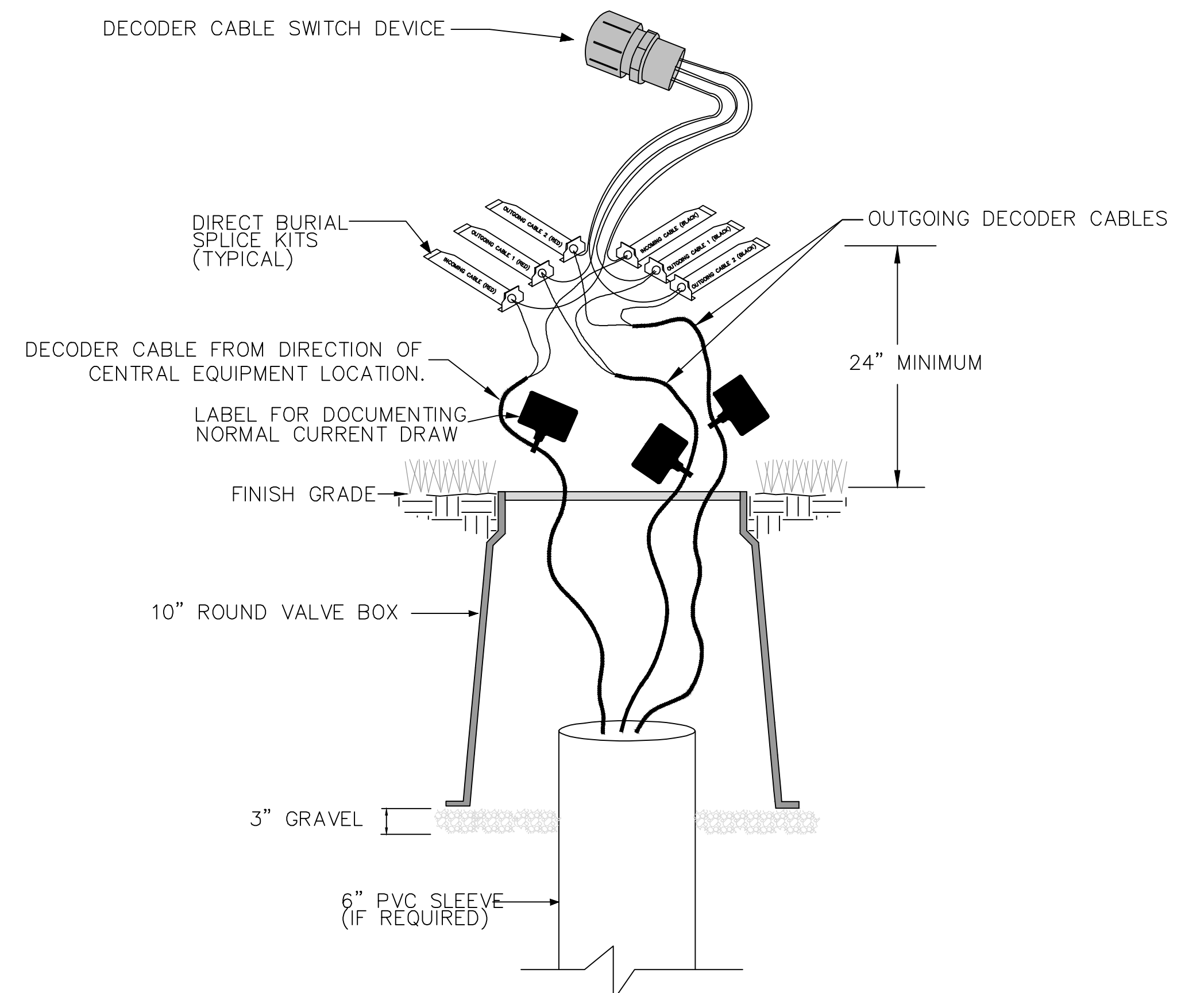
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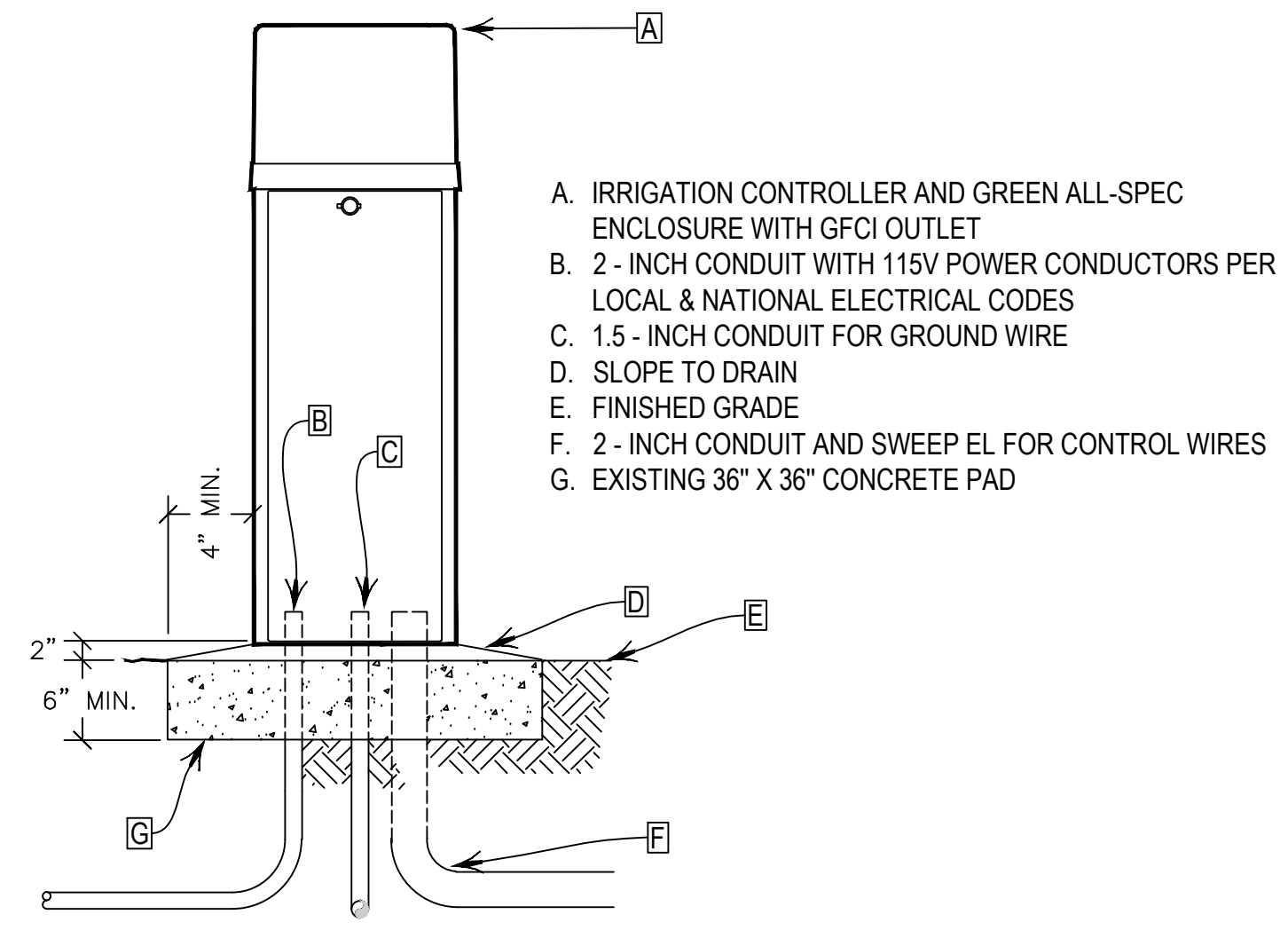


- A. IRRIGATION CONTROLLER ASSEMBLY
- B. UL LISTED 5/8" X 10' COPPER-CLAD GROUNDING ROD
- C. UL LISTED 4" X 8' COPPER GROUNDING PLATE
- D. 10" ROUND VALVE BOX WITH COVER
- E. BRONZE GROUND ROD CLAMP OR CADWELD CONNECTION: PAIGE ELECTRIC
- F. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- G. BRICK (1 OF 4)
- H. #6 AWG INSULATED SOLID COPPER WIRE. NO SHARP BENDS.
- I. SPHERE OF INFLUENCE
- J. EARTH CONTACT MATERIAL, POWERSET® OR POWERFILL® DEPENDING ON SOIL CONDITIONS
- K. FINISH GRADE

- NOTES:
1. CONNECT ALL #6 AWG WIRES INSIDE THE CONTROLLER. CONNECT ONE WIRE TO THE CONTROLLER GROUND LUG AND USE A #4 SPLIT BOLT TO CONNECT ALL WIRES TOGETHER.
 2. EARTH CONTACT MATERIAL MUST COMPLETELY COVER THE WELD JOINT ON THE GROUND PLATE.



- NOTES:
1. INSTALL DECODER CABLE SWITCH DEVICE (DCSD) BETWEEN CABLE FROM CENTRAL AND TWO OUTGOING CABLES.
 2. AT ALL SPLICE LOCATIONS, PROVIDE SUFFICIENT SLACK TO ALLOW THE SPLICE TO BE RAISED A MINIMUM OF 24" (IN.) ABOVE GRADE.
 3. DECODER CABLE SHALL HAVE A MINIMUM OF 24" (IN.) OF COVER.
 4. CLEARLY MARK ON TAG WHERE SUPPLY CABLE ORIGINATES FROM (EX: FROM 8th HOLE) AND EACH OUTGOING CABLE GOES TO (EX: TO 10th GREEN) IN AN OUTWARD BOUND DIRECTION FROM THE CENTRAL EQUIPMENT LOCATION.
 5. CLEARLY MARK THE MILLIAMP DRAW FOR EACH LEG OF CABLE BASED ON THE NUMBER OF DECODERS "DOWNSTREAM" FROM THAT POINT.



- A. IRRIGATION CONTROLLER AND GREEN ALL-SPEC ENCLOSURE WITH GFCI OUTLET
- B. 2- INCH CONDUIT WITH 115V POWER CONDUCTORS PER LOCAL & NATIONAL ELECTRICAL CODES
- C. 1.5- INCH CONDUIT FOR GROUND WIRE
- D. SLOPE TO DRAIN
- E. FINISHED GRADE
- F. 2- INCH CONDUIT AND SWEEP EL FOR CONTROL WIRES
- G. EXISTING 36" X 36" CONCRETE PAD

- NOTES:
1. IN ACCORDANCE WITH AMERICAN SOCIETY OF IRRIGATION CONSULTANTS GUIDELINE 100-2002 "FOR EARTH GROUNDING ELECTRONICS EQUIPMENT IN IRRIGATION SYSTEMS", SECTION 12 PARAGRAPH 1: "ELECTRONIC EQUIPMENT AND WIRES/CABLES SHALL BE INSTALLED OUTSIDE OF THE SPHERE OF INFLUENCE OF THE GROUNDING GRID. THIS IS NECESSARY TO AVOID RE-INJECTING THE DISCHARGED LIGHTNING ENERGY INTO THE EQUIPMENT AND THE UNDERGROUND WIRES AND CABLES."
 2. SEAL OPENING IN TOP OF CONDUITS WITH EXPANDING FOAM AFTER WIRE INSTALLATION.

1 CONTROLLER ASSEMBLY N.T.S.

2 DECODER CABLE FUSE DEVICE N.T.S.

3 GROUNDING DETAIL N.T.S.

POINT OF CONNECTION IRRIGATION SYSTEM DESIGN APPROACH

EXISTING POINTS OF CONNECTION WILL BE REVISED WITH MODERN EQUIPMENT AND THE LOW FLOW MANIFOLD WILL NO LONGER BE NEEDED. NEW BACKFLOW PREVENTER, AUTOMATED FILTER, CONTINUOUSLY OPEN MASTER VALVE, FLOW SENSOR, AND WINTERIZATION EQUIPMENT WILL BE INSTALLED UNDER THIS CONTRACT. ALL NEW CONSTRUCTION IS DOWNSTREAM OF THE EXISTING NON POTABLE WATER METER AND SHUT OFF. AC POWER FOR THE FLOW SENSOR WILL BE PROVIDED BY THE ADJACENT IRRIGATION CONTROLLER.

THE EXISTING FILTER ENCLOSURE AND VAULTS MAY BE REUSED. THE MASTER VALVES ARE TO BE REBUILT AND THE FLOW SENSORS AND RELATED EQUIPMENT IS TO BE DISPOSED OF OFF SITE BY THE CONTRACTOR.

FLAG NOTES

- ① EXCAVATE AND EXPOSE EXISTING 8-INCH DUCTILE IRON DISCHARGE PIPE IN APPROXIMATE LOCATION SHOWN DOWNSTREAM OF THE EXISTING WATER METER. CONNECT NEW MAINLINE PIPE TO DISCHARGE PIPE USING NECESSARY DUCTILE IRON FLANGED FITTINGS. BACKFILL AND COMPACT TO MATCH EXISTING CONDITIONS AND PATCH ROAD PER SPECIFICATIONS. COORDINATE EXACT LOCATION OF DISCHARGE PIPING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ② INSTALL NEW MASTER VALVE AND FLOW SENSOR AS INDICATED ON PLANS. EXTEND MAINLINE PIPE TO SITE AS SHOWN. MAKE ALL NECESSARY CONNECTIONS BETWEEN NEW VALVES AND FUTURE CONTROLLER LOCATION. COORDINATE POINT OF CONNECTION CONSTRUCTION ACTIVITIES WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE OF 131 PSI AT THE POINTS OF CONNECTION. POC 1 HAS A CAPACITY OF 700 GPM AND POC 2 HAS A DESIGN CAPACITY OF 1,200 GPM FOR A COMBINED TOTAL OF 1,900 GPM, THE TWO POINTS OF CONNECTION ARE NOT CONNECTED.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. CONFIRM EXACT LIMITS OF IRRIGATED AREA AND ALL EXISTING AND FUTURE HARDSCAPE AND BURIAL AREAS PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND CONDITIONS BEFORE EXCAVATING.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNERS REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY.
 - B. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - C. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
6. USE EXISTING ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM.
7. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:
 - IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
8. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
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 - B. FOUR OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
 - C. TEN VALVE IN HEAD SPRINKLERS TO INCLUDE NOZZLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION. DISTURBED AREAS INCLUDE THE FOLLOWING BUT ARE NOT LIMITED TO: TRENCHING, SPOILS LEFT ADJACENT TO THE TRENCH THAT DAMAGES EXISTING TURF, CONSTRUCTION EQUIPMENT WEAR ON EXISTING TURF, STAGING AREA DISTURBANCE, AND ANY OTHER DAMAGE INCURRED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST INSTALL SOD (TO MATCH EXISTING CONDITIONS) IN ALL EXISTING TURF AREAS DISTURBED BY CONSTRUCTION. BACKFILLED AREAS MUST BE RETURNED TO ORIGINAL GRADE USING A CLEAN NATIVE LOAM TOPSOIL APPROVED BY CITY OF REPRESENTATIVES PRIOR TO INSTALLATION. CONFIRM WITH OWNER'S REPRESENTATIVE THAT ALL DISTURBED AREAS MEET OR EXCEED REPAIR REQUIREMENTS PRIOR TO SUBSTANTIAL COMPLETION.
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12. THE BURIAL ACTIVITIES AT THE CEMETERY TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITIES. COOPERATION AND COORDINATION WITH THE OWNER'S REPRESENTATIVE AND CEMETERY MANAGER ARRANGING CONSTRUCTION SCHEDULE TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH CEMETERY ACTIVITIES IN ACTUAL BURIAL AREAS IS REQUIRED. CONSTRUCTION NOISE DURING THE INTERNMENT SERVICES MUST NOT DISTURB THE SERVICE. COORDINATION OF WORK MAY REQUIRE THAT EQUIPMENT THAT IS HEARD FROM THE SERVICE LOCATION BE SHUT OFF, OR MOVED OUT OF THE AREA PRIOR TO THE SERVICE, AS ACCEPTABLE TO THE CEMETERY MANAGER. CONSTRUCTION VEHICLES AND WORKERS MUST NOT PASS THROUGH THE SERVICE AREA DURING THIS PERIOD.
 - A. DISCONTINUE WORK SUFFICIENTLY IN ADVANCE OF EASTER SUNDAY, MOTHER'S DAY, FATHER'S DAY, MEMORIAL DAY, VETERAN'S DAY AND/OR FEDERAL HOLIDAYS, AND CLEAN UP ALL AREAS OF OPERATION ADJACENT TO FUNCTIONING AREAS OF THE CEMETERY INCLUDING EXISTING BURIAL SECTIONS AND ANY OTHER AREAS IDENTIFIED BY THE OWNER'S REPRESENTATIVE AND CEMETERY DIRECTION BEFORE THESE DATES.
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 - C. SHORT NOTICE SERVICES TYPICALLY ONLY PROVIDE 12-HOURS NOTICE. WEEKLY CONSTRUCTION MEETINGS WILL PROVIDE PRELIMINARY SCHEDULE TO THE CONTRACTOR, HOWEVER, THERE MAY BE INSTANCES WHERE SHORT NOTICE SERVICES MUST BE ACCOMMODATED.
13. SPRINKLER LOCATIONS WERE STAKED PRIOR TO IRRIGATION DESIGN AND LOCATIONS WERE COLLECTED VIA GPS. AUTOCAD FILES WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING OF THE SPRINKLERS.
14. IT MAY BE NECESSARY TO OPERATE EXISTING VALVES WHEN CONNECTING TO THE WATER DISTRIBUTION SYSTEM. ONLY COLORADO SPRINGS UTILITIES PERSONNEL SHALL OPERATE VALVES ON THE EXISTING WATER DISTRIBUTION SYSTEM OWNED BY COLORADO SPRINGS UTILITIES. THE CONTRACTOR SHALL GIVE THE INSPECTOR 2 WORKING DAYS NOTICE TO ARRANGE FOR THE OPERATION OF VALVES AFTER THE VALVES HAVE BEEN IDENTIFIED, RAISED, CLEANED, AND INSPECTED PER SECTION 2.6.C.1. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE WATERTIGHTNESS OF VALVES ON EXISTING FACILITIES. IF EXISTING VALVES LEAK, COLORADO SPRINGS UTILITIES WILL ASSIST IN REDUCING THE INFLUX OF WATER, BUT THE CONTRACTOR MUST USE APPROVED METHODS AT HIS OWN DISPOSAL TO WORK WITH THE RESULTING LEAKAGE. COLORADO SPRINGS UTILITIES IS NOT LIABLE FOR ANY DAMAGES (FINANCIAL OR OTHERWISE) THAT THE CONTRACTOR SUSTAINS AS A RESULT OF LOST TIME DUE TO LEAKING VALVES.

LEGEND

- EXISTING PVC MAINLINE PIPE: SHOWN FOR REFERENCE ONLY, REFER TO MAINLINE RENOVATION PLANS FOR MORE INFORMATION
- POINT-OF-CONNECTION (P.O.C.)
- ◀ BACKFLOW ASSEMBLY
FEBCO LF880V-FS, SEE DRAWING FOR SIZE
- ⊞ MASTER VALVE ASSEMBLY
GRISWOLD 2000 NORMALLY OPEN, 8-INCH
- ⊞ FLOW SENSOR ASSEMBLY
MCCROMETER ULTRA MAG, 8-INCH AC POWER
- ⊗ ISOLATION GATE VALVE ASSEMBLY, MAINLINE
NIBCO P-619-RW SIZED TO MAIN



EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION POINT OF CONNECTION COVER SHEET

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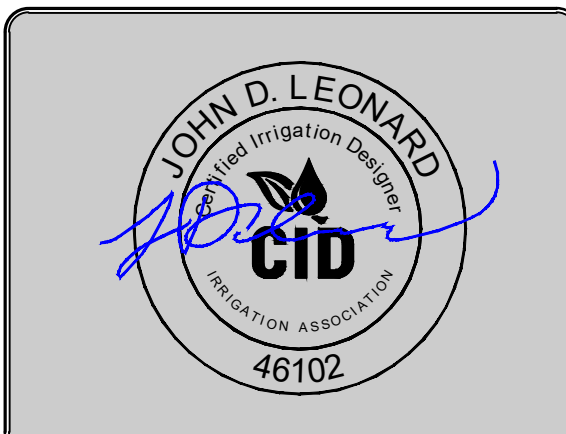
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PAGE 6 OF 65



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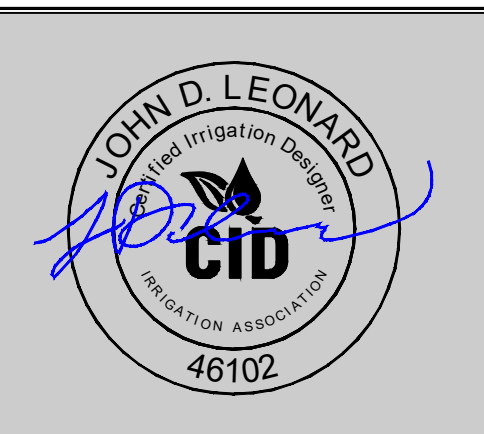
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 IP1.0, PAGE 6 FOR APPLICABLE CALLOUTS ON THIS SHEET.





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IRRIGATION POINT OF CONNECTION PLAN SHEET**

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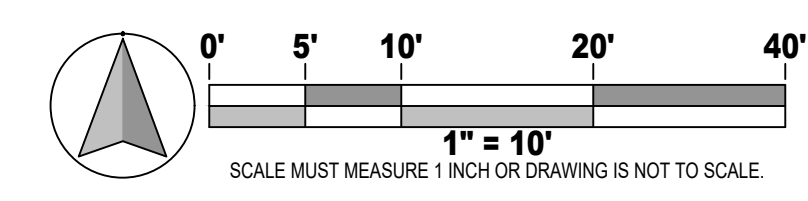
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PAGE 8 OF 65

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**COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL**

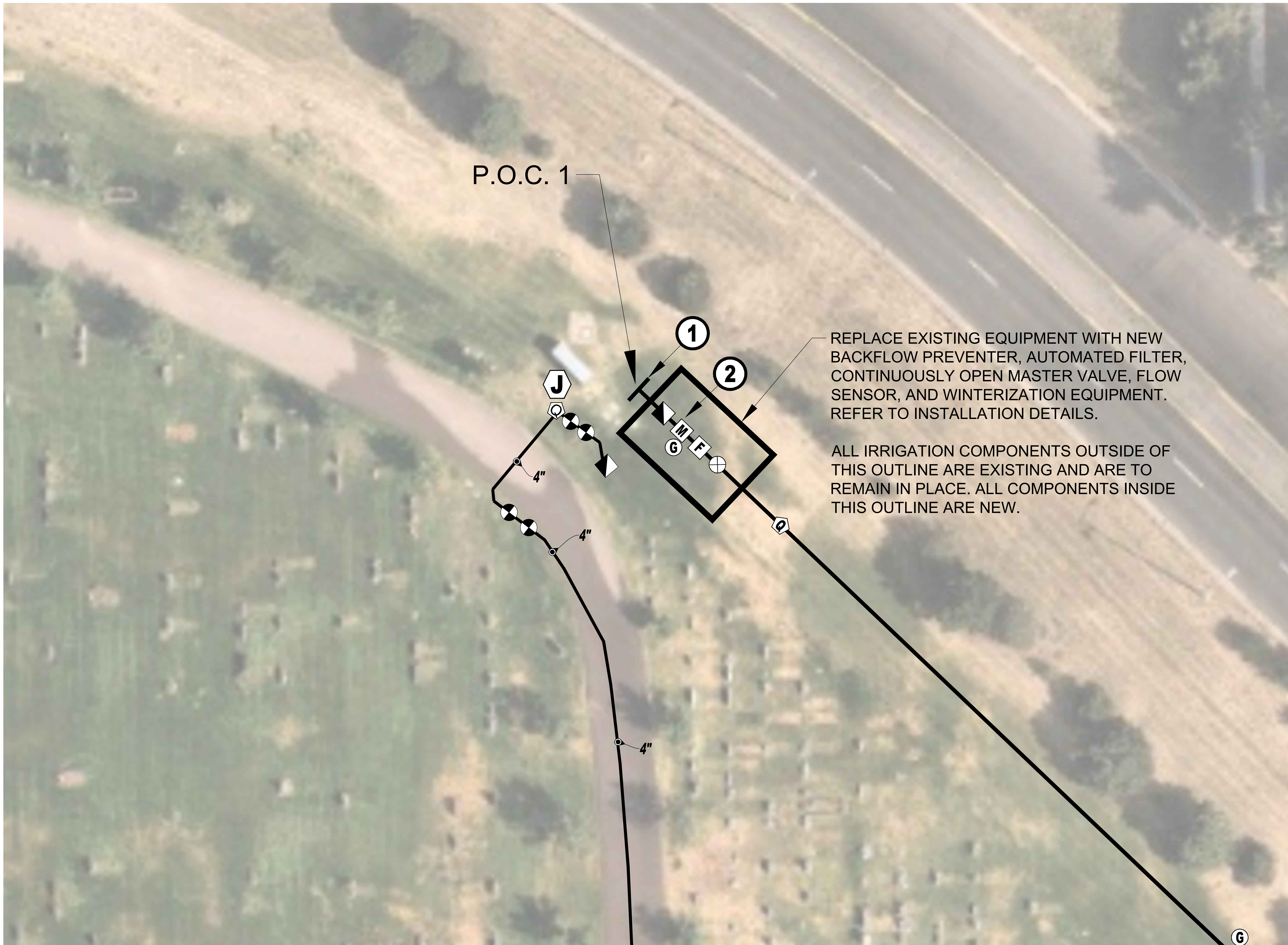
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Water

PROJECT NUMBER: 2023-N217
WORK ORDER NUMBER: 4076767
CSU SHEET 3 OF 41

Colorado Springs Utilities
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APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

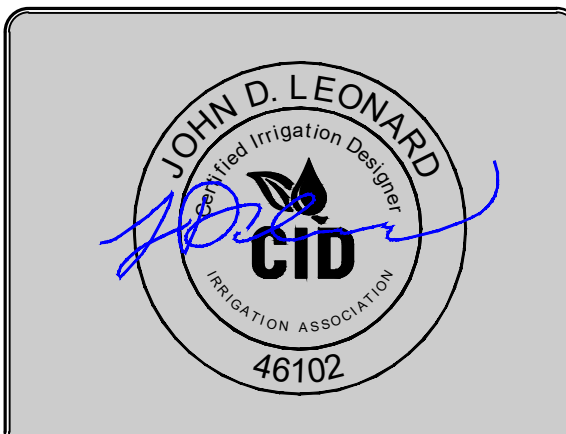
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REPLACE EXISTING EQUIPMENT WITH NEW BACKFLOW PREVENTER, AUTOMATED FILTER, CONTINUOUSLY OPEN MASTER VALVE, FLOW SENSOR, AND WINTERIZATION EQUIPMENT. REFER TO INSTALLATION DETAILS.

ALL IRRIGATION COMPONENTS OUTSIDE OF THIS OUTLINE ARE EXISTING AND ARE TO REMAIN IN PLACE. ALL COMPONENTS INSIDE THIS OUTLINE ARE NEW.

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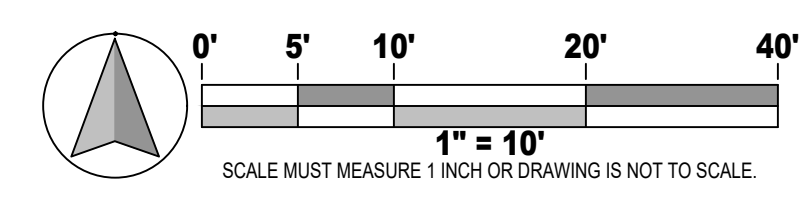
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PAGE	9 OF 65

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THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.



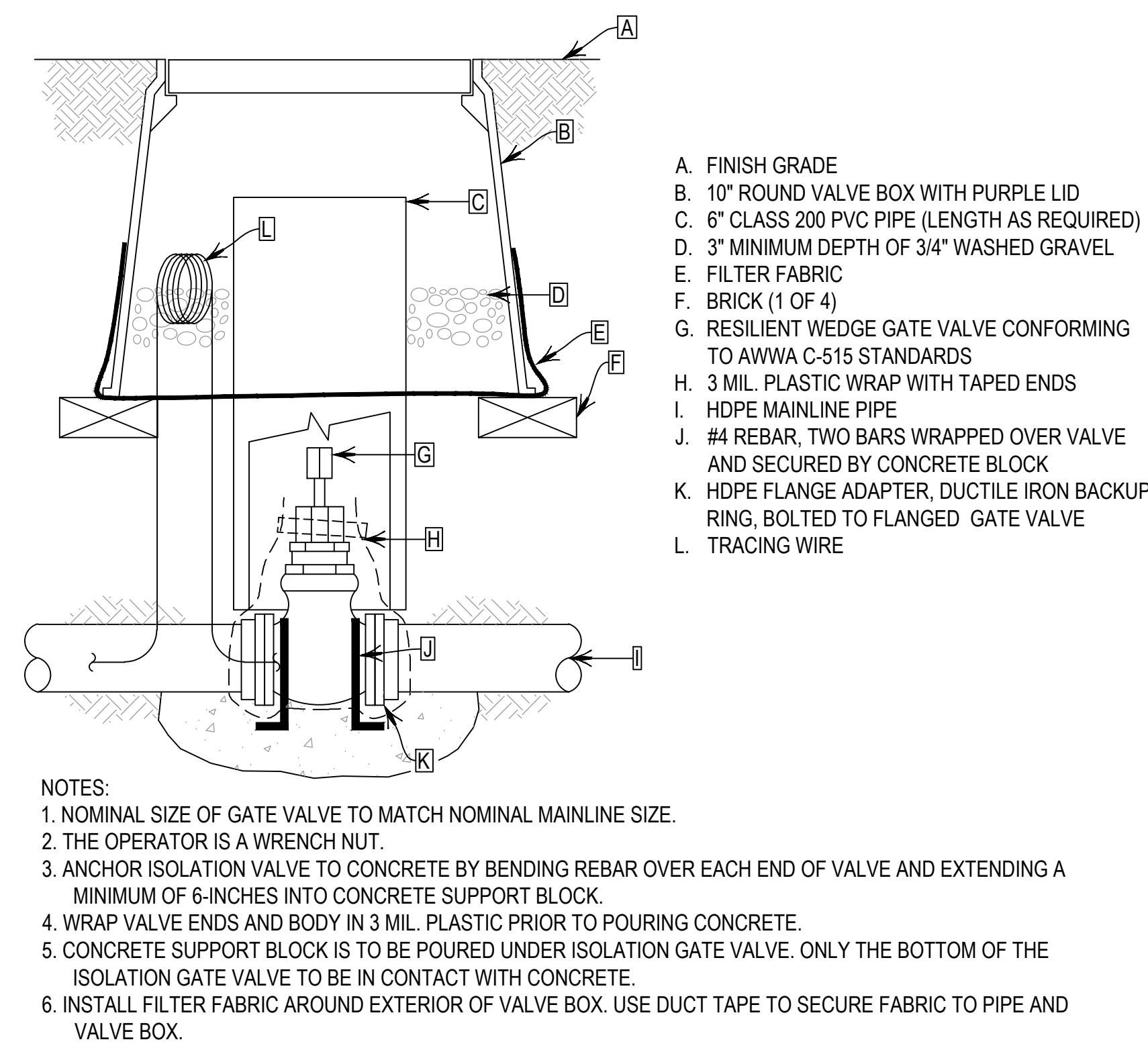
COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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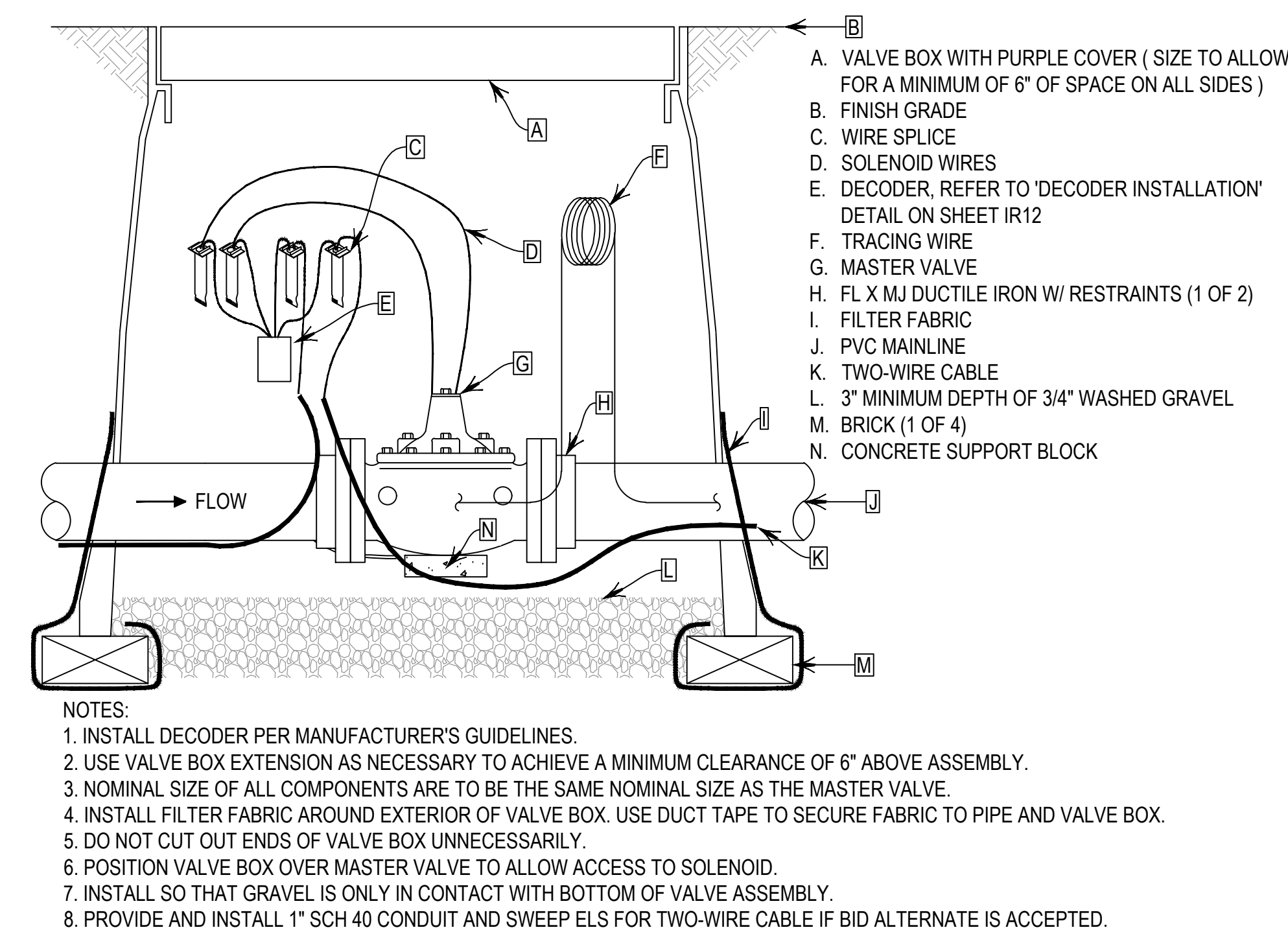
PROJECT NUMBER: 2023-N217
WORK ORDER NUMBER: 4076767
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APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

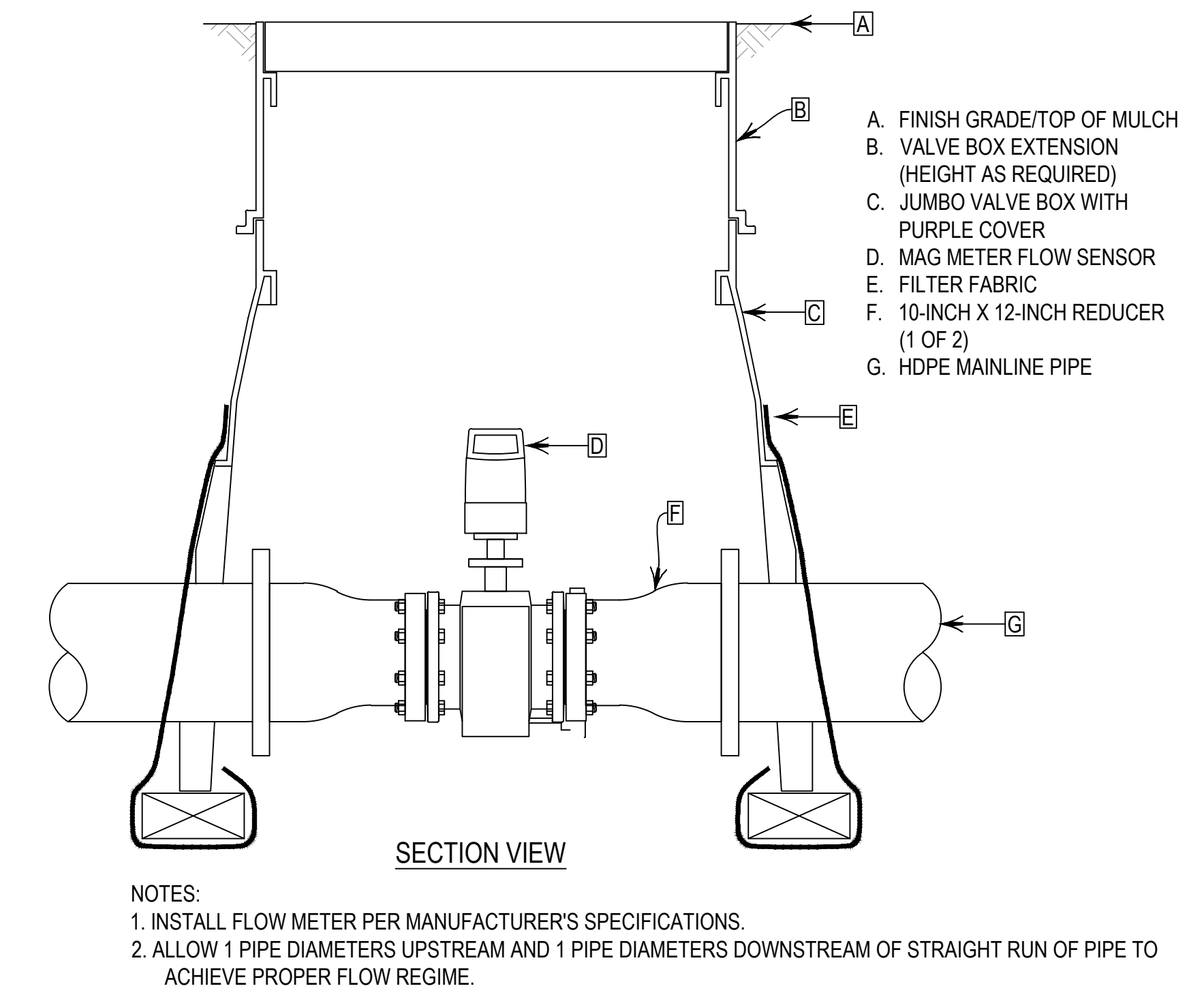
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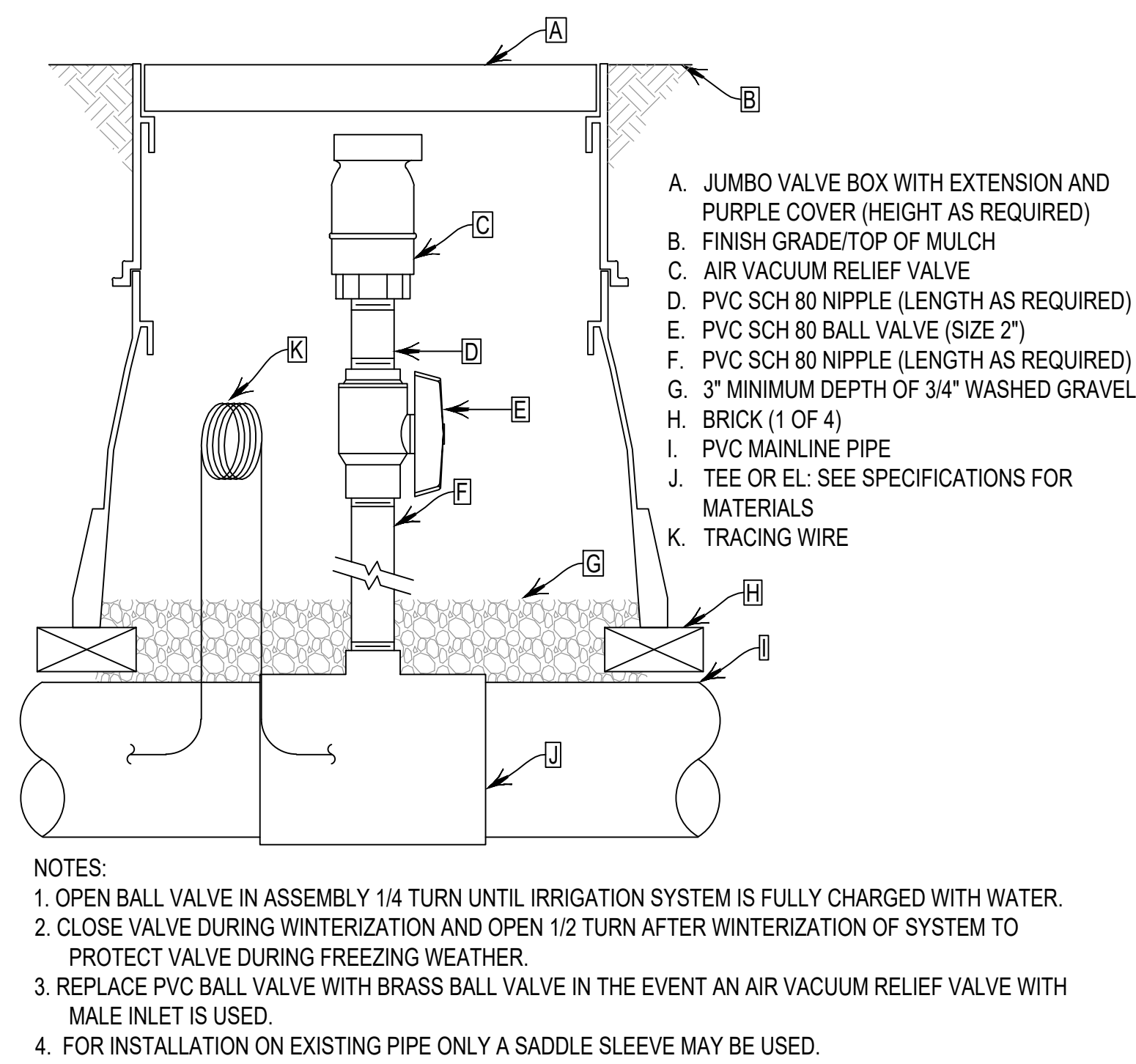
1 ISOLATION GATE VALVE ASSEMBLY N.T.S.



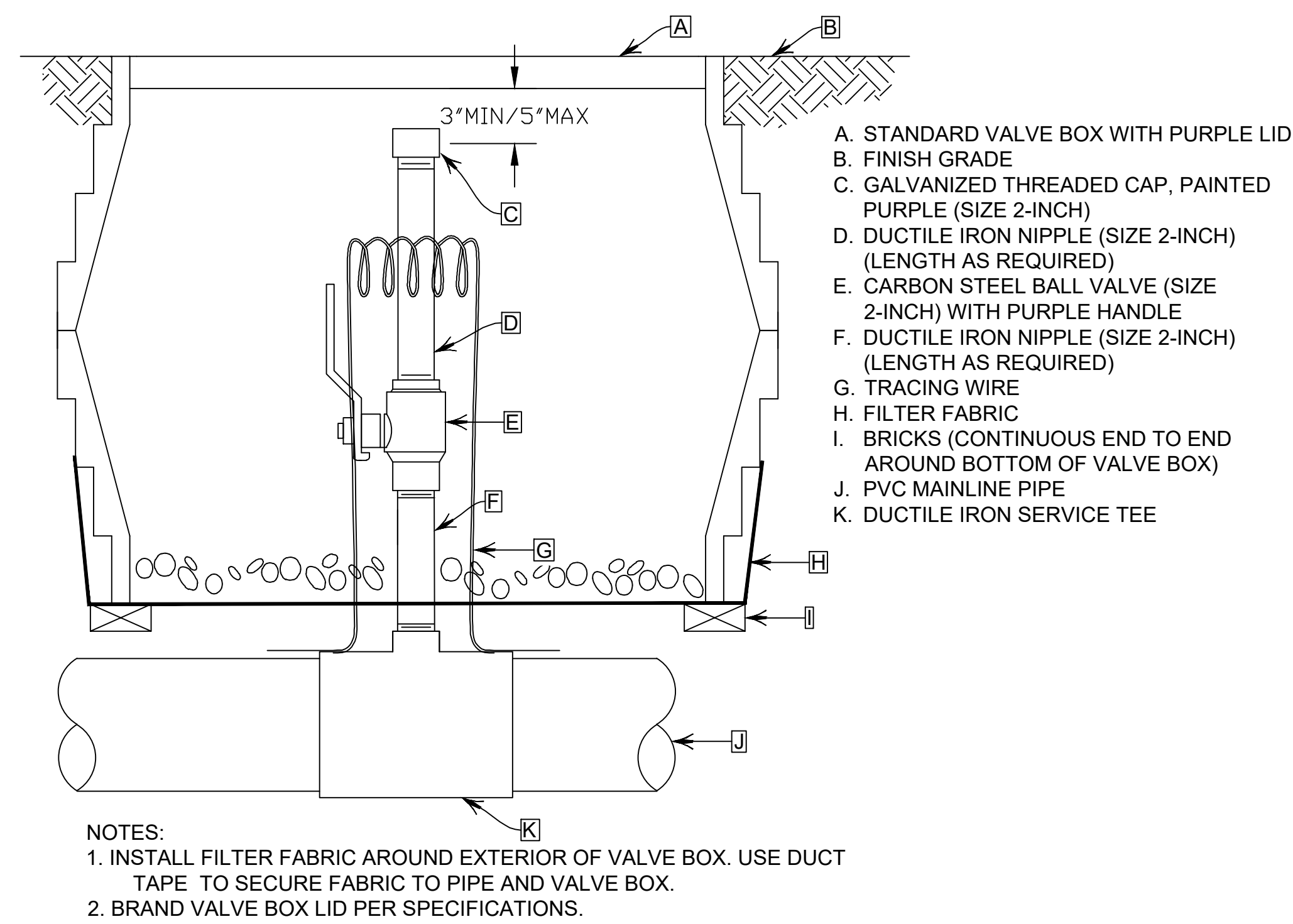
2 MASTER VALVE ASSEMBLY N.T.S.



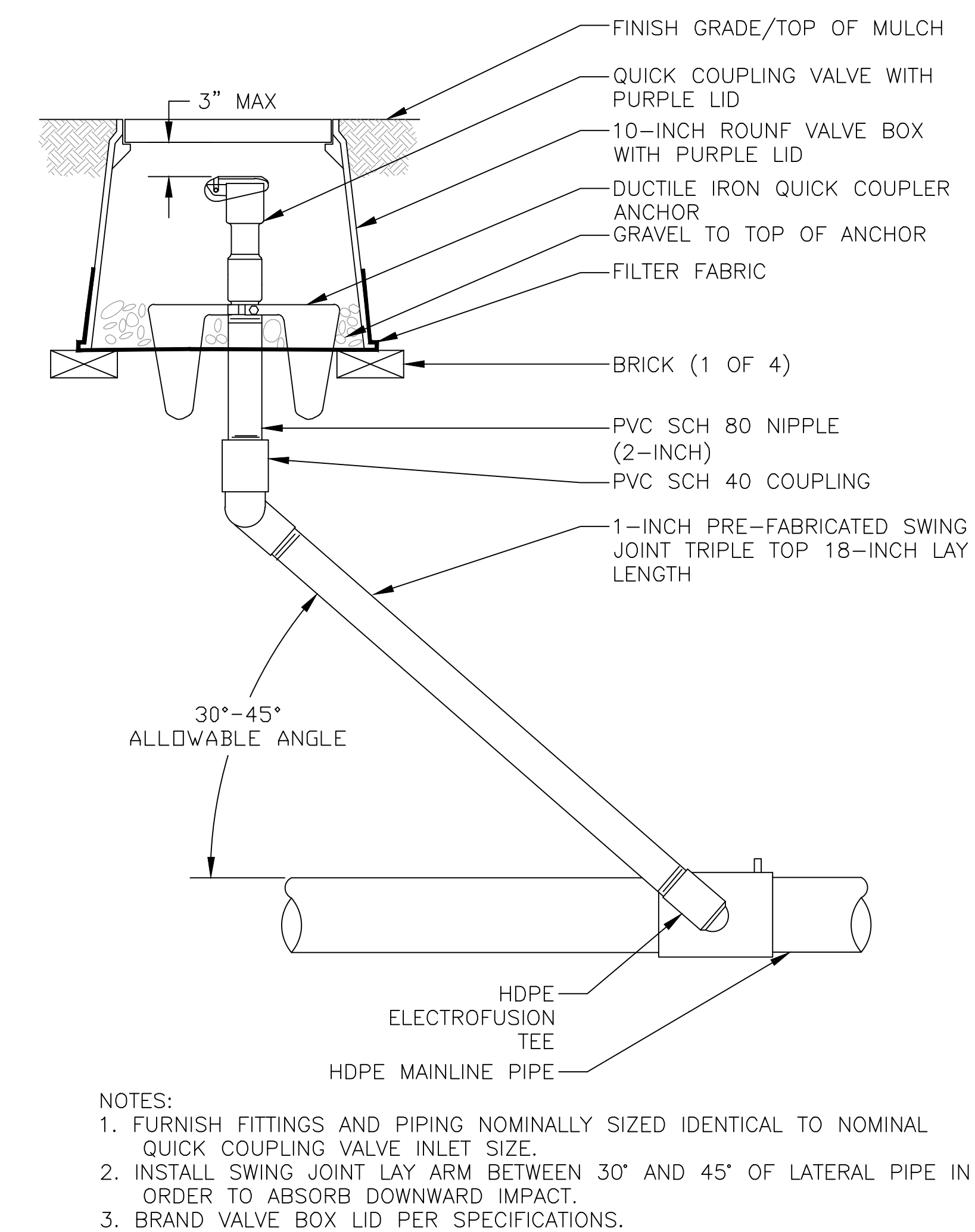
3 FLOW SENSOR ASSEMBLY N.T.S.



4 AIR/VACUUM RELIEF VALVE ASSEMBLY N.T.S.



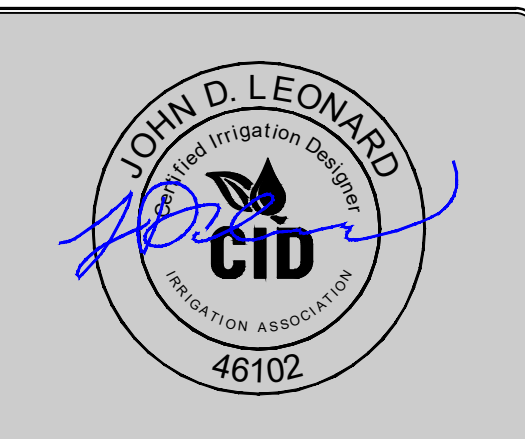
5 WINTERIZATION ASSEMBLY N.T.S.



6 QUICK COUPLER VALVE ASSEMBLY N.T.S.

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COLORADO SPRINGS, CO
IRRIGATION POINT OF CONNECTION DETAILS

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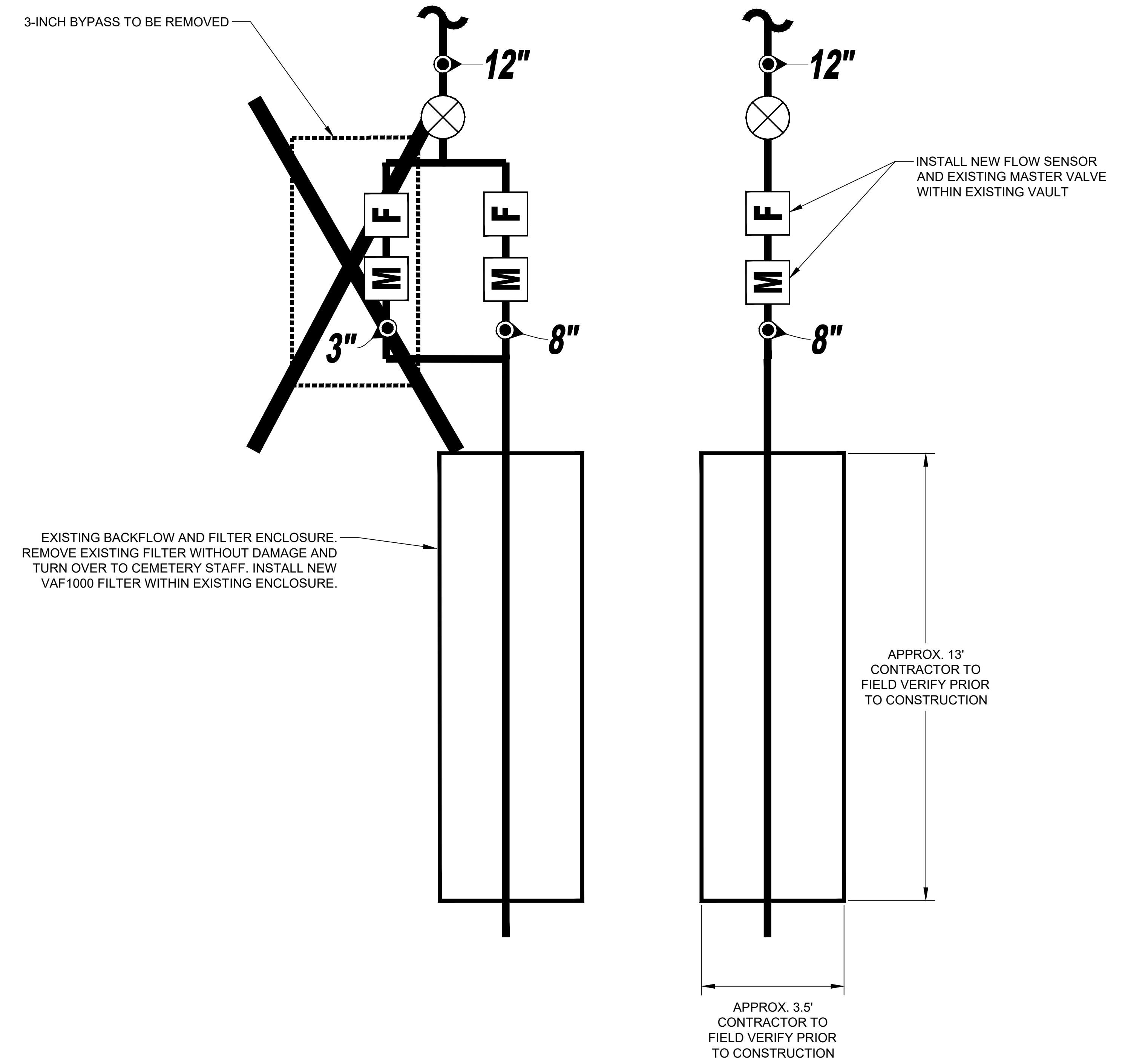
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2 POINT-OF-CONNECTION REVISION DETAIL

N.T.S.

REMOVE EXISTING FILTER WITHOUT DAMAGE AND TURN OVER TO CEMETERY STAFF

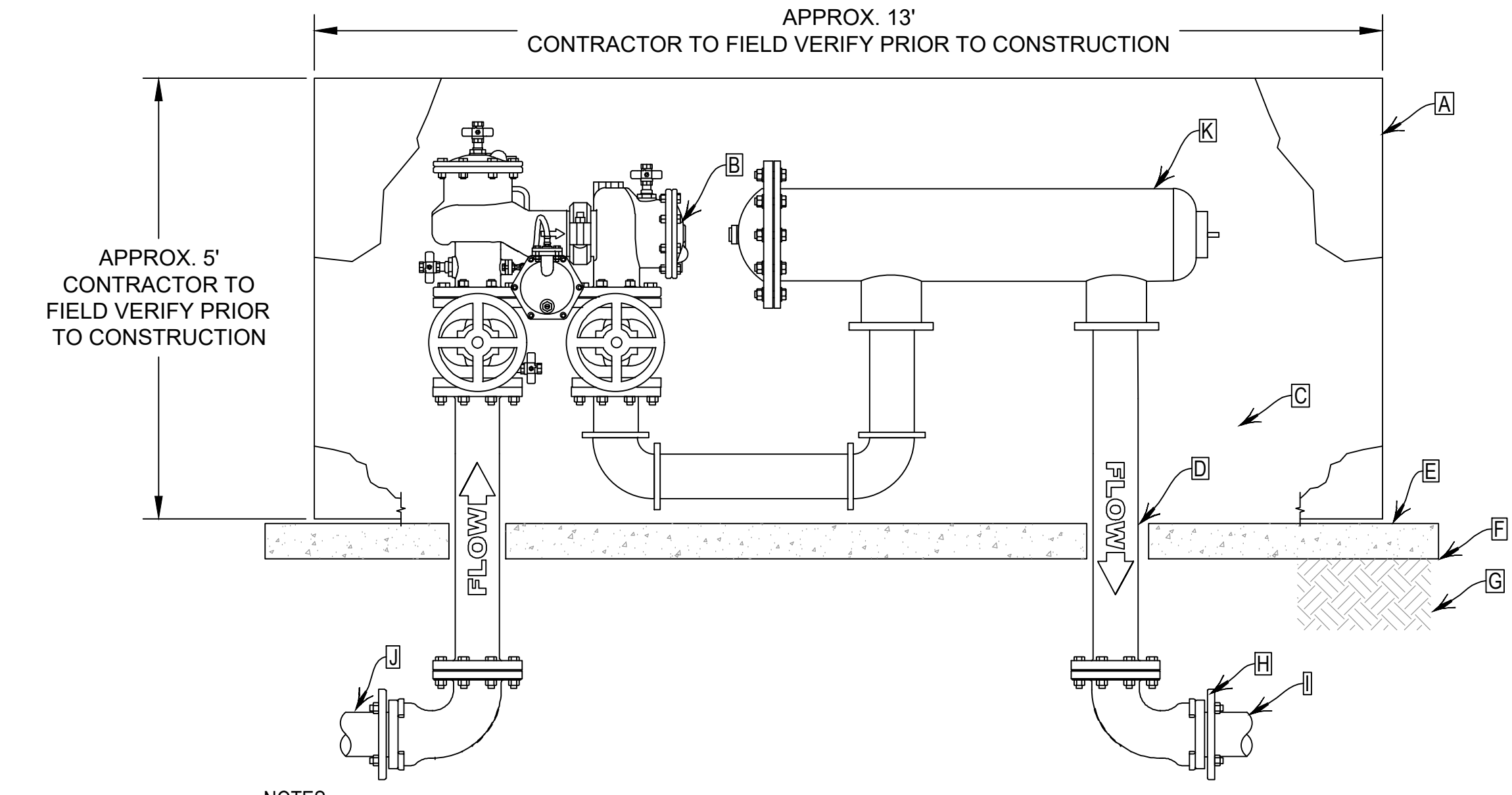


EXISTING FILTER ENCLOSURE TO REMAIN. INSTALL NEW BACKFLOW PREVENTER AND VAF1000 FILTER WITHIN EXISTING ENCLOSURE.



3 EXISTING FILTER ENCLOSURE

N.T.S.



- A. EXISTING BACKFLOW PREVENTER ENCLOSURE
- B. FLANGED MOUNTED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR
- C. FLANGED STEEL PIPE SECTION (LENGTH AS REQUIRED, 1 OF 2)
- D. WRAP PIPE AT PENETRATION WITH 1/4" FELT OR SLEEVE WITH CLASS 200 PVC
- E. 4" THICK 3000 PSI CONCRETE BASE
- F. FINISH GRADE/TOP OF MULCH
- G. COMPACTED SUBGRADE
- H. MECHANICAL JOINT FITTING WITH TRANSITION GASKET AND MEGA-LUGS
- I. PVC PIPE EXISTING/HDPE PIPE NEW
- J. COATED DUCTILE IRON PIPE FROM P.O.C.
- K. VAF-1000 FILTER

- NOTES:
1. EXTEND CONCRETE BASE MINIMUM 6" BEYOND ENCLOSURE.
 2. FURNISH NOMINAL SIZE PIPE AND FITTINGS TO NOMINAL SIZE OF BACKFLOW PREVENTER.
 3. INSTALLATION OF BACKFLOW PREVENTER SHALL COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES.
 4. SUBMIT SHOP DRAWINGS SPECIFYING ENCLOSURE SIZE AND SHOWING RELATIVE LAYOUT OF EQUIPMENT.
 5. ALL COMPONENTS PAINTED PURPLE PER CITY OF COLORADO SPRINGS RECLAIMED WATER STANDARDS.

1 BACKFLOW PREVENTION ASSEMBLY

N.T.S.

CONTROLLER AND MAINLINE IRRIGATION SYSTEM DESIGN APPROACH

A NEW TWO WIRE DECODER CONTROL SYSTEM AND MAINLINE PIPE WILL BE INSTALLED UNDER THIS CONTRACT. NEW HDPE IRRIGATION MAINLINE PIPE WILL BE INSTALLED IN THIS CONTRACT TO BE USED FOR CONTINUOUSLY PRESSURIZED PIPE.

THE EXISTING PVC PIPE MAY BE BURST (PIPE BURSTING) TO KEEP THE HDPE PIPE IN THE SAME LOCATION AS THE EXISTING MAINLINE PROVIDED THIS DOES NOT ADD COST TO THE MAINLINE REPLACEMENT.

ISOLATION GATE VALVES WILL BE INSTALLED TO PROVIDE FOR MAINTENANCE AND TO MINIMIZE THE DISRUPTION TO THE EXISTING SYSTEM DURING CONSTRUCTION. AIR VACUUM RELIEF VALVES WILL BE INSTALLED WHERE INDICATED TO RELEASE OCCASIONAL AIR POCKETS WITHIN THE SYSTEM.

THE EXISTING AUTOMATED IRRIGATION MAINLINE SOUTH OF THE MAINTENANCE BUILDING WILL REMAIN AND BE CONNECTED TO THE NEW MAIN LINE AND POINT OF CONNECTION. THE EXISTING MANUAL MAINLINE AND VALVES WILL BE ABANDONED. VALVES, HYDRANTS, QUICK COUPLING VALVES AND OTHER VALVES WILL BE REMOVED AT THE TEE TO THE MAIN LINE PIPE, EXISTING MAINLINE PIPE WILL BE CAPPED AND ABANDONED IN PLACE.

THE EXISTING PVC MAINLINE WILL BE ABANDONED IN PLACE. WHERE THE NEW MAINLINE CROSSES THE EXISTING MAINLINE, CUT AND REMOVE THE EXISTING MAINLINE 2- FEET ON EITHER SIDE OF THE NEW MAINLINE ROUTING.

EXISTING REMOTE CONTROL VALVES WILL REMAIN IN PLACE. CONNECT THE NEW HDPE MAINLINE TO THE EXISTING PVC MAINLINE AT THE FIRST VALVE IN EACH VALVE CLUSTER. TRANSITION FROM HDPE TO PVC USING REPAIR COUPLING.

THE EXISTING CONVENTIONALLY WIRED WEATHER TRAK CONTROL SYSTEM WILL BE REPLACED BY A NEW TWO WIRE DECODER SYSTEM. THE NEW TWO WIRE PATH WILL BE INSTALLED IN CONDUIT AT THE SAME TIME THE MAINLINE IS INSTALLED. WIRE JUNCTIONS TO BURIAL SECTIONS WILL BE IN TRAFFIC RATED PULL BOXES WITH FUSED SPLICE CONNECTORS FOR EASE OF TROUBLESHOOTING.

FLAG NOTES

- ① EXCAVATE AND EXPOSE EXISTING 8-INCH DUCTILE IRON DISCHARGE PIPE IN APPROXIMATE LOCATION SHOWN DOWNSTREAM OF THE EXISTING WATER METER. CONNECT NEW MAINLINE PIPE TO DISCHARGE PIPE USING NECESSARY DUCTILE IRON FLANGED FITTINGS. BACKFILL AND COMPACT TO MATCH EXISTING CONDITIONS AND PATCH ROAD PER SPECIFICATIONS. COORDINATE EXACT LOCATION OF DISCHARGE PIPING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ② CUT AND REMOVE EXISTING ASPHALT FOR INSTALLATION OF HDPE MAINLINE PIPING AS SHOWN ON PLAN. COORDINATE EXACT PIPE ROUTING WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. INSTALL A 2" HDPE WIRE SLEEVE ADJACENT TO MAINLINE PIPE. BACKFILL/COMPACT TRENCH AND INSTALL 4" OF ROAD BASE AT TOP OF TRENCH. COMPACT TO 95% STANDARD PROCTOR DENSITY.
- ③ CUT AND REMOVE EXISTING ASPHALT FOR INSTALLATION OF NEW HDPE MAINLINE PIPE UNDER CENTER OF EXISTING ROAD. COORDINATE EXACT ROUTING OF MAINLINE PIPE WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION. BACKFILL/COMPACT TRENCH AND INSTALL 4" OF ROAD BASE AT TOP OF TRENCH. COMPACT TO 95% STANDARD PROCTOR DENSITY.
- ④ FOR FUTURE USE: STUB OUT MAINLINE IN APPROXIMATE LOCATION SHOWN. TERMINATE MAINLINE END WITH ELCTROFUION CAP. COORDINATE STUB OUT ACTIVITIES WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ⑤ BORE HDPE MAINLINE A MINIMUM OF 3' DEPTH THROUGH EXPANSE SHOWN. COORDINATE EXACT ROUTING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ⑥ INSTALL AIR VACUUM RELIEF VALVE ASSEMBLY AT HIGHEST MAINLINE PIPE ELEVATION. FIELD LOCATE HIGHEST ELEVATION. LOCATION SHOWN IS SCHEMATIC AND BASED FROM PROVIDED GROUND ELEVATION INFORMATION.
- ⑦ COORDINATE EXACT PIPE ROUTING WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. INSTALL A 2" HDPE WIRE SLEEVE ADJACENT TO MAINLINE PIPE.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE OF 131 PSI AT THE POINTS OF CONNECTION. POC 1 HAS A CAPACITY OF 700 GPM AND POC 2 HAS A DESIGN CAPACITY OF 1,200 GPM FOR A COMBINED TOTAL OF 1,900 GPM, THE TWO POINTS OF CONNECTION ARE NOT CONNECTED.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. CONFIRM EXACT LIMITS OF IRRIGATED AREA AND ALL EXISTING AND FUTURE HARDSCAPE AND BURIAL AREAS PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND CONDITIONS BEFORE EXCAVATING.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNERS REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY.
 - B. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - C. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
6. USE EXISTING ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM.
7. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
8. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - A. FOUR OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
 - B. FOUR OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
 - C. TEN VALVE IN HEAD SPRINKLERS TO INCLUDE NOZZLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION. DISTURBED AREAS INCLUDE THE FOLLOWING BUT ARE NOT LIMITED TO: TRENCHING, SPOILS LEFT ADJACENT TO THE TRENCH THAT DAMAGES EXISTING TURF, CONSTRUCTION EQUIPMENT WEAR ON EXISTING TURF, STAGING AREA DISTURBANCE, AND ANY OTHER DAMAGE INCURRED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST INSTALL SOD (TO MATCH EXISTING CONDITIONS) IN ALL EXISTING TURF AREAS DISTURBED BY CONSTRUCTION. BACKFILLED AREAS MUST BE RETURNED TO ORIGINAL GRADE USING A CLEAN NATIVE LOAM TOPSOIL APPROVED BY CITY OF REPRESENTATIVES PRIOR TO INSTALLATION. CONFIRM WITH OWNER'S REPRESENTATIVE THAT ALL DISTURBED AREAS MEET OR EXCEED REPAIR REQUIREMENTS PRIOR TO SUBSTANTIAL COMPLETION.
10. TREE PROTECTION NOTE: ALL AREAS WITHIN THE DRIP LINE OF EXISTING TREES ARE DEFINED AS CRITICAL ROOT ZONE. ANY AND ALL CONSTRUCTION OPERATIONS (SPECIFICALLY EXCAVATION, BACKFILL, AND COMPACTION) WITHIN THE DRIP LINE/CRITICAL ROOT ZONE OF ANY EXISTING TREE MUST FOLLOW ALL CITY OF COLORADO SPRINGS TREE PROTECTION REQUIREMENTS. ALL TREES IN THIS CATEGORY MUST HAVE PIPING EITHER BORED UNDERNEATH TREE OR PIPING HAND DUG. NO TRENCHING IS ALLOWED FOR IMPACTED TREES. CITY OF COLORADO SPRINGS FORESTER MUST BE PRESENT DURING ALL WORK WITHIN DRIP LINE/CRITICAL ROOT ZONE OF EXISTING TREES. CONTACT XXX XXXX XXXXX)
11. INSTALL AND MAINTAIN SAFETY FENCING AROUND ALL UNATTENDED EXCAVATION. PLACE SAFETY SIGNS ADJACENT TO CONSTRUCTION AREA TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ALL EXCAVATIONS MUST BE BACKFILLED BY THE END OF EACH WORKDAY. DO NOT LEAVE ANY OPEN TRENCHES OVERNIGHT, ON WEEKENDS OR ON HOLIDAYS. IF TRENCHING OPERATION RESTRICTS ACCESS TO A BURIAL SECTION, PROVIDE PLYWOOD AND SAFETY FENCING ACROSS OPEN TRENCH TO ALLOW ACCESS TO BURIAL SECTION. PROVIDE ACCESS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. THE BURIAL ACTIVITIES AT THE CEMETERY TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITIES. COOPERATION AND COORDINATION WITH THE OWNER'S REPRESENTATIVE AND CEMETERY MANAGER ARRANGING CONSTRUCTION SCHEDULE TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH CEMETERY ACTIVITIES IN ACTUAL BURIAL AREAS IS REQUIRED. CONSTRUCTION NOISE DURING THE INTERNMENT SERVICES MUST NOT DISTURB THE SERVICE. COORDINATION OF WORK MAY REQUIRE THAT EQUIPMENT THAT IS HEARD FROM THE SERVICE LOCATION BE SHUT OFF, OR MOVED OUT OF THE AREA PRIOR TO THE SERVICE, AS ACCEPTABLE TO THE CEMETERY MANAGER. CONSTRUCTION VEHICLES AND WORKERS MUST NOT PASS THROUGH THE SERVICE AREA DURING THIS PERIOD.
 - A. DISCONTINUE WORK SUFFICIENTLY IN ADVANCE OF EASTER SUNDAY, MOTHER'S DAY, FATHER'S DAY, MEMORIAL DAY, VETERAN'S DAY AND/OR FEDERAL HOLIDAYS, AND CLEAN UP ALL AREAS OF OPERATION ADJACENT TO FUNCTIONING AREAS OF THE CEMETERY INCLUDING EXISTING BURIAL SECTIONS AND ANY OTHER AREAS IDENTIFIED BY THE OWNER'S REPRESENTATIVE AND CEMETERY DIRECTION BEFORE THESE DATES.
 - B. CLEAN UP ACTIVITIES INCLUDE THE REMOVAL OF ALL EQUIPMENT, TOOLS, MATERIALS AND DEBRIS AND LEAVING THE AREAS IN A CLEAN, NEAT CONDITION.
 - C. SHORT NOTICE SERVICES TYPICALLY ONLY PROVIDE 12-HOURS NOTICE. WEEKLY CONSTRUCTION MEETINGS WILL PROVIDE PRELIMINARY SCHEDULE TO THE CONTRACTOR, HOWEVER, THERE MAY BE INSTANCES WHERE SHORT NOTICE SERVICES MUST BE ACCOMMODATED.
13. SPRINKLER LOCATIONS WERE STAKED PRIOR TO IRRIGATION DESIGN AND LOCATIONS WERE COLLECTED VIA GPS. AUTOCAD FILES WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING OF THE SPRINKLERS.

LEGEND

- SLEEVING: HDPE SIZE: 2 WIRE SLEEVE 2-INCH.
- MAINLINE PIPE: DIRECTIONALLY BORED AT 36-INCHES DEEP 4170 HDPE DR-11, SIZE AS INDICATED ON DRAWINGS
- POINT-OF-CONNECTION (P.O.C.)
- STUB-OUT FOR FUTURE IRRIGATION
- ⊠ BACKFLOW ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO POINT OF CONNECTION PLANS FOR MORE INFORMATION
- ⊞ MASTER VALVE ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO POINT OF CONNECTION PLANS FOR MORE INFORMATION
- ⊞ FLOW SENSOR ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO POINT OF CONNECTION PLANS FOR MORE INFORMATION
- ⊞ ISOLATION GATE VALVE ASSEMBLY, MAINLINE NIBCO P-619-RW SIZED TO MAIN
- ⊞ AIR-VACUUM RELIEF VALVE ASSEMBLY 2-INCH BERMAID C31
- ⊞ REMOTE CONTROL VALVE ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO IRRIGATION MAINLINE VALVE REPLACEMENT PLANS FOR MORE INFORMATION.
- (A) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 56
- (B) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 42
- (C) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 65
- (D) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 60
- (E) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 56
- (F) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 28
- (G) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 57
- (H) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 66
- (I) IRRIGATION CONTROLLER: WEATHER TRAK ET PRO 3 TWO WIRE STATIONS AVAILABLE: 96 STATIONS USED: 5
- ⊞ DECODER CABLE SWITCH DEVICE: PAIGE SPEC DCSD
- ⊞ DECODER CABLE GROUND

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**EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION MAINLINE REPLACEMENT COVER SHEET**

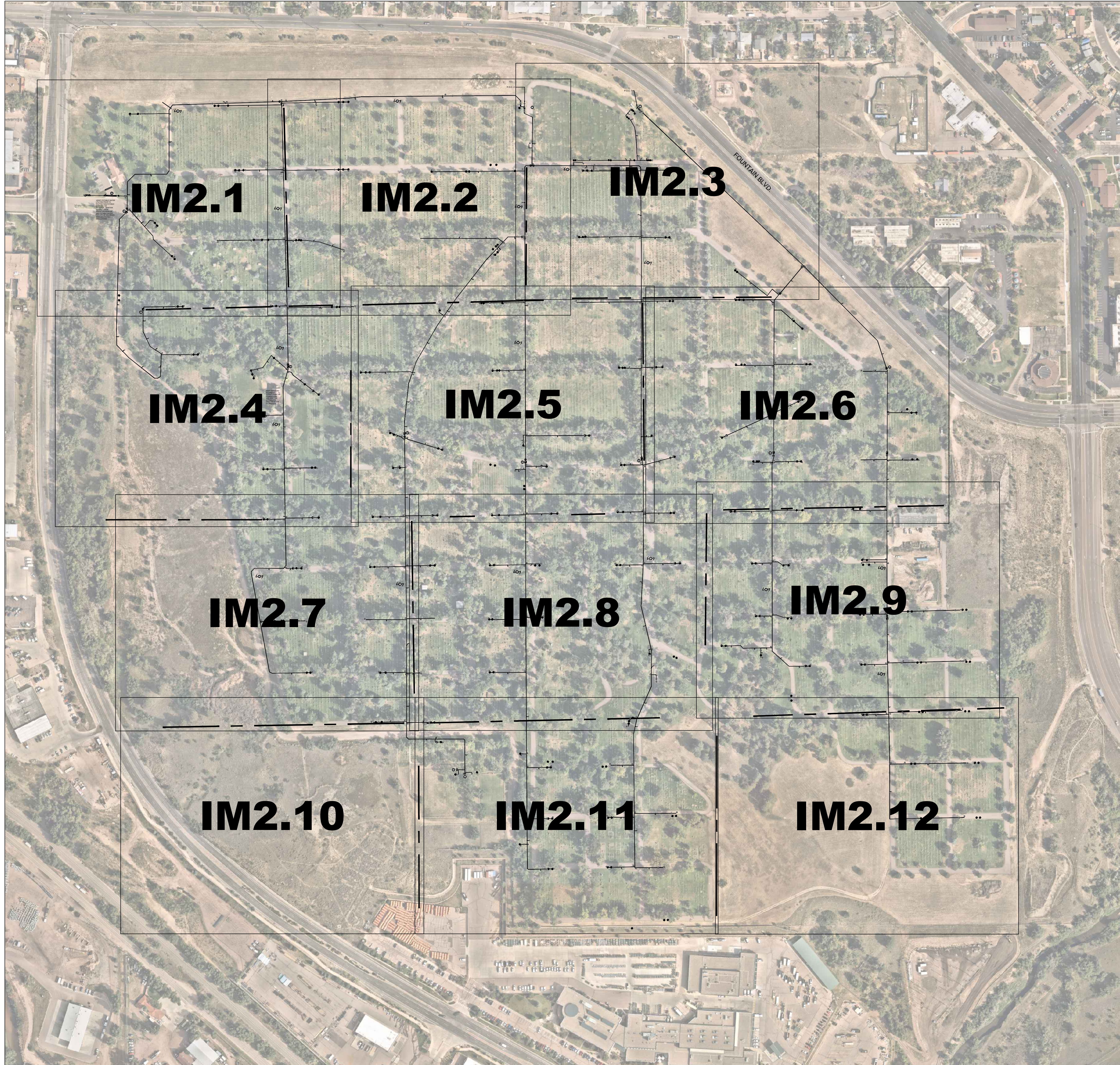
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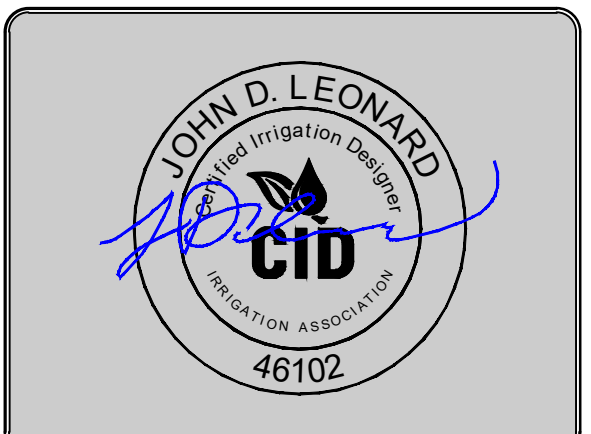
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COLORADO SPRINGS, CO
IRRIGATION PLAN SHEET**

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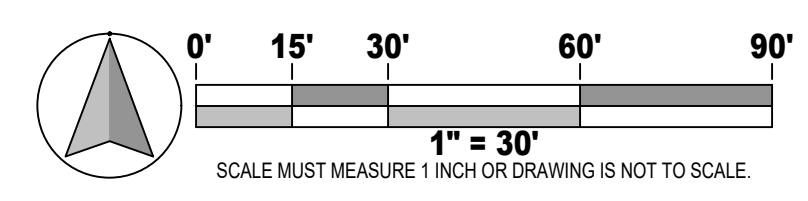
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NONPOTABLE WATER MAIN DESIGN APPROVAL**

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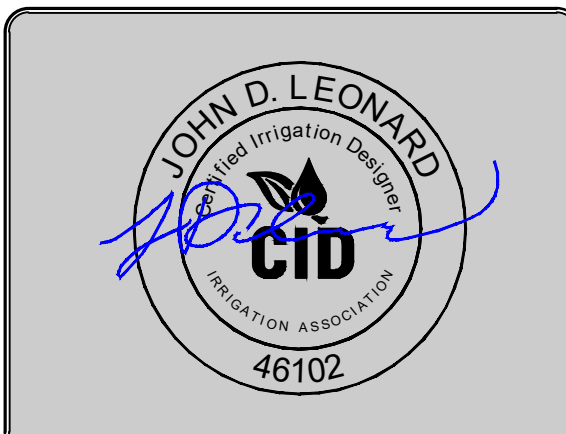
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PAGE	16 OF 65



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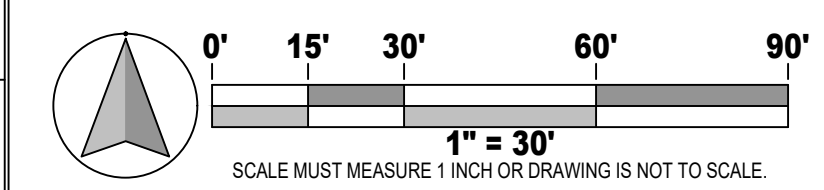
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MATCHLINE SEE SHEET IR2.1



MATCHLINE SEE SHEET IR2.7

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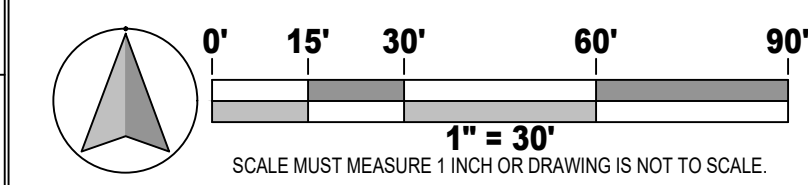
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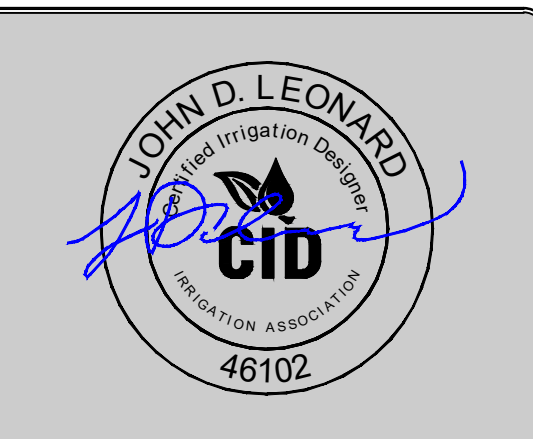
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MATCHLINE SEE SHEET IR2.2

MATCHLINE SEE SHEET IR2.4

MATCHLINE SEE SHEET IR2.6

MATCHLINE SEE SHEET IR2.8



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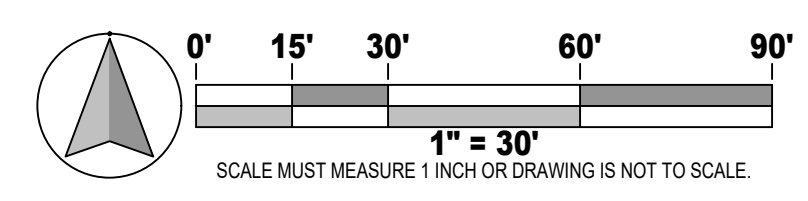
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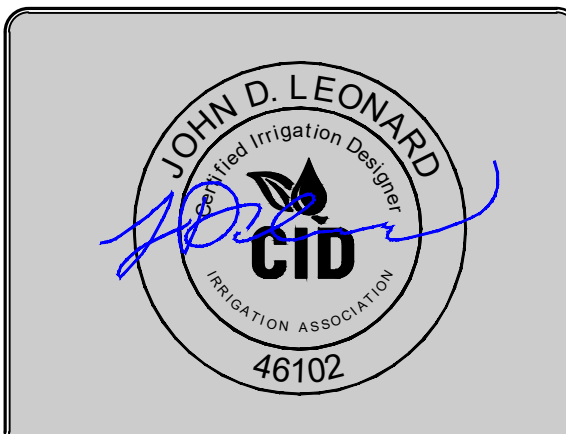
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MATCHLINE SEE SHEET IR2.10



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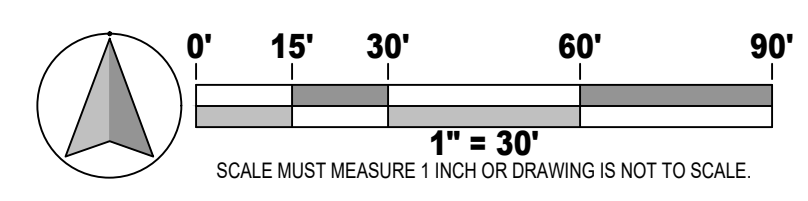
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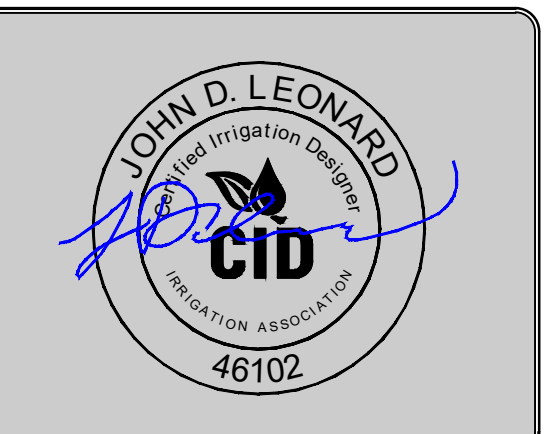
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MATCHLINE SEE SHEET IR2.5



MATCHLINE SEE SHEET IR2.7

MATCHLINE SEE SHEET IR2.9

MATCHLINE SEE SHEET IR2.11

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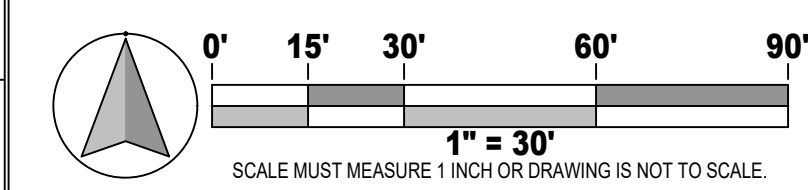
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MATCHLINE SEE SHEET IR2.6



MATCHLINE SEE SHEET IR2.8

MATCHLINE SEE SHEET IR2.12

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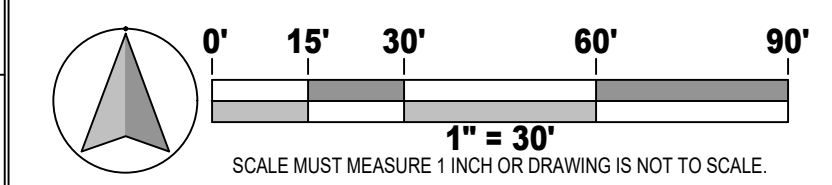
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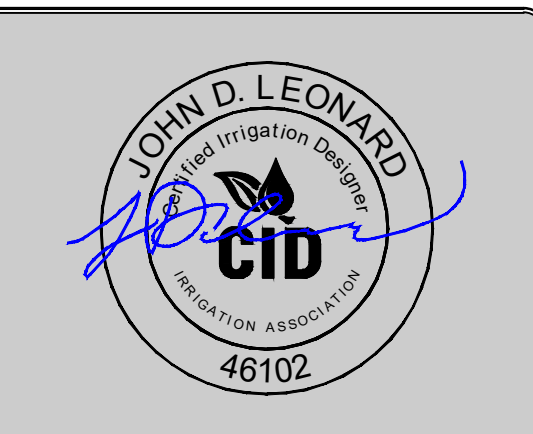
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MATCHLINE SEE SHEET IR2.10



MATCHLINE SEE SHEET IR2.12

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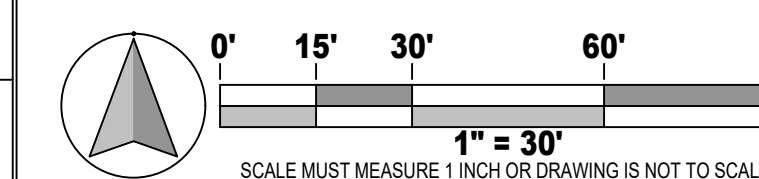
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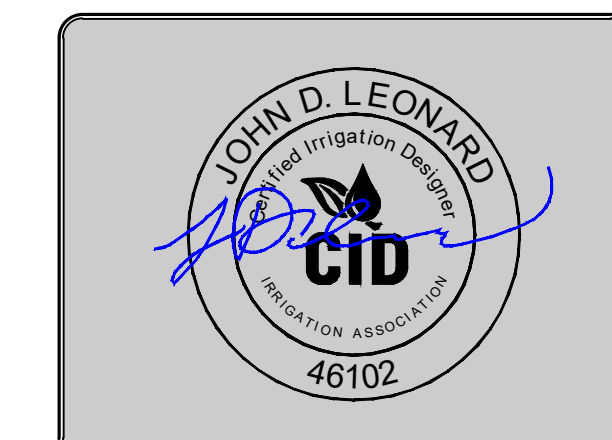
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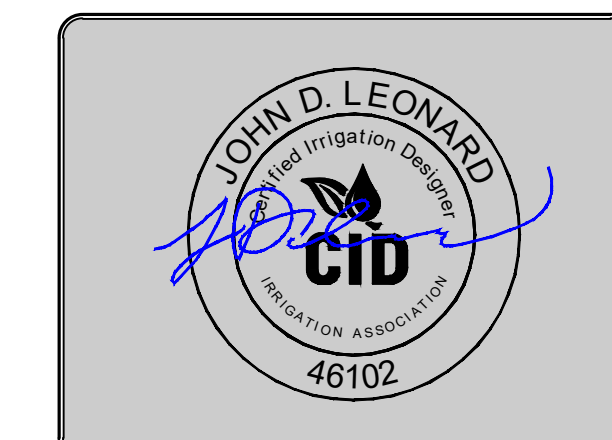
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MATCHLINE SEE SHEET IR2.11



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IRRIGATION PLAN SHEET

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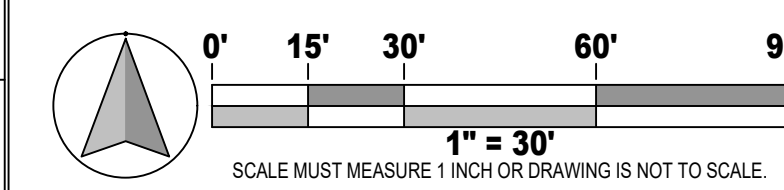
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IRRIGATION SYSTEM REMOTE CONTROL VALVE DESIGN APPROACH

THE EXISTING REMOTE CONTROL IRRIGATION VALVES AND BURIAL SECTION ISOLATION GATE VALVES WILL BE REPLACED UNDER THIS CONTRACT. NEW ISOLATION GATE VALVES WILL BE PROVIDED TO ISOLATE SECTIONS OF THE MAINLINE AND QUICK COUPLINGS VALVES WILL BE INSTALLED TO PROVIDE INCIDENTAL WATERING WITHIN SECTIONS. SALVAGED REMOTE CONTROL VALVE ASSEMBLIES WILL BE TURNED OVER TO THE CEMETERY STAFF. UNSALVAGEABLE ITEMS TO BE DISPOSED OF OFFSITE BY THE CONTRACTOR.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE OF 131 PSI AT THE POINTS OF CONNECTION. POC 1 HAS A CAPACITY OF 700 GPM AND POC 2 HAS A DESIGN CAPACITY OF 1,200 GPM FOR A COMBINED TOTAL OF 1,900 GPM, THE TWO POINTS OF CONNECTION ARE NOT CONNECTED.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. CONFIRM EXACT LIMITS OF IRRIGATED AREA AND ALL EXISTING AND FUTURE HARDSCAPE AND BURIAL AREAS PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND CONDITIONS BEFORE EXCAVATING.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNERS REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY.
 - B. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - C. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
6. USE EXISTING ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM.
7. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
8. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - A. FOUR OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
 - B. FOUR OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
 - C. TEN VALVE IN HEAD SPRINKLERS TO INCLUDE NOZZLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION. DISTURBED AREAS INCLUDE THE FOLLOWING BUT ARE NOT LIMITED TO: TRENCHING, SPOILS LEFT ADJACENT TO THE TRENCH THAT DAMAGES EXISTING TURF, CONSTRUCTION EQUIPMENT WEAR ON EXISTING TURF, STAGING AREA DISTURBANCE, AND ANY OTHER DAMAGE INCURRED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST INSTALL SOD (TO MATCH EXISTING CONDITIONS) IN ALL EXISTING TURF AREAS DISTURBED BY CONSTRUCTION. BACKFILLED AREAS MUST BE RETURNED TO ORIGINAL GRADE USING A CLEAN NATIVE LOAM TOPSOIL APPROVED BY CITY OF REPRESENTATIVES PRIOR TO INSTALLATION. CONFIRM WITH OWNER'S REPRESENTATIVE THAT ALL DISTURBED AREAS MEET OR EXCEED REPAIR REQUIREMENTS PRIOR TO SUBSTANTIAL COMPLETION.
10. TREE PROTECTION NOTE: ALL AREAS WITHIN THE DRIP LINE OF EXISTING TREES ARE DEFINED AS CRITICAL ROOT ZONE. ANY AND ALL CONSTRUCTION OPERATIONS (SPECIFICALLY EXCAVATION, BACKFILL, AND COMPACTION) WITHIN THE DRIP LINE/CRITICAL ROOT ZONE OF ANY EXISTING TREE MUST FOLLOW ALL CITY OF COLORADO SPRINGS TREE PROTECTION REQUIREMENTS. ALL TREES IN THIS CATEGORY MUST HAVE PIPING EITHER BORED UNDERNEATH TREE OR PIPING HAND DUG. NO TRENCHING IS ALLOWED FOR IMPACTED TREES. CITY OF COLORADO SPRINGS FORESTER MUST BE PRESENT DURING ALL WORK WITHIN DRIP LINE/CRITICAL ROOT ZONE OF EXISTING TREES. CONTACT XXX XXXX XXXXX)
11. INSTALL AND MAINTAIN SAFETY FENCING AROUND ALL UNATTENDED EXCAVATION. PLACE SAFETY SIGNS ADJACENT TO CONSTRUCTION AREA TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ALL EXCAVATIONS MUST BE BACKFILLED BY THE END OF EACH WORKDAY. DO NOT LEAVE ANY OPEN TRENCHES OVERNIGHT, ON WEEKENDS OR ON HOLIDAYS. IF TRENCHING OPERATION RESTRICTS ACCESS TO A BURIAL SECTION, PROVIDE PLYWOOD AND SAFETY FENCING ACROSS OPEN TRENCH TO ALLOW ACCESS TO BURIAL SECTION. PROVIDE ACCESS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. THE BURIAL ACTIVITIES AT THE CEMETERY TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITIES. COOPERATION AND COORDINATION WITH THE OWNER'S REPRESENTATIVE AND CEMETERY MANAGER ARRANGING CONSTRUCTION SCHEDULE TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH CEMETERY ACTIVITIES IN ACTUAL BURIAL AREAS IS REQUIRED. CONSTRUCTION NOISE DURING THE INTERNMENT SERVICES MUST NOT DISTURB THE SERVICE. COORDINATION OF WORK MAY REQUIRE THAT EQUIPMENT THAT IS HEARD FROM THE SERVICE LOCATION BE SHUT OFF, OR MOVED OUT OF THE AREA PRIOR TO THE SERVICE, AS ACCEPTABLE TO THE CEMETERY MANAGER. CONSTRUCTION VEHICLES AND WORKERS MUST NOT PASS THROUGH THE SERVICE AREA DURING THIS PERIOD.
 - A. DISCONTINUE WORK SUFFICIENTLY IN ADVANCE OF EASTER SUNDAY, MOTHER'S DAY, FATHER'S DAY, MEMORIAL DAY, VETERAN'S DAY AND/OR FEDERAL HOLIDAYS, AND CLEAN UP ALL AREAS OF OPERATION ADJACENT TO FUNCTIONING AREAS OF THE CEMETERY INCLUDING EXISTING BURIAL SECTIONS AND ANY OTHER AREAS IDENTIFIED BY THE OWNER'S REPRESENTATIVE AND CEMETERY DIRECTION BEFORE THESE DATES.
 - B. CLEAN UP ACTIVITIES INCLUDE THE REMOVAL OF ALL EQUIPMENT, TOOLS, MATERIALS AND DEBRIS AND LEAVING THE AREAS IN A CLEAN, NEAT CONDITION.
 - C. SHORT NOTICE SERVICES TYPICALLY ONLY PROVIDE 12-HOURS NOTICE. WEEKLY CONSTRUCTION MEETINGS WILL PROVIDE PRELIMINARY SCHEDULE TO THE CONTRACTOR, HOWEVER, THERE MAY BE INSTANCES WHERE SHORT NOTICE SERVICES MUST BE ACCOMMODATED.
13. SPRINKLER LOCATIONS WERE STAKED PRIOR TO IRRIGATION DESIGN AND LOCATIONS WERE COLLECTED VIA GPS. AUTOCAD FILES WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING OF THE SPRINKLERS.

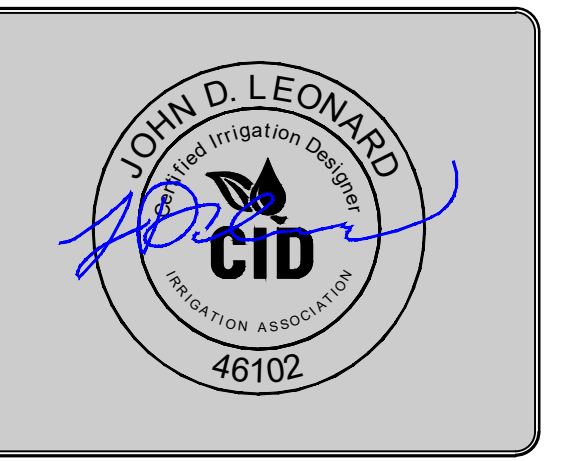
LEGEND

- SLEEVING: HDPE SIZE: SHOWN FOR REFERENCE ONLY, REFER TO MAINLINE RENOVATION PLANS FOR MORE INFORMATION
- MAINLINE PIPE: SHOWN FOR REFERENCE ONLY, REFER TO MAINLINE RENOVATION PLANS FOR MORE INFORMATION
- POINT-OF-CONNECTION (P.O.C.): SHOWN FOR REFERENCE ONLY, REFER TO MAINLINE RENOVATION PLANS FOR MORE INFORMATION
- STUB-OUT FOR FUTURE IRRIGATION: SHOWN FOR REFERENCE ONLY, REFER TO MAINLINE RENOVATION PLANS FOR MORE INFORMATION
- BACKFLOW ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO POINT OF CONNECTION PLANS FOR MORE INFORMATION
- MASTER VALVE ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO POINT OF CONNECTION PLANS FOR MORE INFORMATION
- FLOW SENSOR ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO POINT OF CONNECTION PLANS FOR MORE INFORMATION
- ISOLATION GATE VALVE ASSEMBLY, MAINLINE NIBCO P-619-RW SIZED TO MAIN
- QUICK COUPLING VALVE ASSEMBLY RAIN BIRD 44RC
- AIR-VACUUM RELIEF VALVE ASSEMBLY, SHOWN FOR REFERENCE ONLY. REFER TO MAINLINE RENOVATION PLANS FOR MORE INFORMATION
- REMOTE CONTROL VALVE ASSEMBLY
*MODEL: RAIN BIRD PESB-PRS-D
*SIZE: AS SHOWN ON PLANS
*BALL VALVE: SPEARS PVC COMPACT OR EQUAL



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COLORADO SPRINGS, CO
IRRIGATION MAINLINE VALVE REPLACEMENT COVER SHEET

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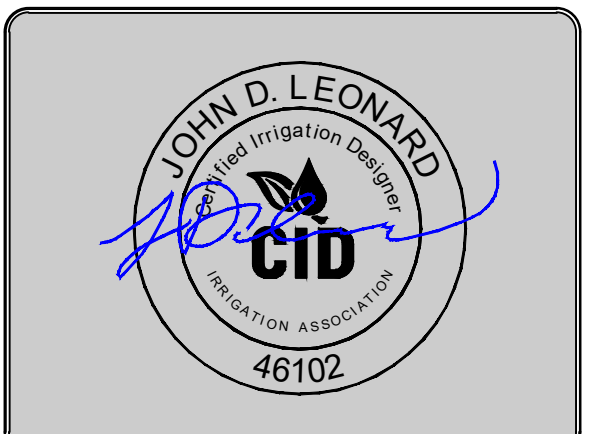
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**EVERGREEN CEMETERY
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IRRIGATION MAINLINE VALVE REPLACEMENT PLAN SHEET**

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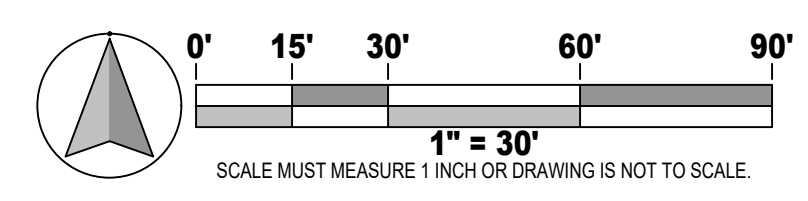
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**COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL**

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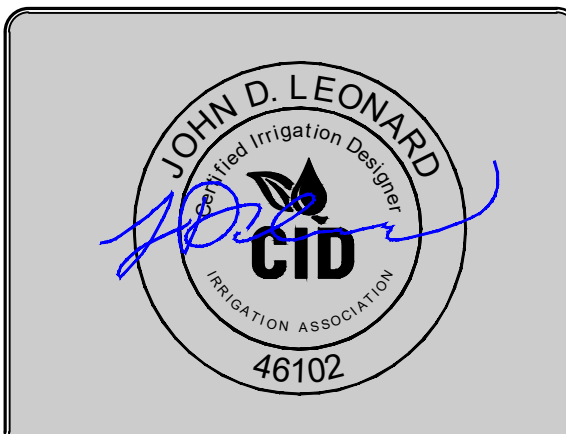
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WORK ORDER NUMBER: 4076767
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EVERGREEN CEMETERY
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IRRIGATION MAINLINE VALVE REPLACEMENT PLAN SHEET

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SHEET NO.	IV2.2
PAGE	30 OF 65



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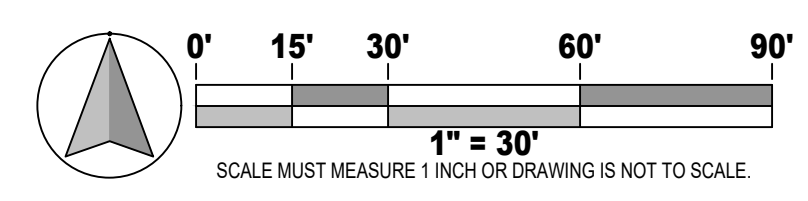
COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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mgackle
Water

PROJECT NUMBER: 2023-N2217
WORK ORDER NUMBER: 4076767
CSU SHEET 18 OF 41

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MATCHLINE SEE SHEET IR2.5

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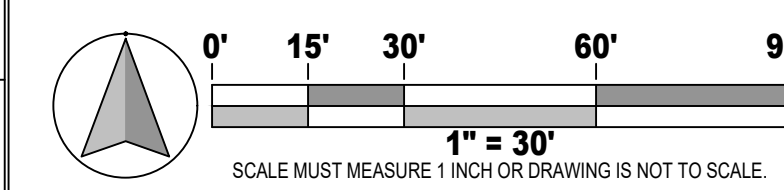
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 CSU SHEET 20 OF 41

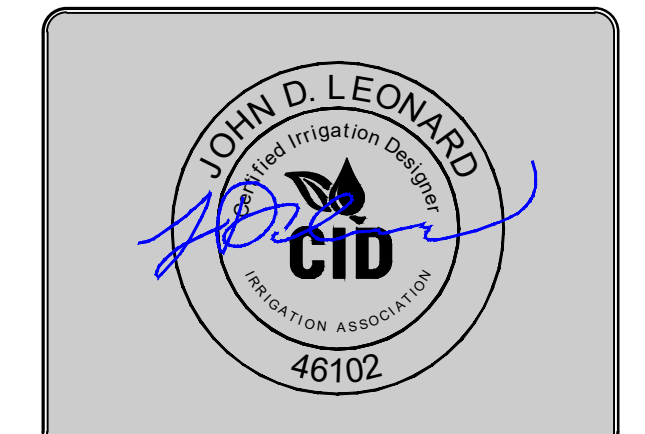
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EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION MAINLINE VALVE REPLACEMENT PLAN SHEET

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 PAGE 32 OF 65

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MATCHLINE SEE SHEET IR2.4


MATCHLINE SEE SHEET IR2.6

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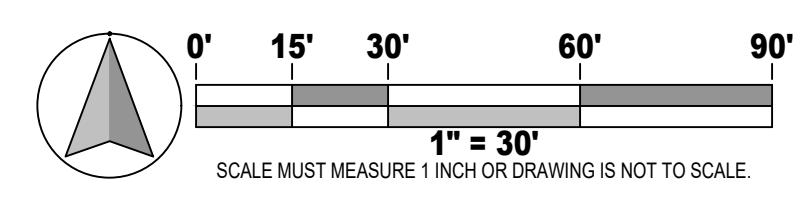
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PAGE	34 OF 65



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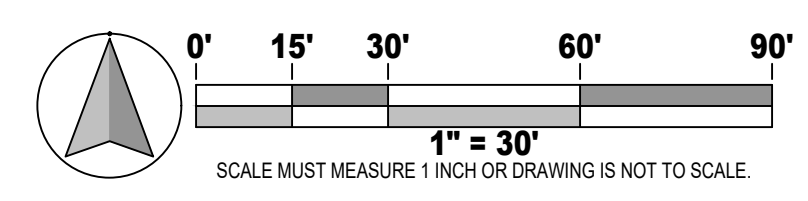
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MATCHLINE SEE SHEET IR2.8

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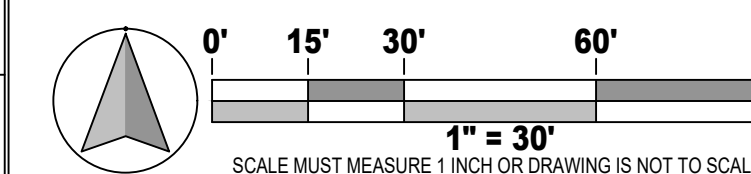
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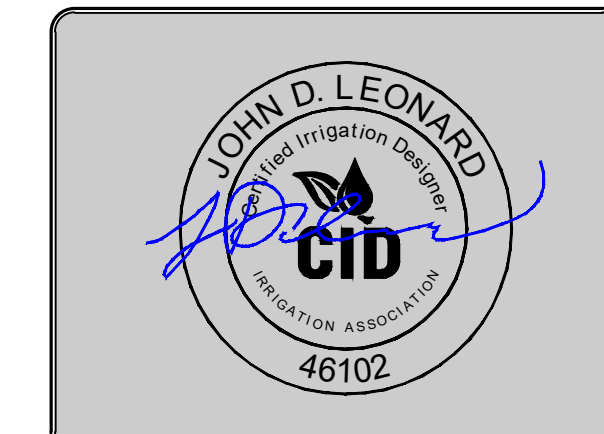
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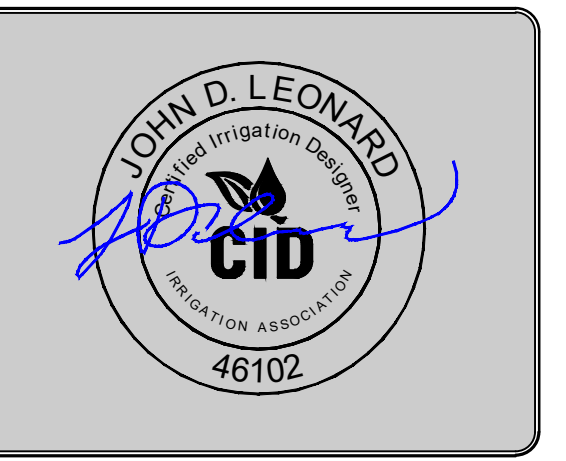
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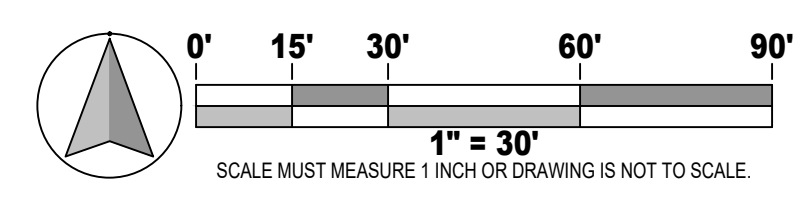
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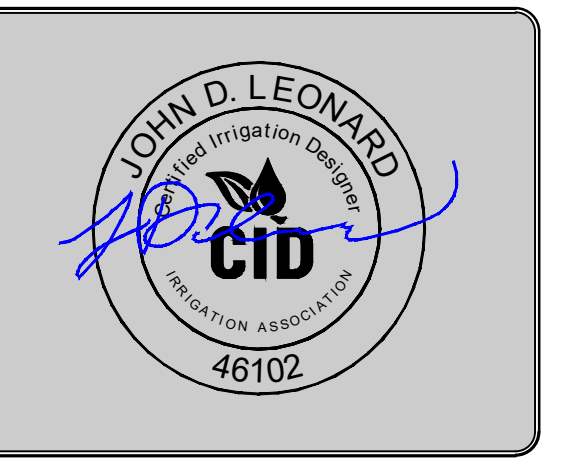


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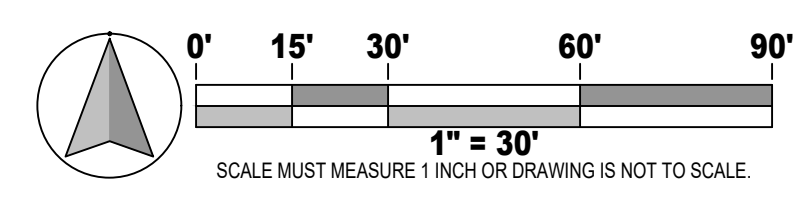
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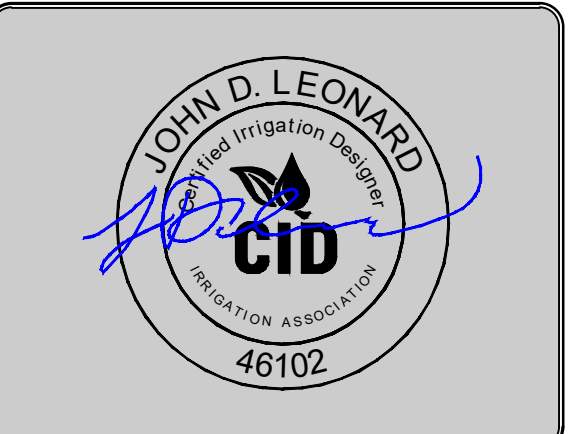


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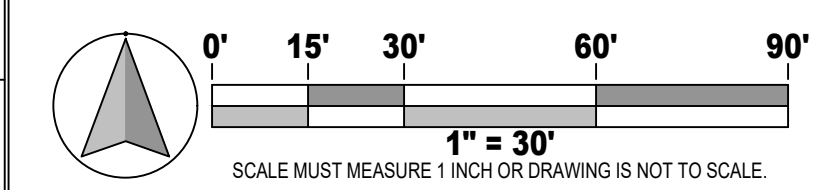
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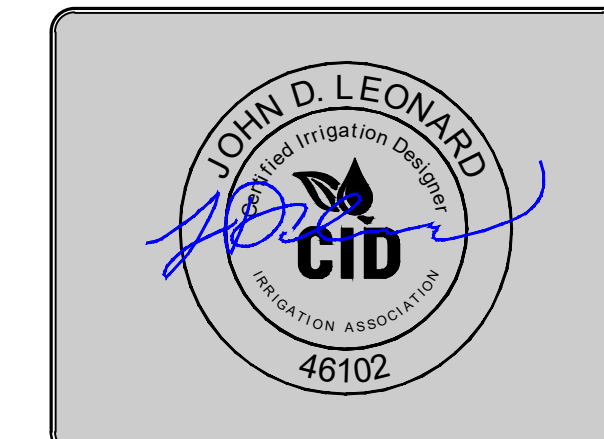


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MATCHLINE SEE SHEET IR2.12

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PAGE	39 OF 65

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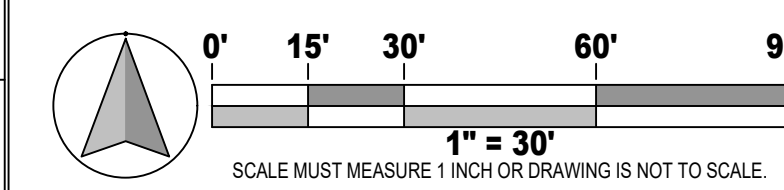
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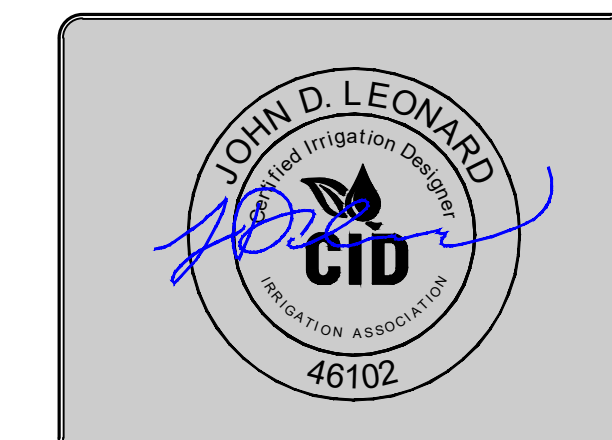
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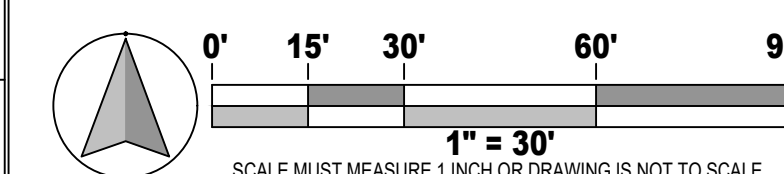
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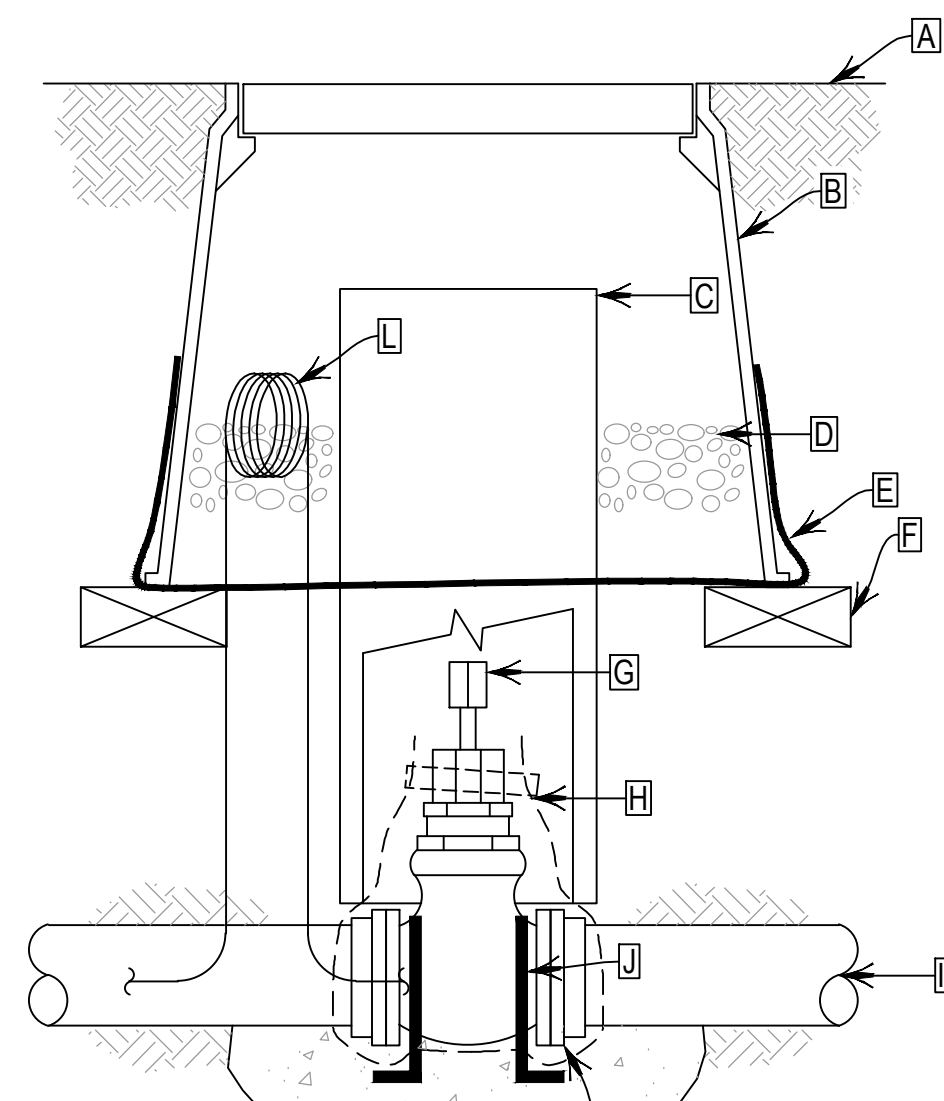
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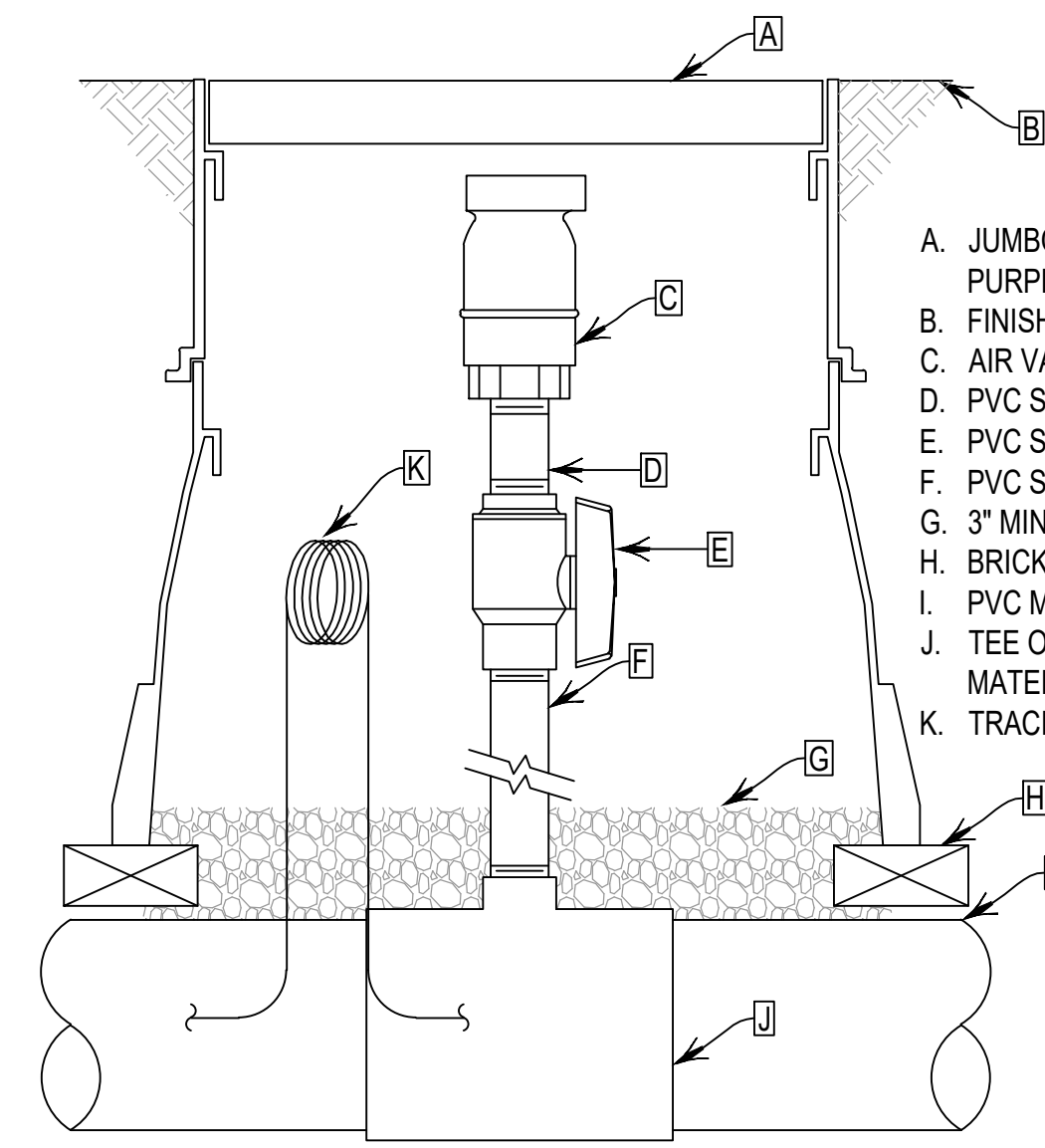


- A. FINISH GRADE
- B. 10" ROUND VALVE BOX WITH PURPLE LID
- C. 6" CLASS 200 PVC PIPE (LENGTH AS REQUIRED)
- D. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- E. FILTER FABRIC
- F. BRICK (1 OF 4)
- G. RESILIENT WEDGE GATE VALVE CONFORMING TO AWWA C-515 STANDARDS
- H. 3 MIL. PLASTIC WRAP WITH TAPED ENDS
- I. HDPE MAINLINE PIPE
- J. #4 REBAR, TWO BARS WRAPPED OVER VALVE AND SECURED BY CONCRETE BLOCK
- K. HDPE FLANGE ADAPTER, DUCTILE IRON BACKUP RING, BOLTED TO FLANGED GATE VALVE
- L. TRACING WIRE

- NOTES:
- NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.
 - THE OPERATOR IS A WRENCH NUT.
 - ANCHOR ISOLATION VALVE TO CONCRETE BY BENDING REBAR OVER EACH END OF VALVE AND EXTENDING A MINIMUM OF 6-INCHES INTO CONCRETE SUPPORT BLOCK.
 - WRAP VALVE ENDS AND BODY IN 3 MIL. PLASTIC PRIOR TO POURING CONCRETE.
 - CONCRETE SUPPORT BLOCK IS TO BE POURED UNDER ISOLATION GATE VALVE. ONLY THE BOTTOM OF THE ISOLATION GATE VALVE TO BE IN CONTACT WITH CONCRETE.
 - INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.

1 ISOLATION GATE VALVE ASSEMBLY

N.T.S.

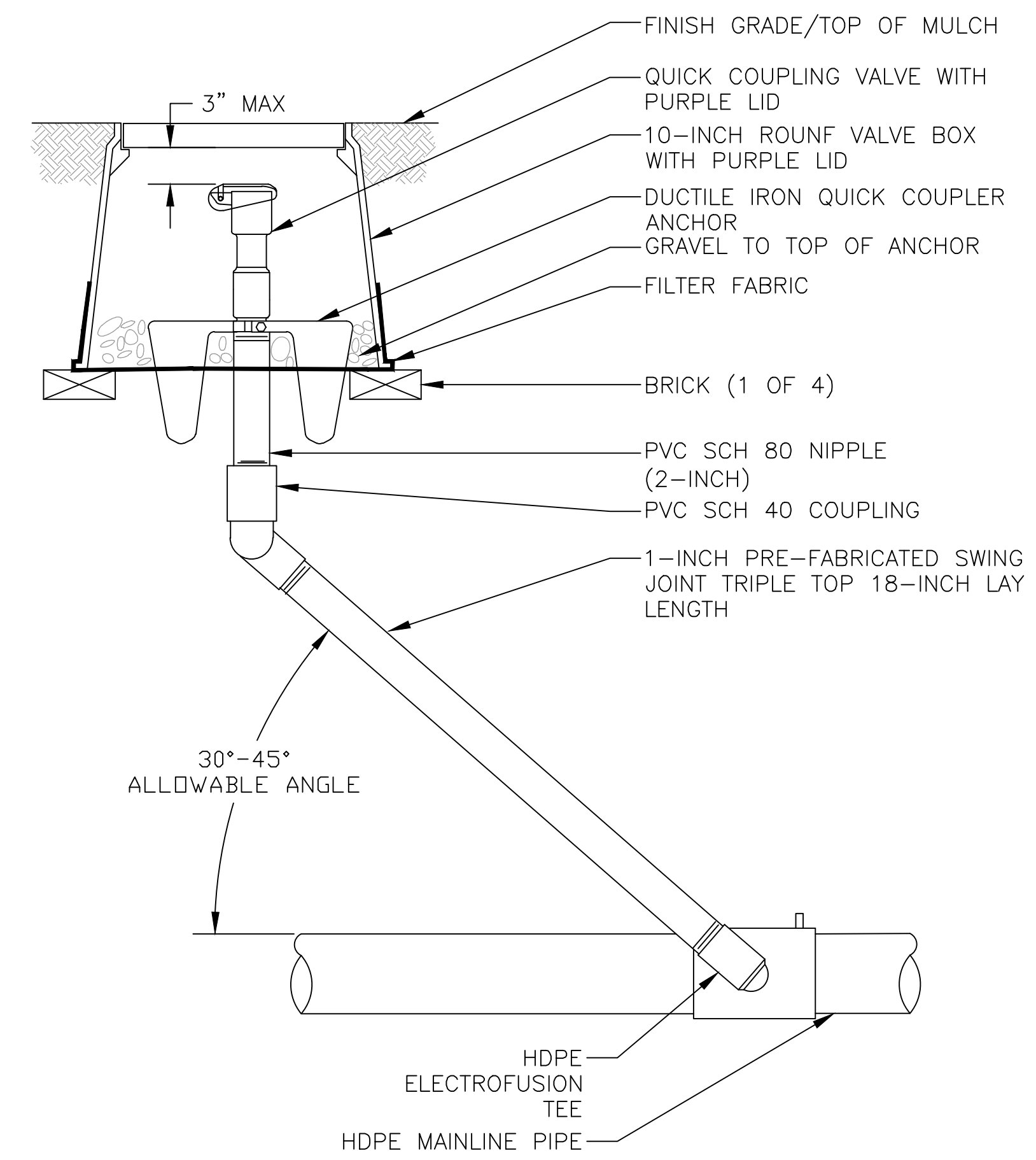


- A. JUMBO VALVE BOX WITH EXTENSION AND PURPLE COVER (HEIGHT AS REQUIRED)
- B. FINISH GRADE/TOP OF MULCH
- C. AIR VACUUM RELIEF VALVE
- D. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- E. PVC SCH 80 BALL VALVE (SIZE 2")
- F. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- G. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- H. BRICK (1 OF 4)
- I. PVC MAINLINE PIPE
- J. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- K. TRACING WIRE

- NOTES:
- OPEN BALL VALVE IN ASSEMBLY 1/4 TURN UNTIL IRRIGATION SYSTEM IS FULLY CHARGED WITH WATER.
 - CLOSE VALVE DURING WINTERIZATION AND OPEN 1/2 TURN AFTER WINTERIZATION OF SYSTEM TO PROTECT VALVE DURING FREEZING WEATHER.
 - REPLACE PVC BALL VALVE WITH BRASS BALL VALVE IN THE EVENT AN AIR VACUUM RELIEF VALVE WITH MALE INLET IS USED.
 - FOR INSTALLATION ON EXISTING PIPE ONLY A SADDLE SLEEVE MAY BE USED.

2 AIR/VACUUM RELIEF VALVE ASSEMBLY

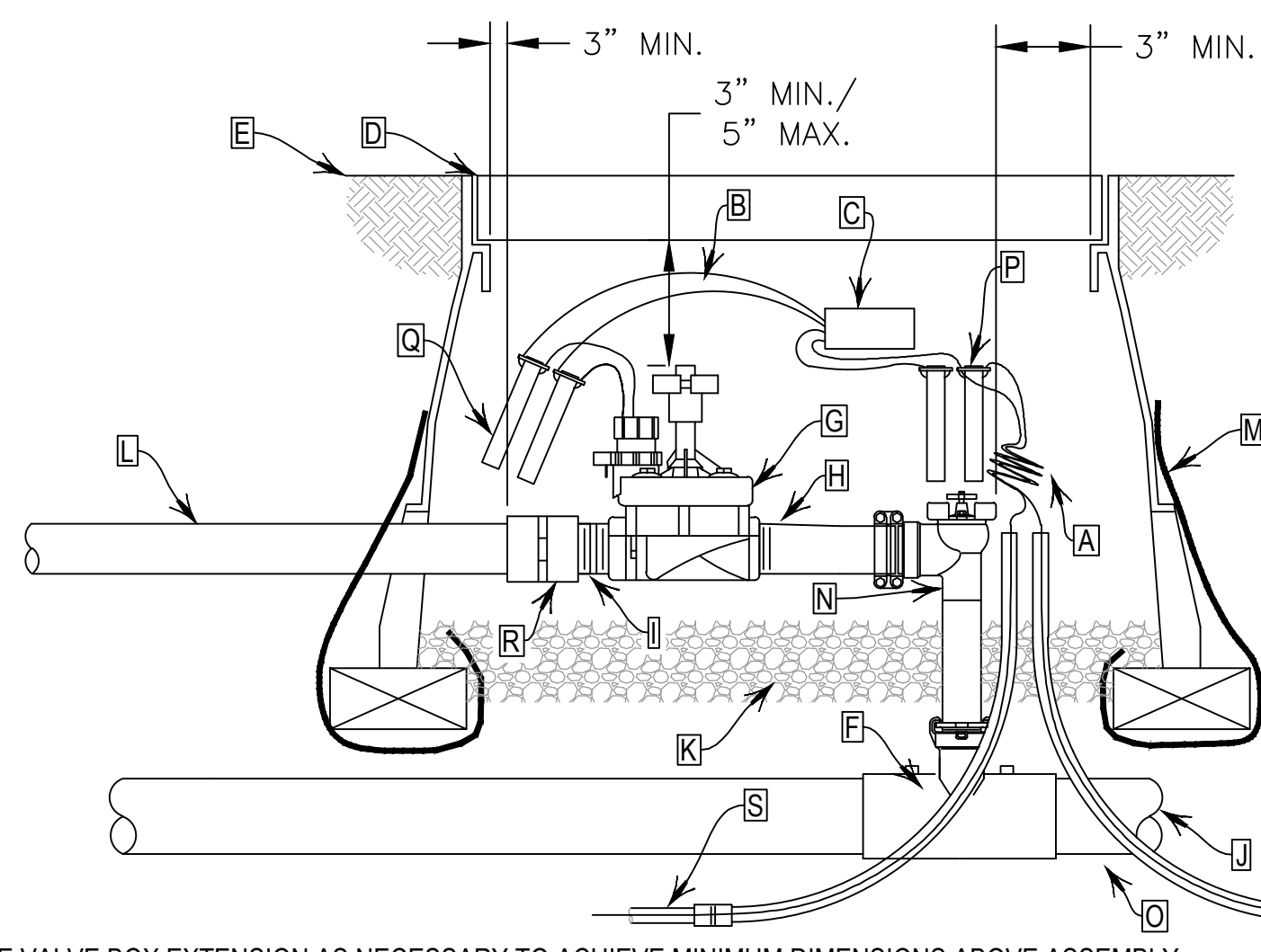
N.T.S.



- NOTES:
- FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLER VALVE INLET SIZE.
 - INSTALL SWING JOINT LAY ARM BETWEEN 30° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT.
 - BRAND VALVE BOX LID PER SPECIFICATIONS.

3 QUICK COUPLER VALVE ASSEMBLY

N.T.S.



- A. TWO-WIRE CABLE
- B. WIRE FROM BICODER TO VALVE SEE SPECIFICATIONS
- C. DECODER: ATTACH TO VALVE BOX WITH ZIP TIE
- D. JUMBO VALVE BOX WITH PURPLE LID
- E. FINISH GRADE
- F. HDPE ELECTROFUSION WELD SERVICE TEE AND ADAPTOR FOR LEEMCO LV-200
- G. REMOTE CONTROL VALVE
- H. LEEMCO LMNP SERIES ADAPTER. OUTLET SIZE TO MATCH REMOTE CONTROL VALVE SIZE.
- I. PVC SCH 80 NIPPLE
- J. HDPE MAINLINE PIPE
- K. 3-INCH DEPTH OF 3/4-INCH WASHED GRAVEL
- L. PVC LATERAL PIPE
- M. FILTER FABRIC
- N. 2-INCH DUCTILE IRON ANGLE VALVE: LEEMCO LV-200. SECURE ANGLE VALVE POSITION WITH LEEMCO LV CLIPS PER MANUFACTURER'S GUIDELINES.
- O. NOT USED
- P. WIRE SPLICE FROM TWO-WIRE CABLE TO BICODER (1 OF 2, REFER TO SPECIFICATIONS)
- Q. WIRE CONNECTOR FROM BICODER TO SOLENOID VALVE (1 OF 2)
- R. PVC SCH40 FEMALE ADAPTER
- S. 1" PVC SCH 40 CONDUIT AND LONG RADIUS SWEEP EL (TYPICAL)

- NOTES:
- USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
 - NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
 - INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
 - TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
 - DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
 - POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID AND PROPER OPERATION OF BALL VALVE.
 - INSTALL SO THAT NO GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.
 - COIL 3-FEET OF WIRE FOR EACH BICODER FOR SERVICE PURPOSES.

3 REMOTE CONTROL VALVE ASSEMBLY

N.T.S.

**EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION DETAILS**

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PAGE	41 OF 65

IRRIGATION SYSTEM DESIGN APPROACH

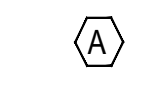
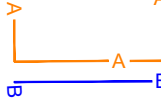
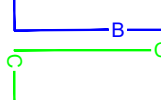
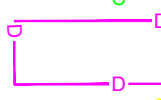

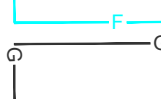
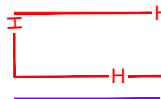



THE EXISTING CONVENTIONALLY WIRED CALSENSE CONTROL SYSTEM WILL BE REPLACED BY A NEW TWO WIRE DECODER SYSTEM. THE NEW TWO WIRE PATH WILL BE INSTALLED IN CONDUIT AT THE SAME TIME THE MAINLINE IS INSTALLED. WIRE JUNCTIONS TO BURIAL SECTIONS WILL BE IN TRAFFIC RATED PULL BOXES WITH FUSED SPLICE CONNECTORS FOR EASE OF TROUBLESHOOTING. THE CONCRETE PADS, GROUNDING AND CONTROLLER ENCLOSURE WILL BE REPLACED.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE OF 131 PSI AT THE POINTS OF CONNECTION. POC 1 HAS A CAPACITY OF 700 GPM AND POC 2 HAS A DESIGN CAPACITY OF 1,200 GPM FOR A COMBINED TOTAL OF 1,900 GPM, THE TWO POINTS OF CONNECTION ARE NOT CONNECTED.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. CONFIRM EXACT LIMITS OF IRRIGATED AREA AND ALL EXISTING AND FUTURE HARDSCAPE AND BURIAL AREAS PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND CONDITIONS BEFORE EXCAVATING.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNERS REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY.
 - B. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - C. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
6. USE EXISTING ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM.
7. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
8. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - A. FOUR OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
 - B. FOUR OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
 - C. TEN VALVE IN HEAD SPRINKLERS TO INCLUDE NOZZLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION. DISTURBED AREAS INCLUDE THE FOLLOWING BUT ARE NOT LIMITED TO: TRENCHING, SPOILS LEFT ADJACENT TO THE TRENCH THAT DAMAGES EXISTING TURF, CONSTRUCTION EQUIPMENT WEAR ON EXISTING TURF, STAGING AREA DISTURBANCE, AND ANY OTHER DAMAGE INCURRED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST INSTALL SOD (TO MATCH EXISTING CONDITIONS) IN ALL EXISTING TURF AREAS DISTURBED BY CONSTRUCTION. BACKFILLED AREAS MUST BE RETURNED TO ORIGINAL GRADE USING A CLEAN NATIVE LOAM TOPSOIL APPROVED BY CITY OF REPRESENTATIVES PRIOR TO INSTALLATION. CONFIRM WITH OWNER'S REPRESENTATIVE THAT ALL DISTURBED AREAS MEET OR EXCEED REPAIR REQUIREMENTS PRIOR TO SUBSTANTIAL COMPLETION.
10. TREE PROTECTION NOTE: REFER TO TREE PROTECTION PLAN.
11. INSTALL AND MAINTAIN SAFETY FENCING AROUND ALL UNATTENDED EXCAVATION. PLACE SAFETY SIGNS ADJACENT TO CONSTRUCTION AREA TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ALL EXCAVATIONS MUST BE BACKFILLED BY THE END OF EACH WORKDAY. DO NOT LEAVE ANY OPEN TRENCHES OVERNIGHT, ON WEEKENDS OR ON HOLIDAYS. IF TRENCHING OPERATION RESTRICTS ACCESS TO A BURIAL SECTION, PROVIDE PLYWOOD AND SAFETY FENCING ACROSS OPEN TRENCH TO ALLOW ACCESS TO BURIAL SECTION. PROVIDE ACCESS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. THE BURIAL ACTIVITIES AT THE CEMETERY TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITIES. COOPERATION AND COORDINATION WITH THE OWNER'S REPRESENTATIVE AND CEMETERY MANAGER ARRANGING CONSTRUCTION SCHEDULE TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH CEMETERY ACTIVITIES IN ACTUAL BURIAL AREAS IS REQUIRED. CONSTRUCTION NOISE DURING THE INTERNMENT SERVICES MUST NOT DISTURB THE SERVICE. COORDINATION OF WORK MAY REQUIRE THAT EQUIPMENT THAT IS HEARD FROM THE SERVICE LOCATION BE SHUT OFF, OR MOVED OUT OF THE AREA PRIOR TO THE SERVICE, AS ACCEPTABLE TO THE CEMETERY MANAGER. CONSTRUCTION VEHICLES AND WORKERS MUST NOT PASS THROUGH THE SERVICE AREA DURING THIS PERIOD.
 - A. DISCONTINUE WORK SUFFICIENTLY IN ADVANCE OF EASTER SUNDAY, MOTHER'S DAY, FATHER'S DAY, MEMORIAL DAY, VETERAN'S DAY AND/OR FEDERAL HOLIDAYS, AND CLEAN UP ALL AREAS OF OPERATION ADJACENT TO FUNCTIONING AREAS OF THE CEMETERY INCLUDING EXISTING BURIAL SECTIONS AND ANY OTHER AREAS IDENTIFIED BY THE OWNER'S REPRESENTATIVE AND CEMETERY DIRECTION BEFORE THESE DATES.
 - B. CLEAN UP ACTIVITIES INCLUDE THE REMOVAL OF ALL EQUIPMENT, TOOLS, MATERIALS AND DEBRIS AND LEAVING THE AREAS IN A CLEAN, NEAT CONDITION.
 - C. SHORT NOTICE SERVICES TYPICALLY ONLY PROVIDE 12-HOURS NOTICE. WEEKLY CONSTRUCTION MEETINGS WILL PROVIDE PRELIMINARY SCHEDULE TO THE CONTRACTOR, HOWEVER, THERE MAY BE INSTANCES WHERE SHORT NOTICE SERVICES MUST BE ACCOMMODATED.
13. SPRINKLER LOCATIONS WERE STAKED PRIOR TO IRRIGATION DESIGN AND LOCATIONS WERE COLLECTED VIA GPS. AUTOCAD FILES WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING OF THE SPRINKLERS.

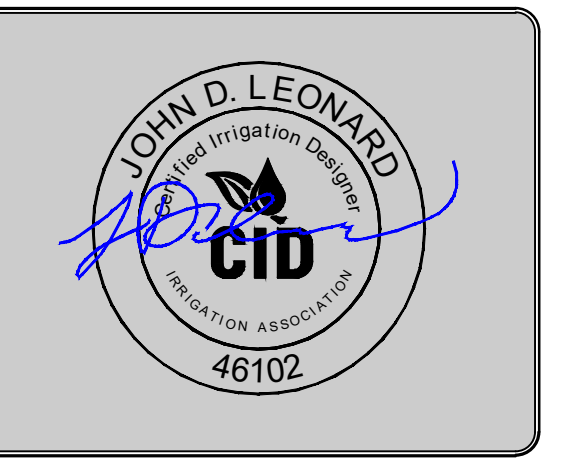
LEGEND

-  EXISTING IRRIGATION CONTROLLER TO BE REPLACED WITH WEATHER TRAK OPTIFLOW XR CONTROLLERS
-  IRRIGATION CONTROLLER "A" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "B" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "C" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "D" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "E" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "F" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "G" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "H" AREA OF INFLUENCE
-  IRRIGATION CONTROLLER "I" AREA OF INFLUENCE



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COLORADO SPRINGS, CO
IRRIGATION CONTROLLER COVER SHEET

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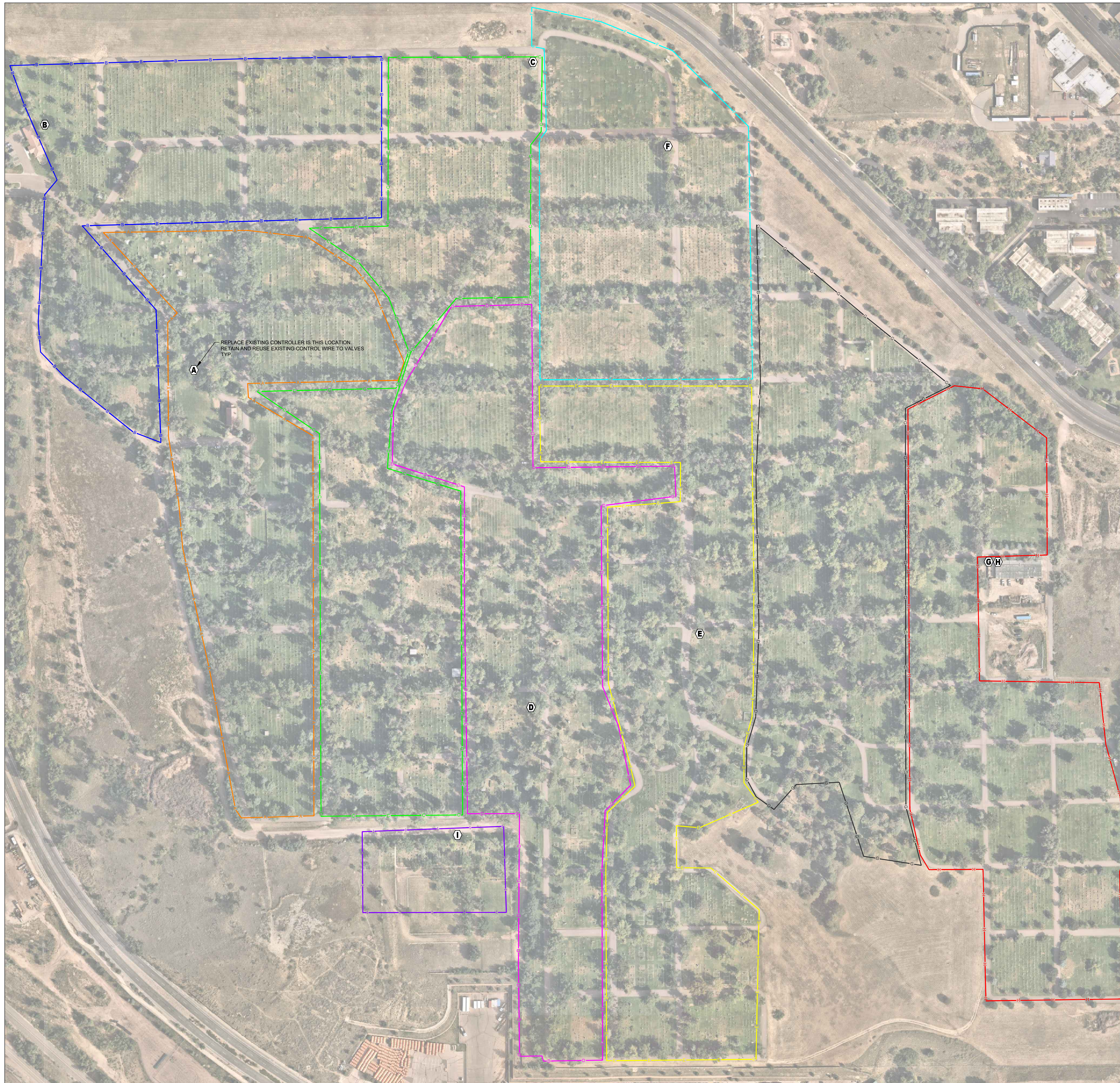


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PAGE 42 OF 65

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LEGEND

- (A) EXISTING IRRIGATION CONTROLLER TO BE REPLACED WITH WEATHER TRAK OPTIFLOW XR CONTROLLERS
- IRRIGATION CONTROLLER "A" AREA OF INFLUENCE
- IRRIGATION CONTROLLER "B" AREA OF INFLUENCE
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- IRRIGATION CONTROLLER "G" AREA OF INFLUENCE
- IRRIGATION CONTROLLER "H" AREA OF INFLUENCE
- IRRIGATION CONTROLLER "I" AREA OF INFLUENCE



EVERGREEN CEMETERY
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IRRIGATION CONTROLLER PLAN

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THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES

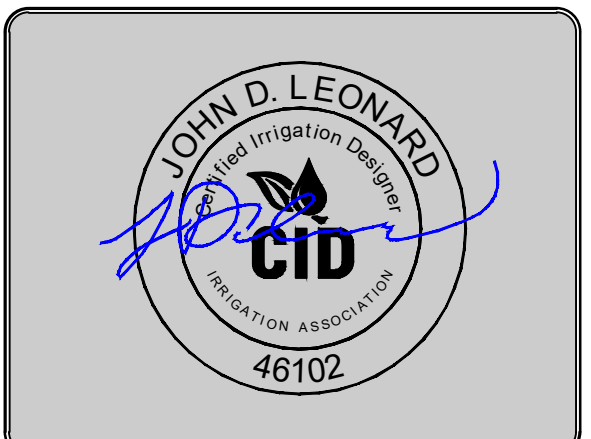
NONPOTABLE WATER MAIN DESIGN APPROVAL

APPROVED 05/16/2024 10:13:37 AM
 PROJECT NUMBER: 2023-N217
 WORK ORDER NUMBER: 4076767
 COLORADO SPRINGS UTILITIES CSU SHEET 29 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



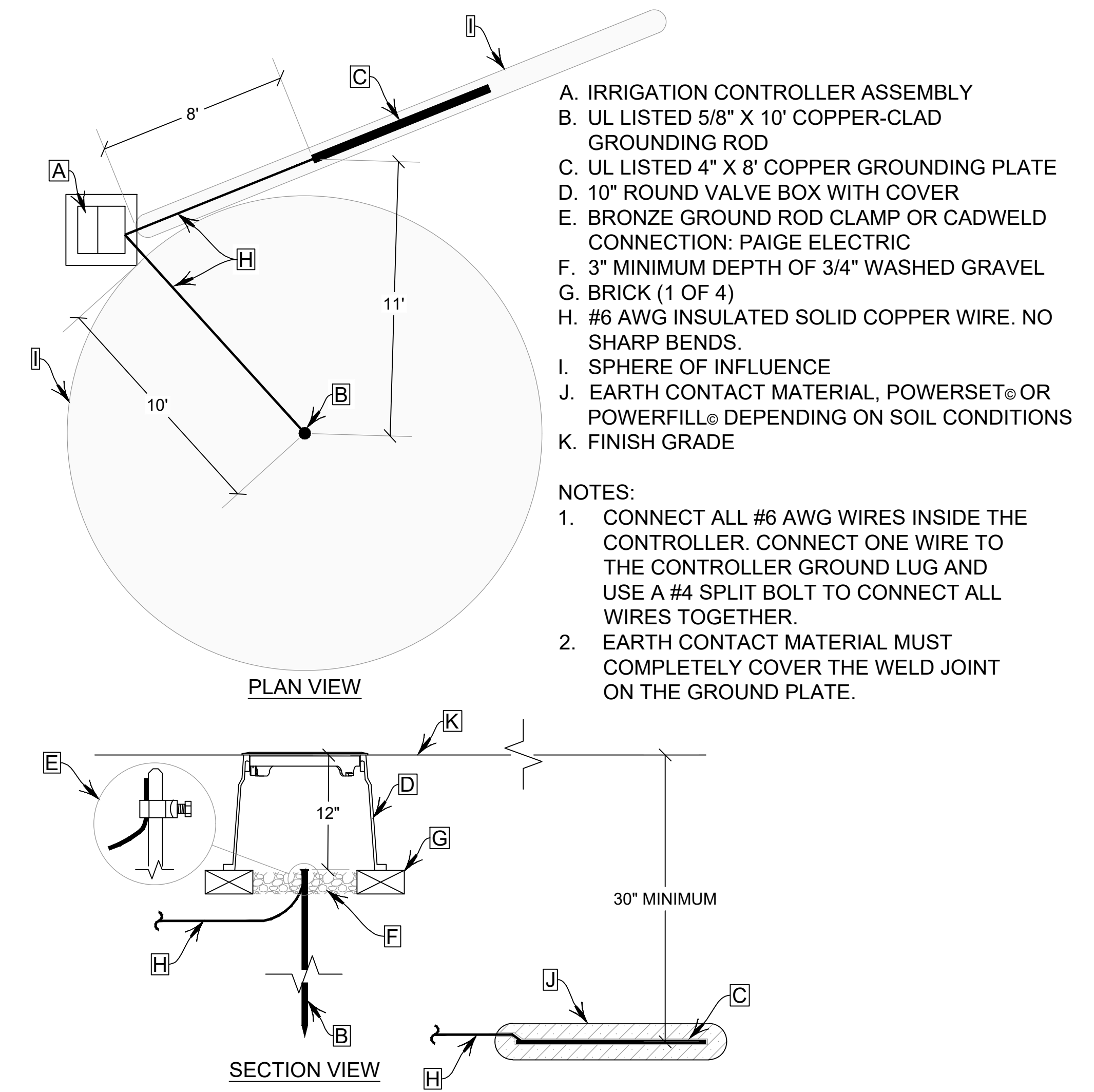
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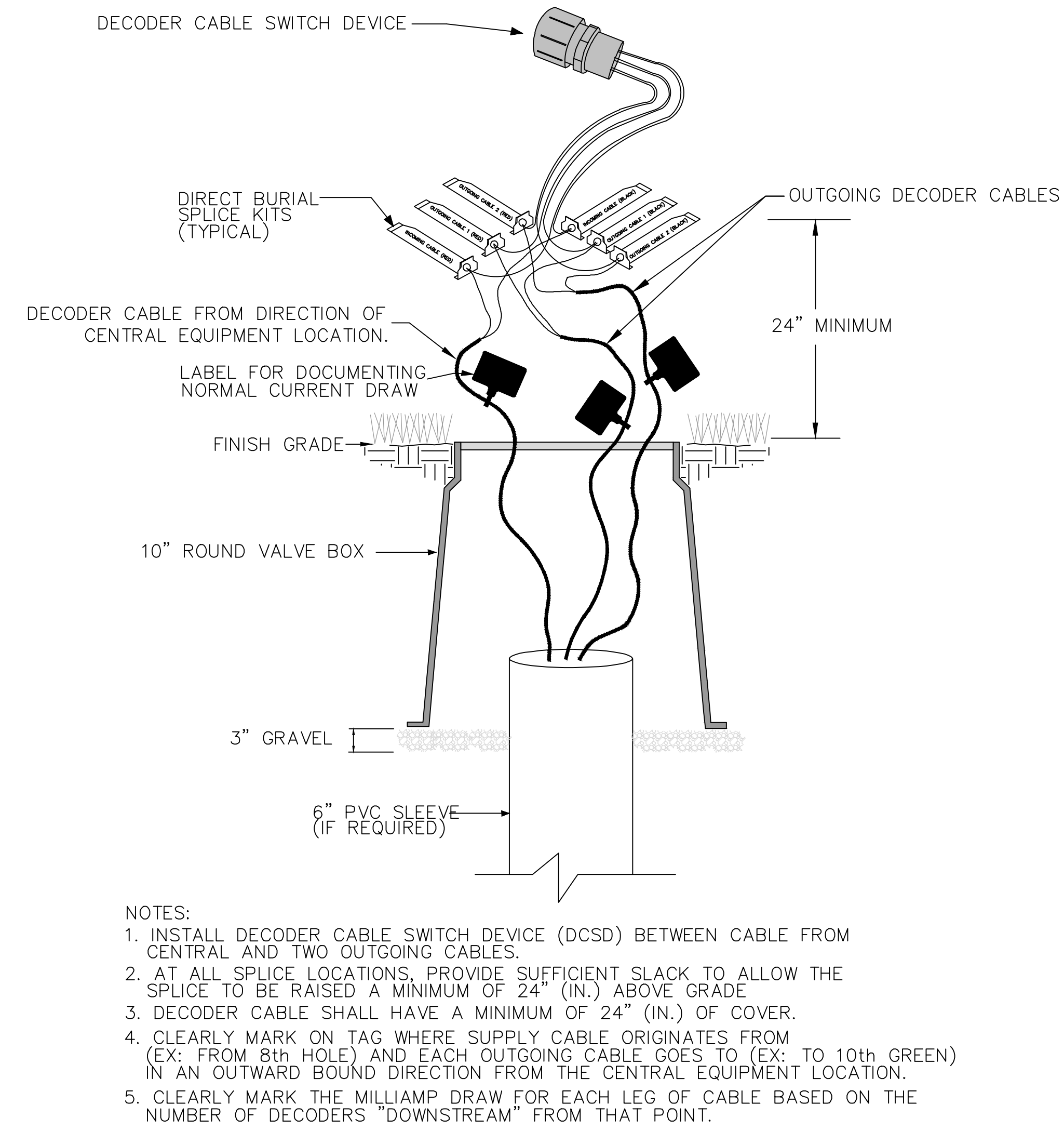
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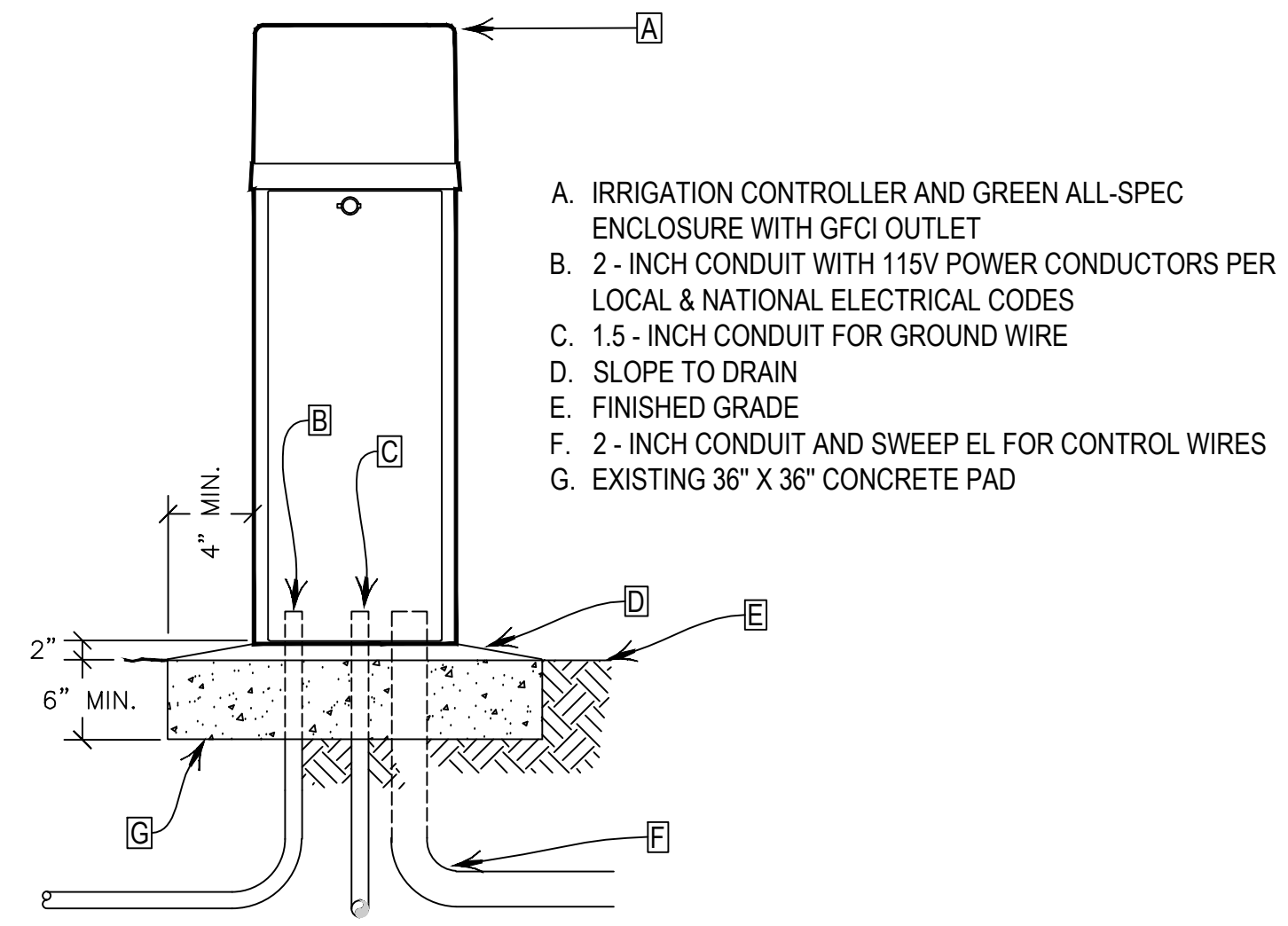
SHEET NO. **IC3.0**
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3 GROUNDING DETAIL N.T.S.



2 DECODER CABLE FUSE DEVICE N.T.S.



1 CONTROLLER ASSEMBLY N.T.S.

COMPREHENSIVE IRRIGATION SYSTEM DESIGN APPROACH

THE EXISTING AUTOMATED IRRIGATION SYSTEM WILL BE RENOVATED TO PROVIDE AUTOMATED IRRIGATION TO THE EXISTING 110 ACRES AND PROVIDE FOR THE FUTURE 4 ACRE EXPANSION. EXISTING POINTS OF CONNECTION WILL BE USED. NEW MAINLINE PIPE, MASTER VALVE, FLOW SENSOR, ISOLATION GATE VALVES, AND ROTOR SPRINKLERS WILL BE INSTALLED. EXISTING LATERAL PIPE ALREADY IN BURIAL AREAS WILL BE USED IN PLACE.

THE NEW HDPE IRRIGATION MAINLINE PIPE WILL BE USED FOR CONTINUOUSLY PRESSURIZED PIPE. PVC PIPE WILL BE USED REMOTE CONTROL VALVE LATERALS. A CONTINUOUSLY OPEN MASTER VALVE AND FLOW SENSOR WILL BE INSTALLED TO MONITOR FOR MAINLINE BREAKS.

BLOCK STYLE IRRIGATION WITH POP-UP ROTOR SPRINKLERS WILL BE USED TO IRRIGATE BURIAL AREAS AND TURF AREAS OUTSIDE OF BURIAL SECTIONS.

A NEW TWO WIRE DECODER BASED CONTROLLER COMPATIBLE WITH THE PROPOSED WEATHERTRAK OPTI FLOWXR CENTRAL CONTROL SYSTEM WILL BE USED FOR THE SITE.

NEW QUICK COUPLING VALVE ASSEMBLIES WILL BE INSTALLED TO FACILITATE HAND WATERING.

ISOLATION GATE VALVES WILL BE INSTALLED TO PROVIDE FOR MAINTENANCE AND TO MINIMIZE THE DISRUPTION TO THE EXISTING SYSTEM DURING CONSTRUCTION.

THE EXISTING AUTOMATED IRRIGATION MAINLINE SOUTH OF THE MAINTENANCE BUILDING WILL REMAIN AND BE CONNECTED TO THE NEW MAIN LINE AND POINT OF CONNECTION. THE EXISTING MANUAL MAINLINE AND VALVES WILL BE ABANDONED. VALVES, HYDRANTS, QUICK COUPLING VALVES AND OTHER VALVES WILL BE REMOVED AT THE TEE TO THE MAIN LINE PIPE. EXISTING MAINLINE PIPE WILL BE CAPPED AND ABANDONED IN PLACE.

FLAG NOTES

- 1 EXCAVATE AND EXPOSE EXISTING 8-INCH DUCTILE IRON DISCHARGE PIPE IN APPROXIMATE LOCATION SHOWN DOWNSTREAM OF THE EXISTING WATER METER. CONNECT NEW MAINLINE PIPE TO DISCHARGE PIPE USING NECESSARY DUCTILE IRON FLANGED FITTINGS. BACKFILL AND COMPACT TO MATCH EXISTING CONDITIONS AND PATCH ROAD PER SPECIFICATIONS. COORDINATE EXACT LOCATION OF DISCHARGE PIPING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 2 INSTALL WALL MOUNTED IRRIGATION CONTROLLERS IN THE APPROXIMATE LOCATION INDICATED ADJACENT TO THE EXISTING IRRIGATION CONTROLLER. CONTRACTOR TO PROVIDE 120V ELECTRICAL POWER TO CONTROLLER. COORDINATE LOCATION OF ELECTRICAL POWER SOURCE WITH THE OWNER'S REPRESENTATIVE. IT IS ANTICIPATED THAT POWER SOURCE IS AVAILABLE WITHIN 10' OF THE CONTROLLER LOCATION. PROVIDE ALL NECESSARY CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL POWER SOURCE AND THE IRRIGATION CONTROLLER AND MAKE ALL NECESSARY CONNECTIONS. COORDINATE EXACT PLACEMENT OF CONTROLLER WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION. INSTALL TWO-WIRE PATH FROM THE CONTROLLER TO THE MAINLINE AS SHOWN ON PLAN.
- 3 CUT AND REMOVE EXISTING ASPHALT FOR INSTALLATION OF HDPE MAINLINE PIPING AS SHOWN ON PLAN. COORDINATE EXACT PIPE ROUTING WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. INSTALL A 2" HDPE WIRE SLEEVE ADJACENT TO MAINLINE PIPE. BACKFILL/COMPACT TRENCH AND INSTALL 4" OF ROAD BASE AT TOP OF TRENCH. COMPACT TO 95% STANDARD PROCTOR DENSITY.
- 4 CUT AND REMOVE EXISTING ASPHALT FOR INSTALLATION OF NEW HDPE MAINLINE PIPE UNDER CENTER OF EXISTING ROAD. COORDINATE EXACT ROUTING OF MAINLINE PIPE WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION. BACKFILL/COMPACT TRENCH AND INSTALL 4" OF ROAD BASE AT TOP OF TRENCH. COMPACT TO 95% STANDARD PROCTOR DENSITY.
- 5 FOR FUTURE USE: STUB OUT MAINLINE IN APPROXIMATE LOCATION SHOWN. TERMINATE MAINLINE END WITH ELCTROFUION CAP. COORDINATE STUB OUT ACTIVITIES WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 6 ALL LATERAL PIPING FOR INDICATED ZONES ARE DIAGRAMMATIC. THESE PIPES MAY SHARE TRENCHES AS NEEDED TO MINIMIZE CEMETERY DISTURBANCE.
- 7 BORE HDPE MAINLINE A MINIMUM OF 3' DEPTH THROUGH EXPANSE SHOWN. COORDINATE EXACT ROUTING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 8 INSTALL AIR VACUUM RELIEF VALVE ASSEMBLY AT HIGHEST MAINLINE PIPE ELEVATION. FIELD LOCATE HIGHEST ELEVATION. LOCATION SHOWN IS SCHEMATIC AND BASED FROM PROVIDED GROUND ELEVATION INFORMATION.
- 9 ROUTE PIPE AT FOOT OF GRAVES FOR INDICATED ZONES AND PROTECT EXISTING MONUMENTATION WITH CARDBOARD DURING PIPE INSTALLATION. COORDINATE EXACT PIPE ROUTING WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 10 COORDINATE EXACT PIPE ROUTING WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. INSTALL A 2" HDPE WIRE SLEEVE ADJACENT TO MAINLINE PIPE.
- 11 STUB OUT TWO-WIRE CABLE FROM CONTROLLER "C" IN APPROXIMATE LOCATION SHOWN. COIL 30' OF TWO-WIRE CABLE IN A STANDARD VALVE BOX.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE OF 131 PSI AT THE POINTS OF CONNECTION. POC 1 HAS A CAPACITY OF 700 GPM AND POC 2 HAS A DESIGN CAPACITY OF 1,200 GPM FOR A COMBINED TOTAL OF 1,900 GPM, THE TWO POINTS OF CONNECTION ARE NOT CONNECTED.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. CONFIRM EXACT LIMITS OF IRRIGATED AREA AND ALL EXISTING AND FUTURE HARDSCAPE AND BURIAL AREAS PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND CONDITIONS BEFORE EXCAVATING.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNERS REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY.
 - B. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - C. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
6. USE EXISTING ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM.
7. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
8. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - A. FOUR OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
 - B. FOUR OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
 - C. TEN VALVE IN HEAD SPRINKLERS TO INCLUDE NOZZLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION. DISTURBED AREAS INCLUDE THE FOLLOWING BUT ARE NOT LIMITED TO: TRENCHING, SPOILS LEFT ADJACENT TO THE TRENCH THAT DAMAGES EXISTING TURF, CONSTRUCTION EQUIPMENT WEAR ON EXISTING TURF, STAGING AREA DISTURBANCE, AND ANY OTHER DAMAGE INCURRED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST INSTALL SOD (TO MATCH EXISTING CONDITIONS) IN ALL EXISTING TURF AREAS DISTURBED BY CONSTRUCTION. BACKFILLED AREAS MUST BE RETURNED TO ORIGINAL GRADE USING A CLEAN NATIVE LOAM TOPSOIL APPROVED BY CITY OF REPRESENTATIVES PRIOR TO INSTALLATION. CONFIRM WITH OWNER'S REPRESENTATIVE THAT ALL DISTURBED AREAS MEET OR EXCEED REPAIR REQUIREMENTS PRIOR TO SUBSTANTIAL COMPLETION.
10. TREE PROTECTION NOTE: REFER TO TREE PROTECTION PLAN.
11. INSTALL AND MAINTAIN SAFETY FENCING AROUND ALL UNATTENDED EXCAVATION. PLACE SAFETY SIGNS ADJACENT TO CONSTRUCTION AREA TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ALL EXCAVATIONS MUST BE BACKFILLED BY THE END OF EACH WORKDAY. DO NOT LEAVE ANY OPEN TRENCHES OVERNIGHT, ON WEEKENDS OR ON HOLIDAYS. IF TRENCHING OPERATION RESTRICTS ACCESS TO A BURIAL SECTION, PROVIDE PLYWOOD AND SAFETY FENCING ACROSS OPEN TRENCH TO ALLOW ACCESS TO BURIAL SECTION. PROVIDE ACCESS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. THE BURIAL ACTIVITIES AT THE CEMETERY TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITIES. COOPERATION AND COORDINATION WITH THE OWNER'S REPRESENTATIVE AND CEMETERY MANAGER ARRANGING CONSTRUCTION SCHEDULE TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH CEMETERY ACTIVITIES IN ACTUAL BURIAL AREAS IS REQUIRED. CONSTRUCTION NOISE DURING THE INTERNMENT SERVICES MUST NOT DISTURB THE SERVICE. COORDINATION OF WORK MAY REQUIRE THAT EQUIPMENT THAT IS HEARD FROM THE SERVICE LOCATION BE SHUT OFF, OR MOVED OUT OF THE AREA PRIOR TO THE SERVICE, AS ACCEPTABLE TO THE CEMETERY MANAGER. CONSTRUCTION VEHICLES AND WORKERS MUST NOT PASS THROUGH THE SERVICE AREA DURING THIS PERIOD.
 - A. DISCONTINUE WORK SUFFICIENTLY IN ADVANCE OF EASTER SUNDAY, MOTHER'S DAY, FATHER'S DAY, MEMORIAL DAY, VETERAN'S DAY AND/OR FEDERAL HOLIDAYS, AND CLEAN UP ALL AREAS OF OPERATION ADJACENT TO FUNCTIONING AREAS OF THE CEMETERY INCLUDING EXISTING BURIAL SECTIONS AND ANY OTHER AREAS IDENTIFIED BY THE OWNER'S REPRESENTATIVE AND CEMETERY DIRECTION BEFORE THESE DATES.
 - B. CLEAN UP ACTIVITIES INCLUDE THE REMOVAL OF ALL EQUIPMENT, TOOLS, MATERIALS AND DEBRIS AND LEAVING THE AREAS IN A CLEAN, NEAT CONDITION.
 - C. SHORT NOTICE SERVICES TYPICALLY ONLY PROVIDE 12-HOURS NOTICE. WEEKLY CONSTRUCTION MEETINGS WILL PROVIDE PRELIMINARY SCHEDULE TO THE CONTRACTOR, HOWEVER, THERE MAY BE INSTANCES WHERE SHORT NOTICE SERVICES MUST BE ACCOMMODATED.
13. SPRINKLER LOCATIONS WERE STAKED PRIOR TO IRRIGATION DESIGN AND LOCATIONS WERE COLLECTED VIA GPS. AUTOCAD FILES WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING OF THE SPRINKLERS.

LEGEND

- SLEEVE: HDPE SIZE: WIRE SLEEVE 4-INCH.
 - MAINLINE PIPE CL 200 PVC, SIZE AS SHOWN
 - POINT-OF-CONNECTION (P.O.C.)
 - STUB-OUT FOR FUTURE IRRIGATION
 - LATERAL PIPE REMOTE CONTROL VALVE SPRINKLERS : CLASS 200 PVC PURPLE (1-INCH SIZE UNLESS OTHERWISE INDICATED)
 - UNCONNECTED PIPE CROSSING
 - BACKFLOW ASSEMBLY PAINTED PURPLE FEBCO 880N, SEE DRAWING FOR SIZE
 - MASTER VALVE ASSEMBLY GRISWOLD 2000 NORMALLY OPEN, 8-INCH
 - FLOW SENSOR ASSEMBLY MCCROMETER ULTRA MAG, 8-INCH BATTERY POWER
 - ISOLATION GATE VALVE ASSEMBLY, MAINLINE NIBCO P-619-RW SIZED TO MAIN
 - QUICK COUPLING VALVE ASSEMBLY RAIN BIRD 44RC-NP
 - AIR-VACUUM RELIEF VALVE ASSEMBLY 2-INCH BERMAD C31
 - REMOTE CONTROL VALVE ASSEMBLY RAINBIRD PESB-NP-PRS-D
- POP-UP ROTOR SPRINKLER: RAIN BIRD 8005-NP-SS PRESSURE 80 PSI
- | NOZZLE | FLOW(GPM) | RADIUS(FEET) |
|--------|-----------|--------------|
| 8 | 9.8 | 49 |
| 12 | 14.2 | 61 |
- NOTE: FC=FULL CIRCLE, PC=PART CIRCLE
- POP-UP SPRINKLER: RAIN BIRD 1804-NP-SAM-MPR @ 30 PSI
- | RADIUS: | FLOW (GPM): | Q | H | F |
|---------|-------------|------|------|------|
| 5' | 0.10 | 0.10 | 0.20 | 0.41 |
| 8' | 0.26 | 0.26 | 0.52 | 1.05 |
| 10' | 0.39 | 0.39 | 0.79 | 1.58 |
| 12' | 0.65 | 0.65 | 1.30 | 2.60 |
| 15' | 0.92 | 0.92 | 1.85 | 3.70 |
- VALVE CONTROLLER AND STATION NUMBER
 - FLOW (GPM)
 - VALVE SIZE (INCHES)
- IRRIGATION CONTROLLER: HUNTER ICC2 48 STATIONS AVAILABLE, 10 STATIONS USED



EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE COVER SHEET

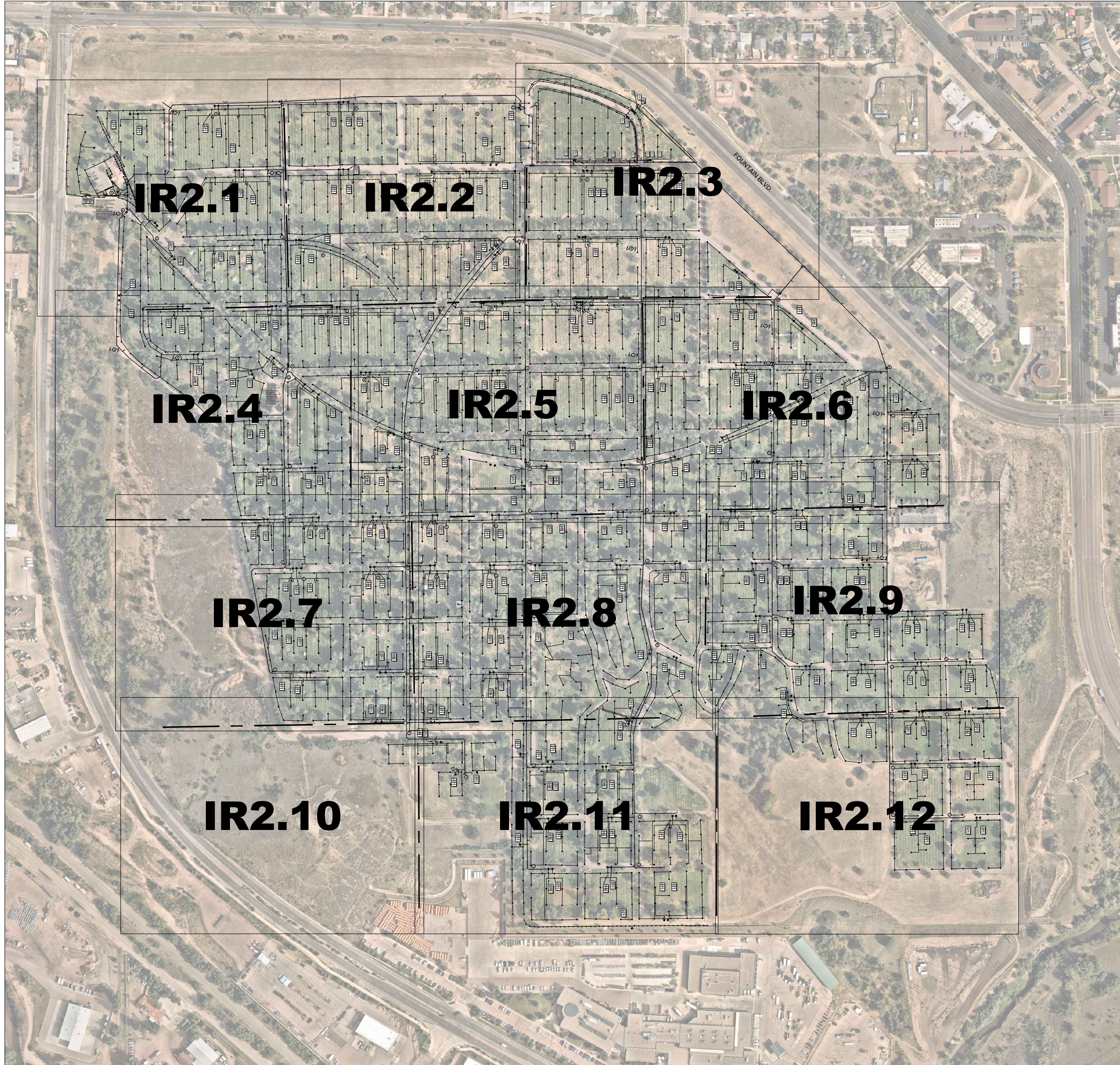
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PAGE 45 OF 65



EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE OVERALL SHEET

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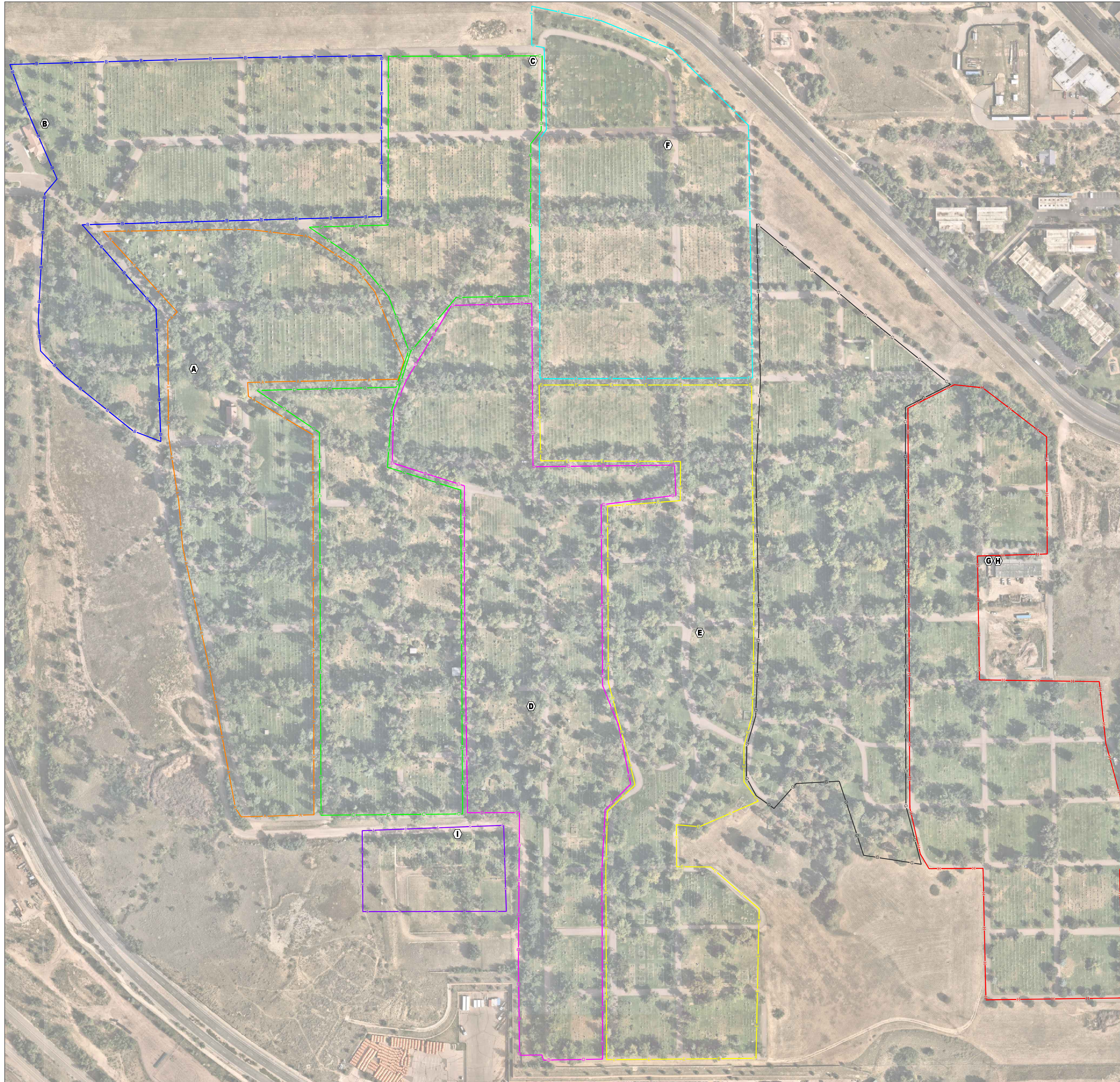
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NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

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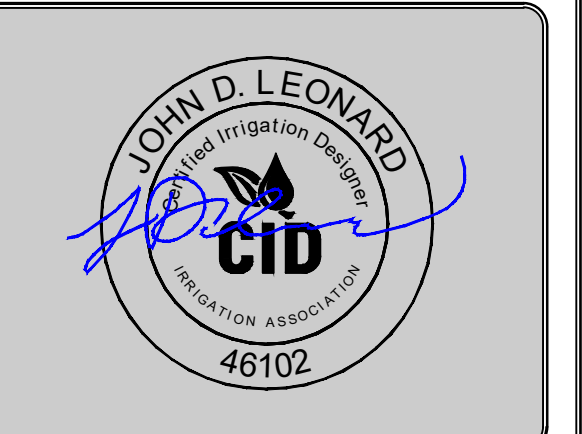
LEGEND

- (A) EXISTING IRRIGATION CONTROLLER TO BE REPLACED WITH WEATHER TRAK OPTIFLOW XR CONTROLLERS
- IRRIGATION CONTROLLER "A" AREA OF INFLUENCE
- IRRIGATION CONTROLLER "B" AREA OF INFLUENCE
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**EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE COMMUNICATION PLAN**

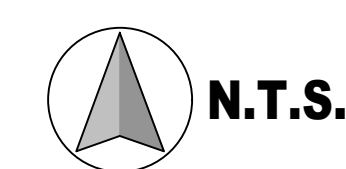
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SHEET NO.	IR1.2
PAGE	47 OF 65



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EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE PLAN SHEET



MATCHLINE SEE SHEET IR2.2

MATCHLINE SEE SHEET IR2.4

NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

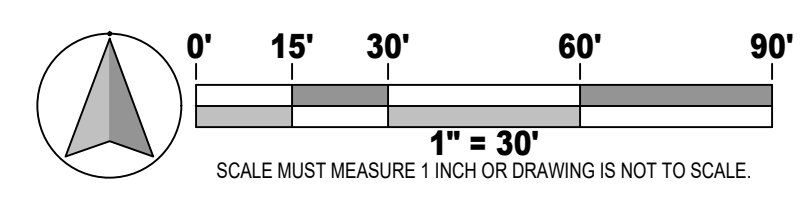
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COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

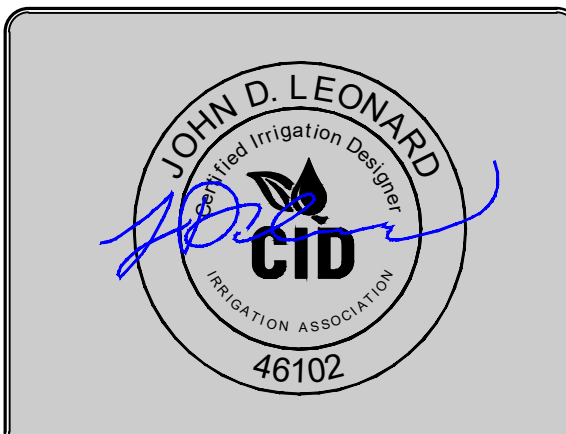
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PROJECT NUMBER: 2023-N2217
WORK ORDER NUMBER: 4076767
CSU SHEET 30 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



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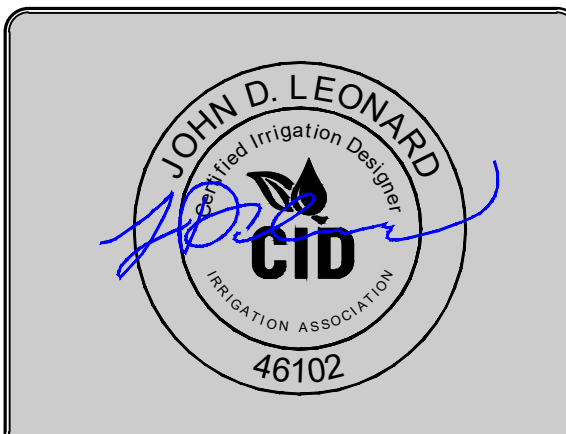
DATE	05/08/2024
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SHEET NO.
IR2.1
PAGE 48 OF 65

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SHEET NO.	IR2.2
PAGE	49 OF 65



NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

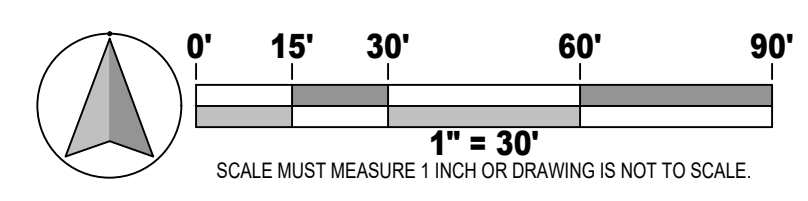
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2023-N217
WORK ORDER NUMBER: 4076767
CSU SHEET 31 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



File: C:\CSU\EVERGREEN\EVERGREEN-Comprehensive-Plans-24-1.s (LMS Tech) R24-004SL

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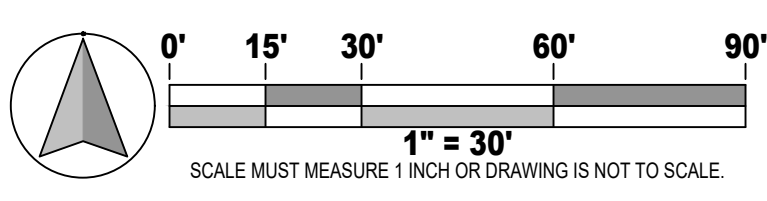
SHEET NO.	IR2.3
PAGE	50 OF 65



MATCHLINE SEE SHEET IR2.6

NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

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COLORADO SPRINGS UTILITIES
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PROJECT NUMBER: 2023-N2217
WORK ORDER NUMBER: 4076767
CSU SHEET 32 OF 41

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APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

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EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE PLAN SHEET



NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

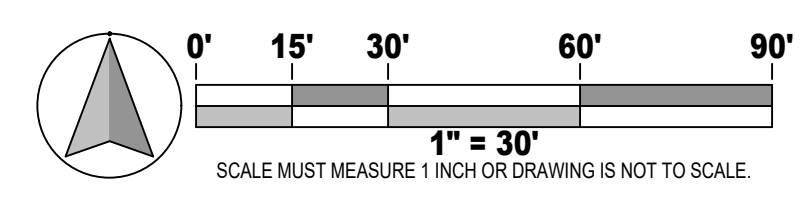
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COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

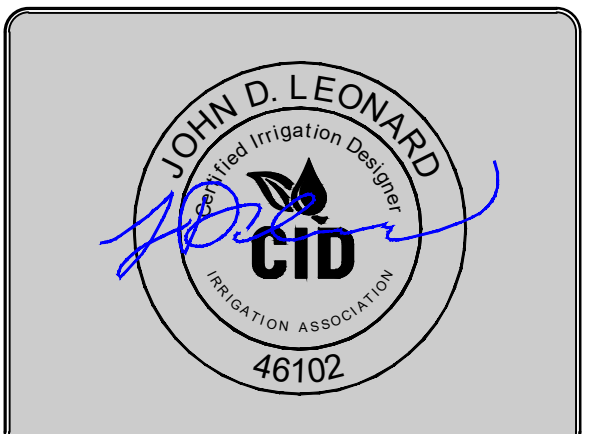
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PROJECT NUMBER: 2023-N2217
WORK ORDER NUMBER: 4076767
CSU SHEET 33 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



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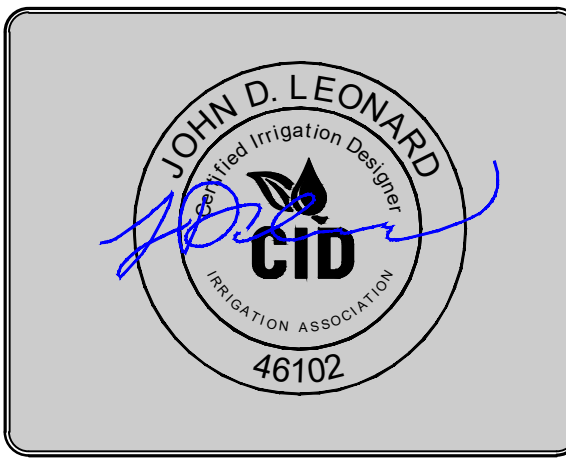
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SHEET NO. **IR2.4**
PAGE 51 OF 65

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COLORADO SPRINGS, CO
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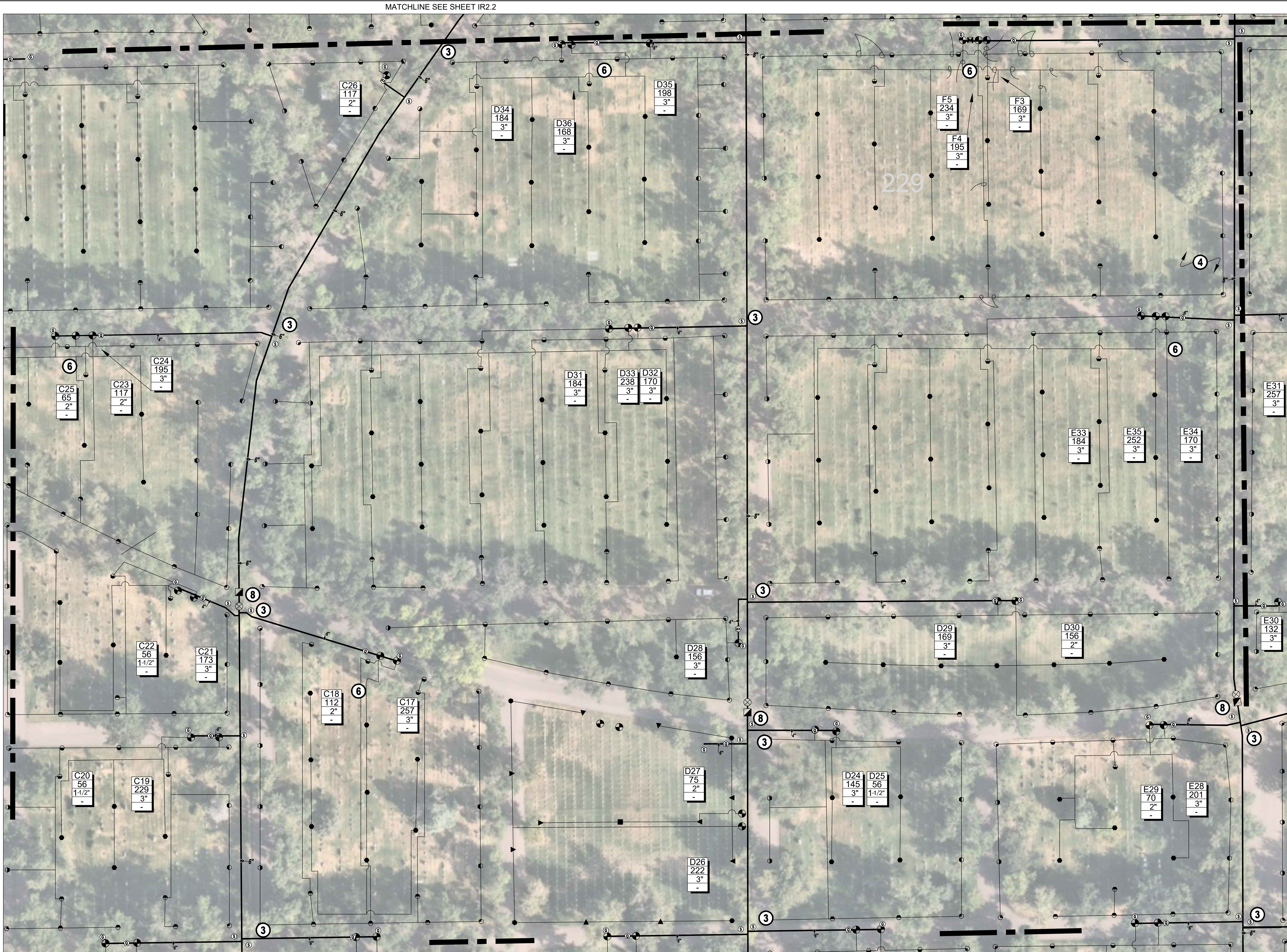
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SHEET NO. **IR2.5**
PAGE 52 OF 65



NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

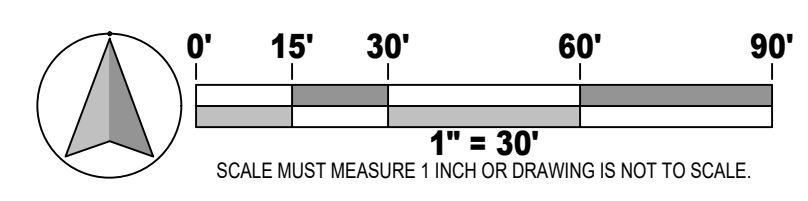
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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WORK ORDER NUMBER: 4076767
CSU SHEET 34 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



File: C:\CSU\EVERGREEN\EVERGREEN-Comprehensive-Plans-24-1.s (LWS Tech) R24-004SL

MATCHLINE SEE SHEET IR2.3

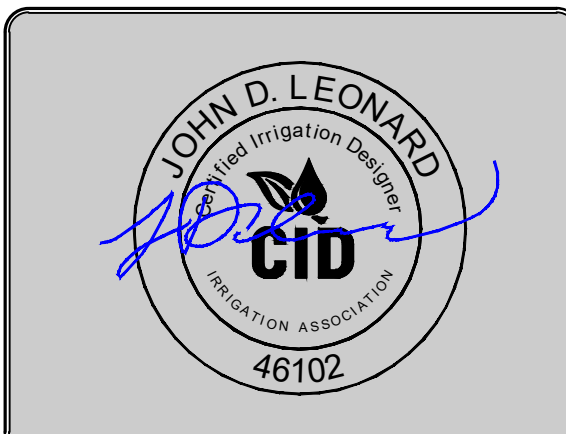
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COLORADO SPRINGS, CO
 IRRIGATION COMPREHENSIVE PLAN SHEET

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SHEET NO. **IR2.6**
 PAGE 53 OF 65

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THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

MATCHLINE SEE SHEET IR2.9

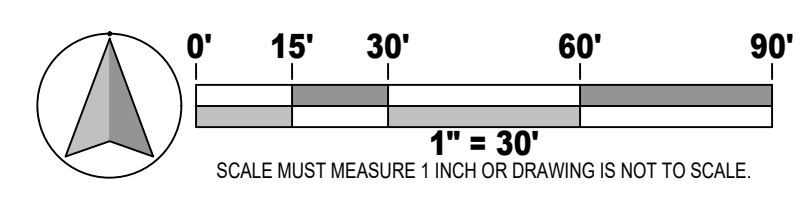
COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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 CSU SHEET 35 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



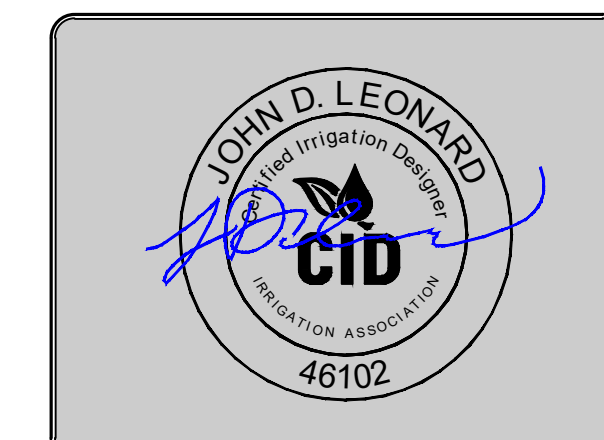
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MATCHLINE SEE SHEET IR2.8

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SHEET NO.	IR2.7
PAGE	54 OF 65

NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

MATCHLINE SEE SHEET IR2.10

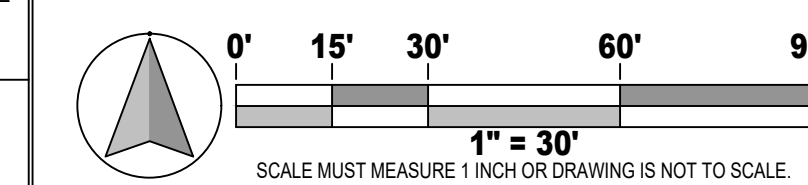
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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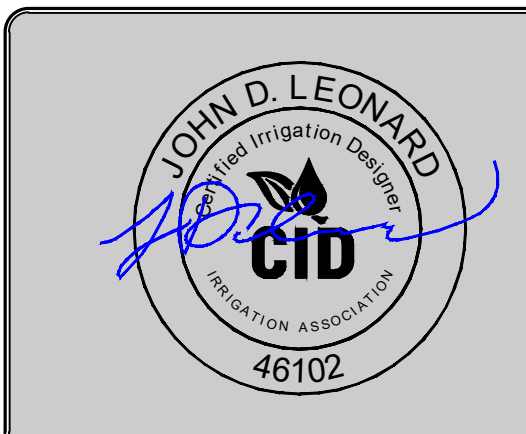
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WORK ORDER NUMBER: 4076767
CSU SHEET 36 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



EVERGREEN CEMETERY
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SHEET NO. **IR2.8**
PAGE 55 OF 65

MATCHLINE SEE SHEET IR2.5

MATCHLINE SEE SHEET IR2.7

MATCHLINE SEE SHEET IR2.9

MATCHLINE SEE SHEET IR2.11

NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

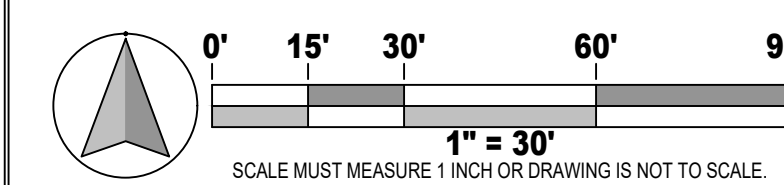
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

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NONPOTABLE WATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2023-N217
WORK ORDER NUMBER: 4076767
CSU SHEET 37 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



MATCHLINE SEE SHEET IR2.6

EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE PLAN SHEET

MATCHLINE SEE SHEET IR2.8



NOTE: SEE LEGEND ON COVER SHEET IR1.0, PAGE 45 FOR APPLICABLE CALLOUTS ON THIS SHEET.

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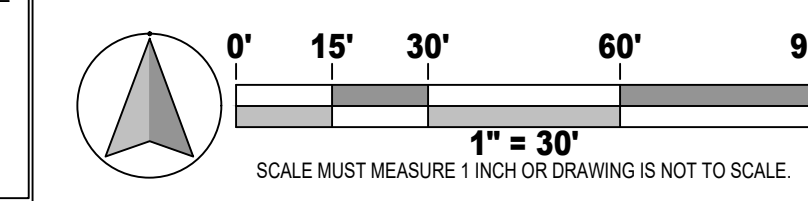
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NONPOTABLE WATER MAIN DESIGN APPROVAL

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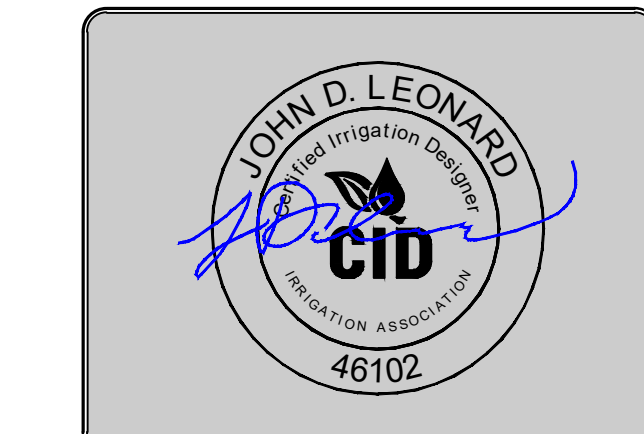
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 WORK ORDER NUMBER: 4076767
 CSU SHEET 38 OF 41

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SHEET NO. **IR2.9**
 PAGE 56 OF 65

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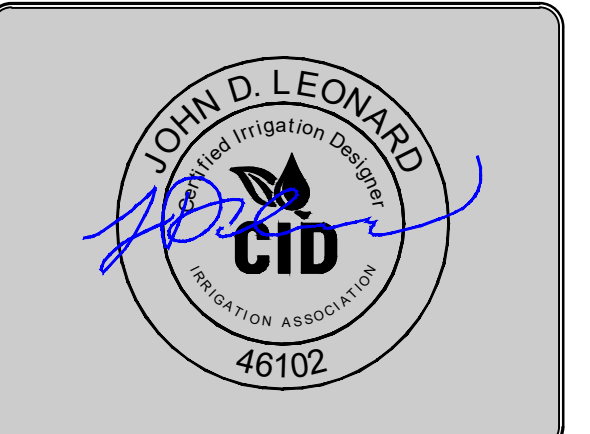


MATCHLINE SEE SHEET IR2.11



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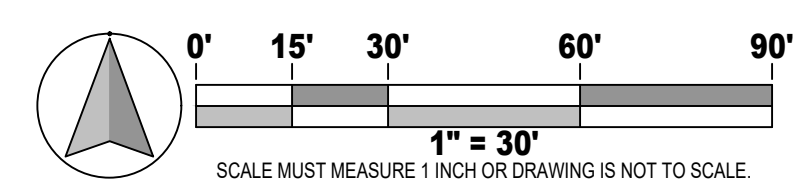
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SHEET NO. **IR2.10**
 PAGE 57 OF 65

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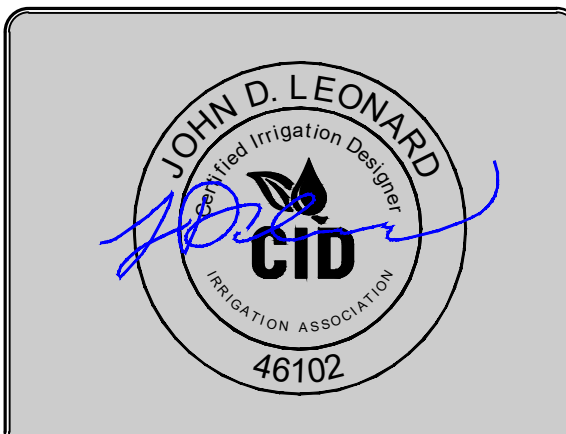
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL
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 PROJECT NUMBER: 2023-N2217
 WORK ORDER NUMBER: 4076767
 CSU SHEET 39 OF 41
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IRRIGATION COMPREHENSIVE PLAN SHEET

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SHEET NO.	IR2.11
PAGE	58 OF 65



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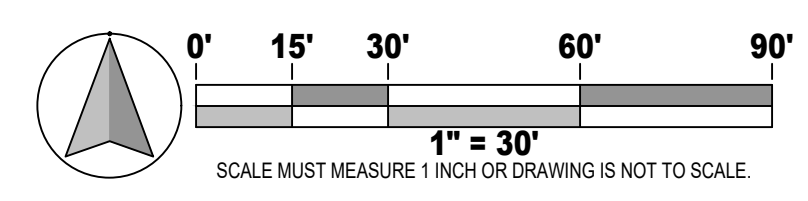
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2023-N217
WORK ORDER NUMBER: 407676
CSU SHEET 40 OF 41

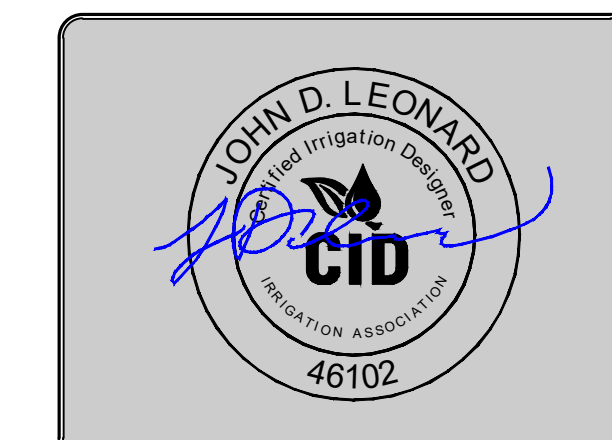
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SHEET NO.	IR2.12
PAGE	59 OF 65



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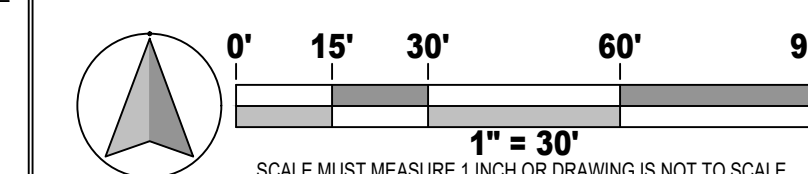
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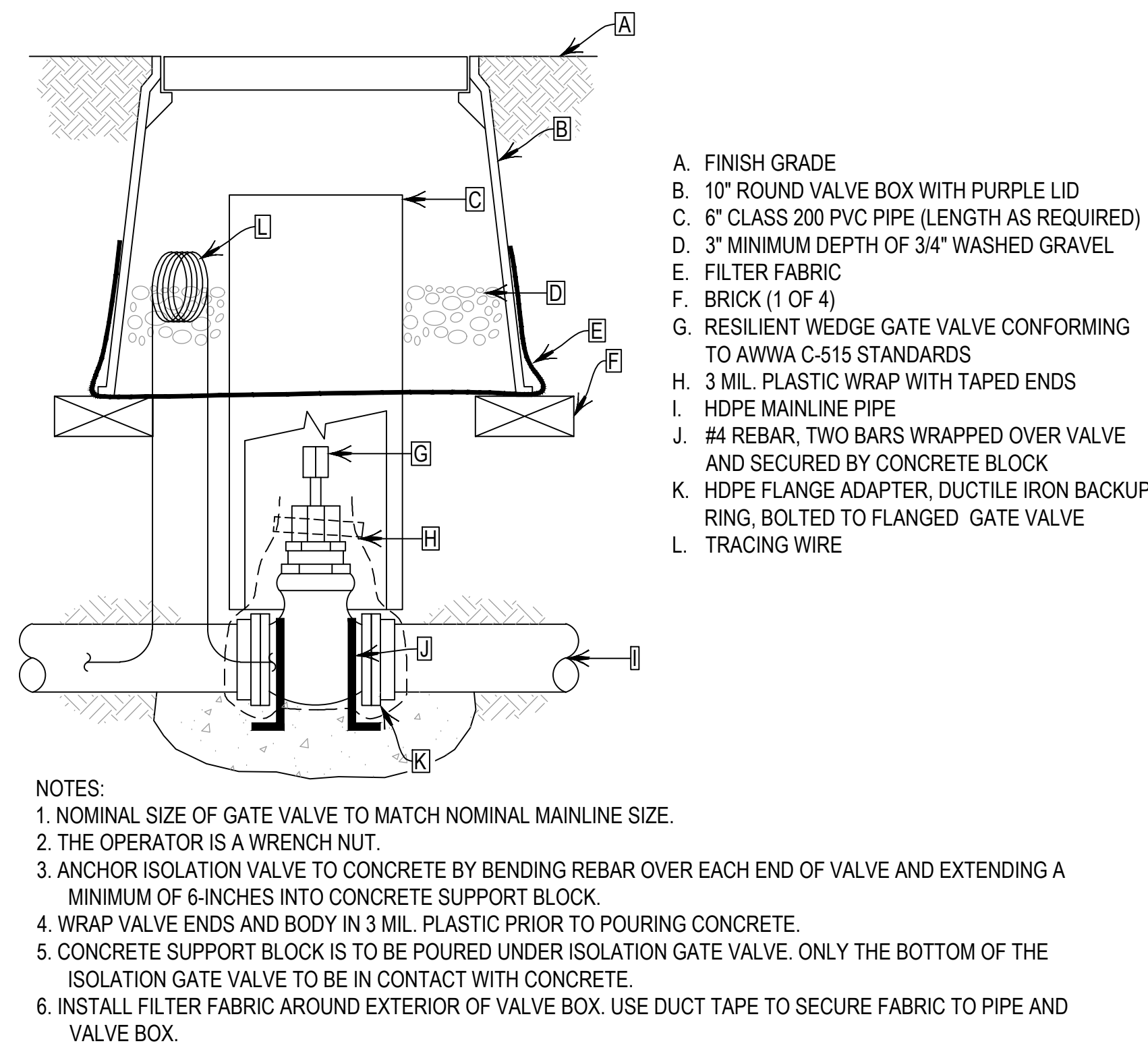
THE INSTALLATION, LOCATION, LENGTHS, SEPARATIONS ETC. IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND CONTRACTOR.

COLORADO SPRINGS UTILITIES
NONPOTABLE WATER MAIN DESIGN APPROVAL

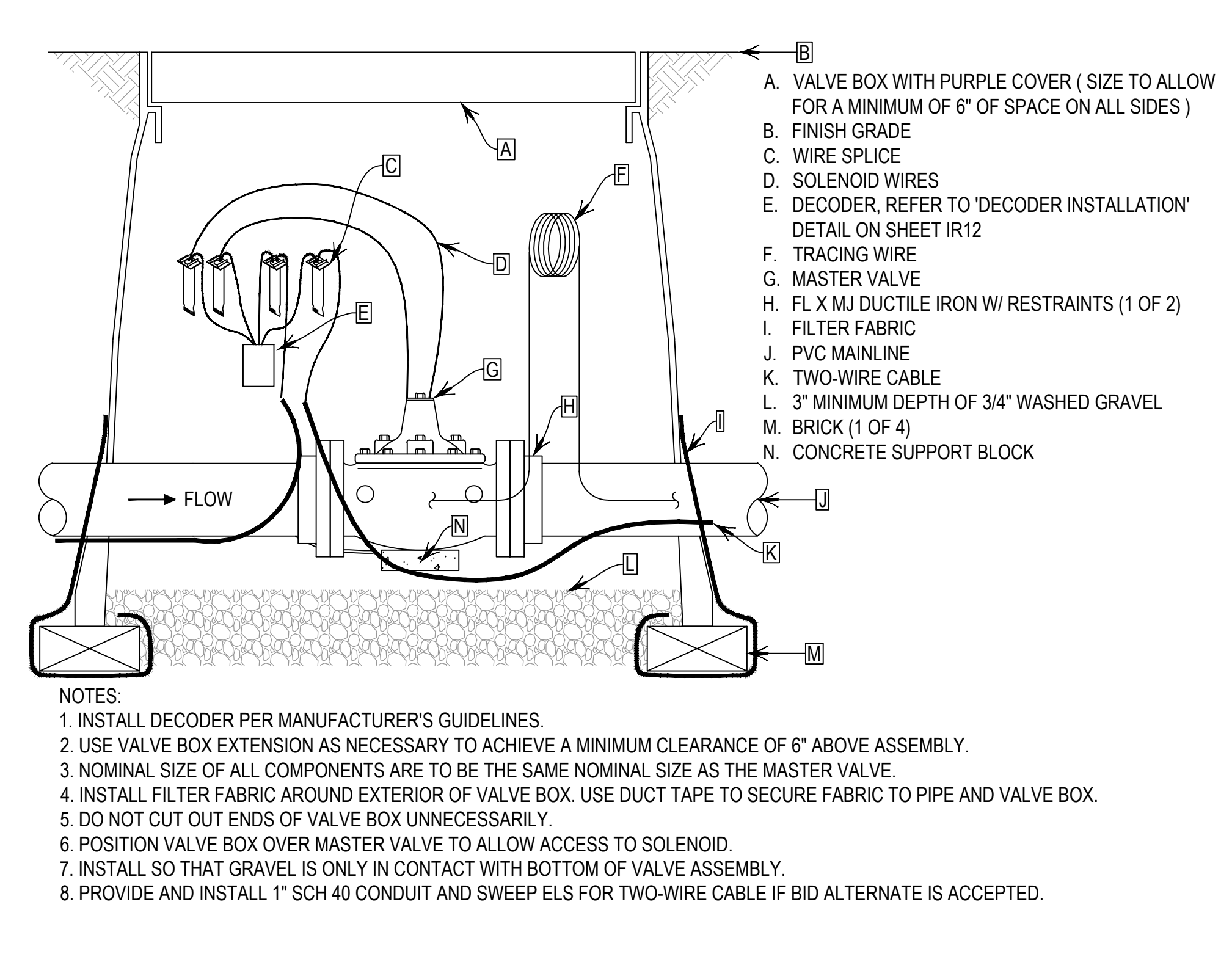
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 CSU SHEET 41 OF 41

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

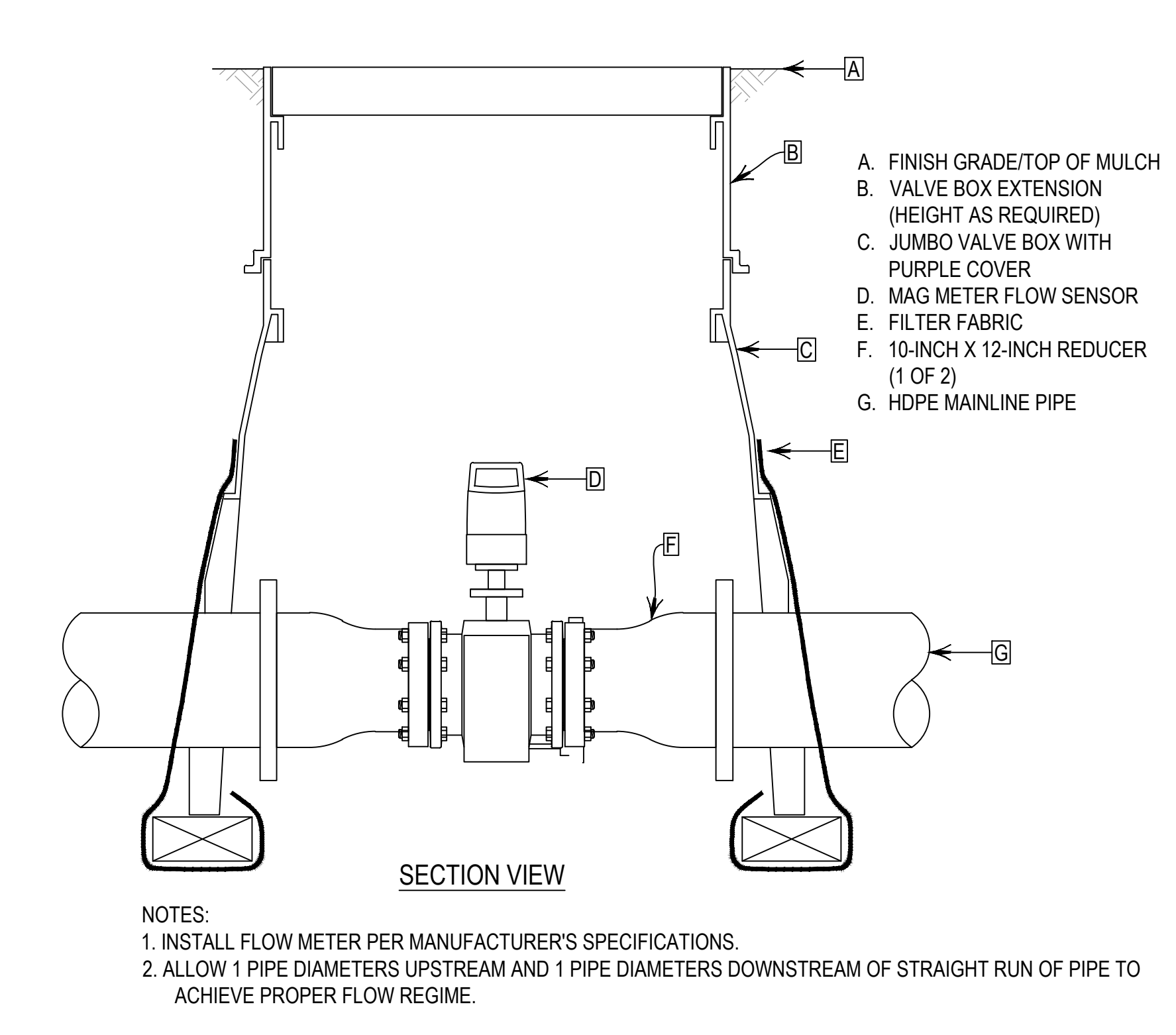




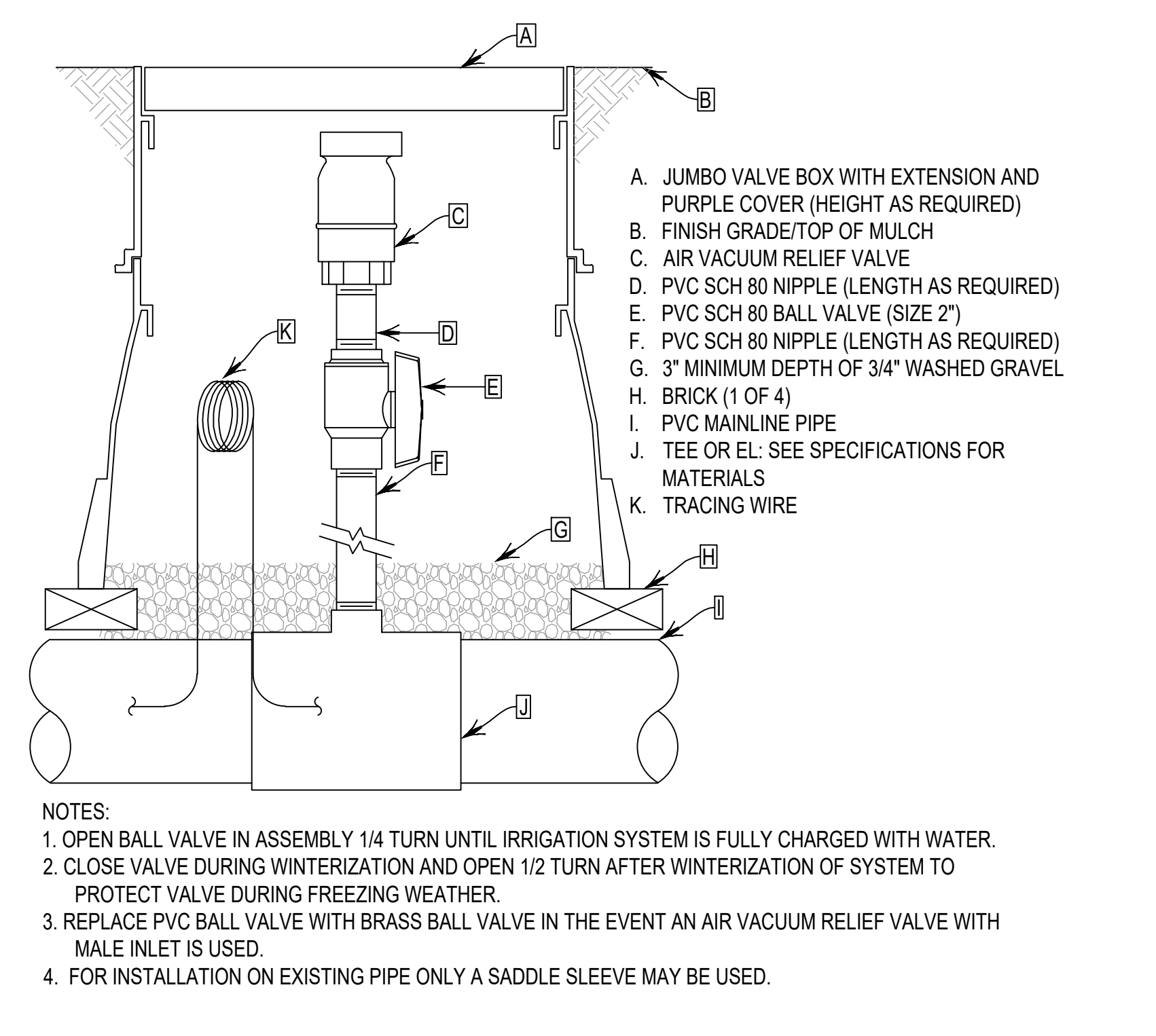
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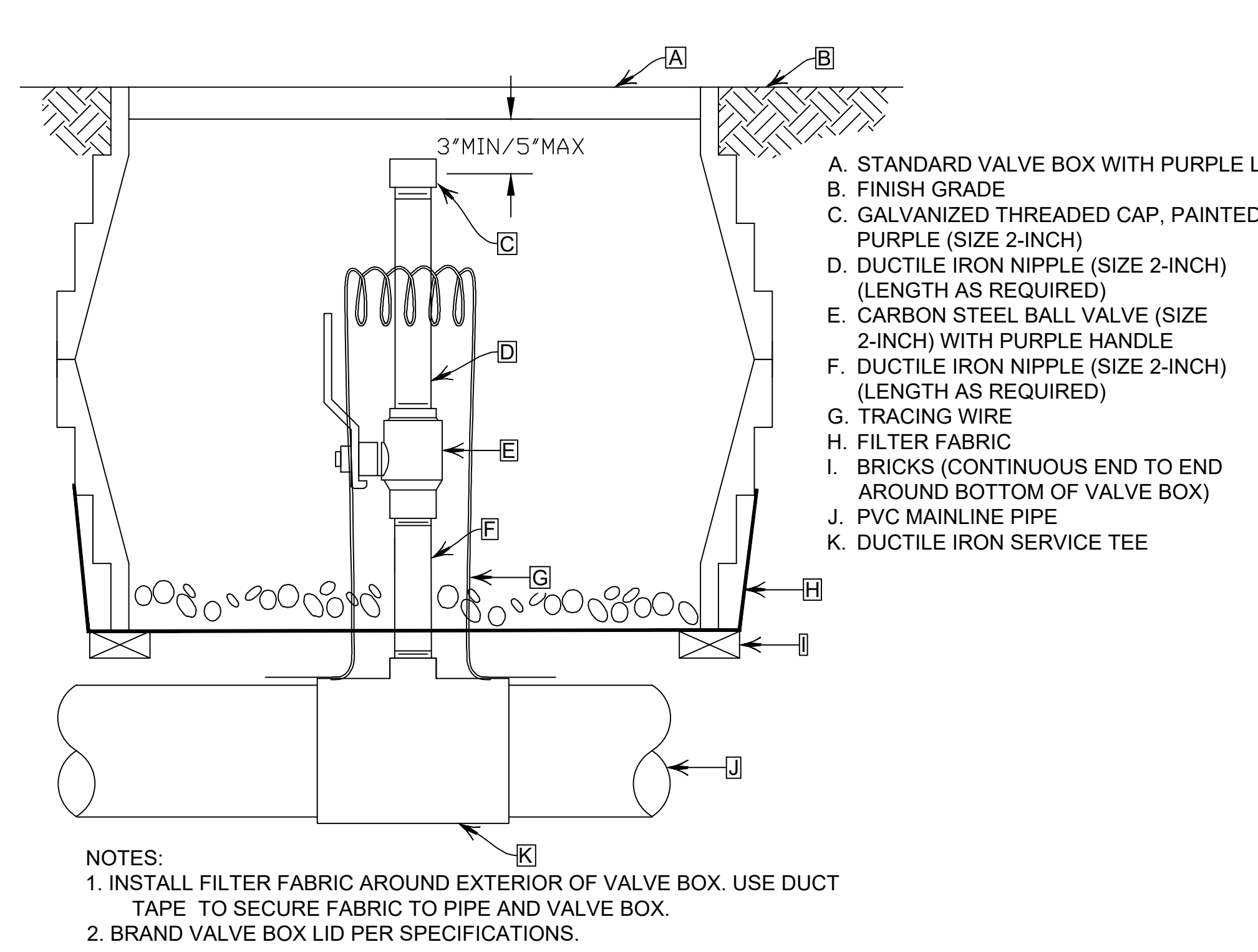
2 MASTER VALVE ASSEMBLY N.T.S.



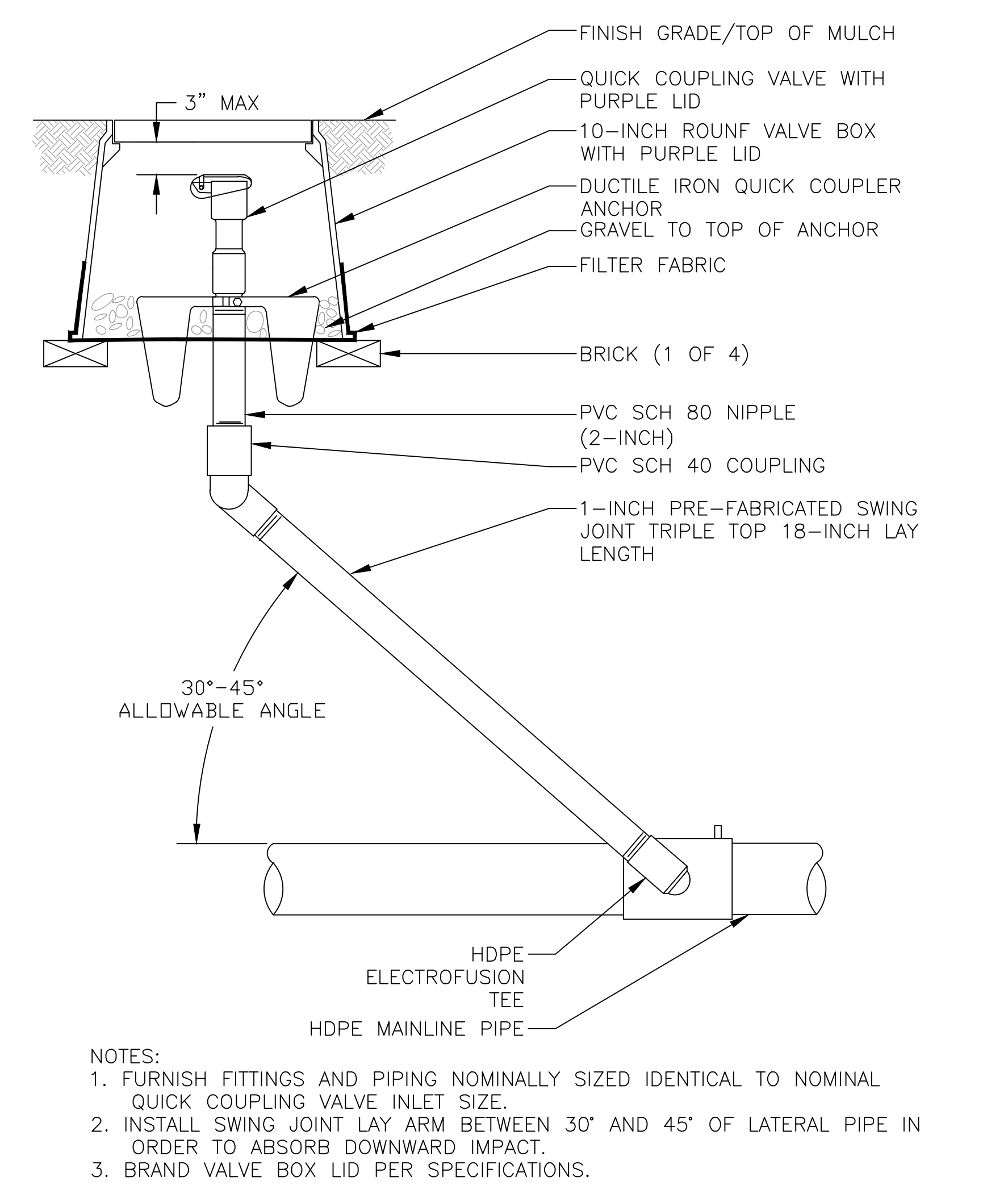
3 FLOW SENSOR ASSEMBLY N.T.S.



4 AIR/VACUUM RELIEF VALVE ASSEMBLY N.T.S.



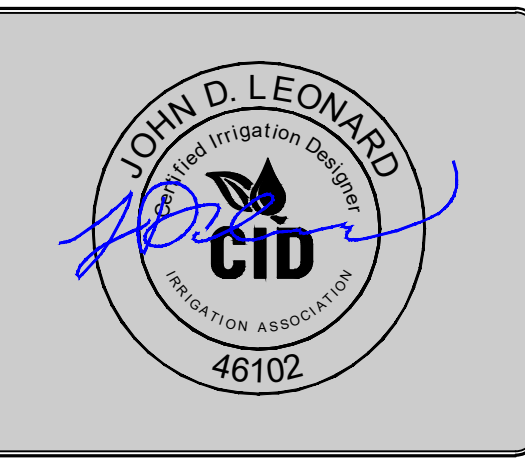
5 WINTERIZATION ASSEMBLY N.T.S.



6 QUICK COUPLER VALVE ASSEMBLY N.T.S.

EVERGREEN CEMETERY
COLORADO SPRINGS, CO
IRRIGATION COMPREHENSIVE DETAILS

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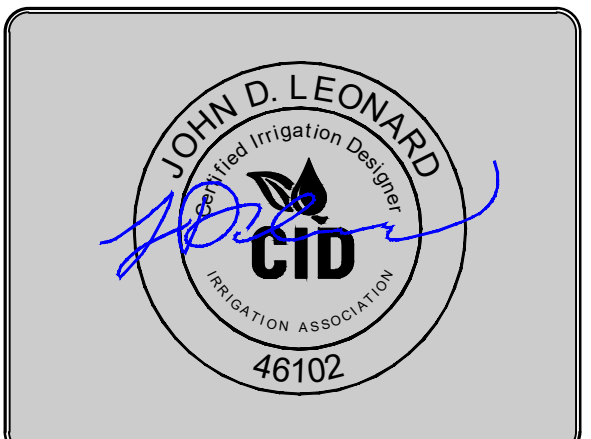


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SHEET NO. **IR3.0**
PAGE 60 OF 65

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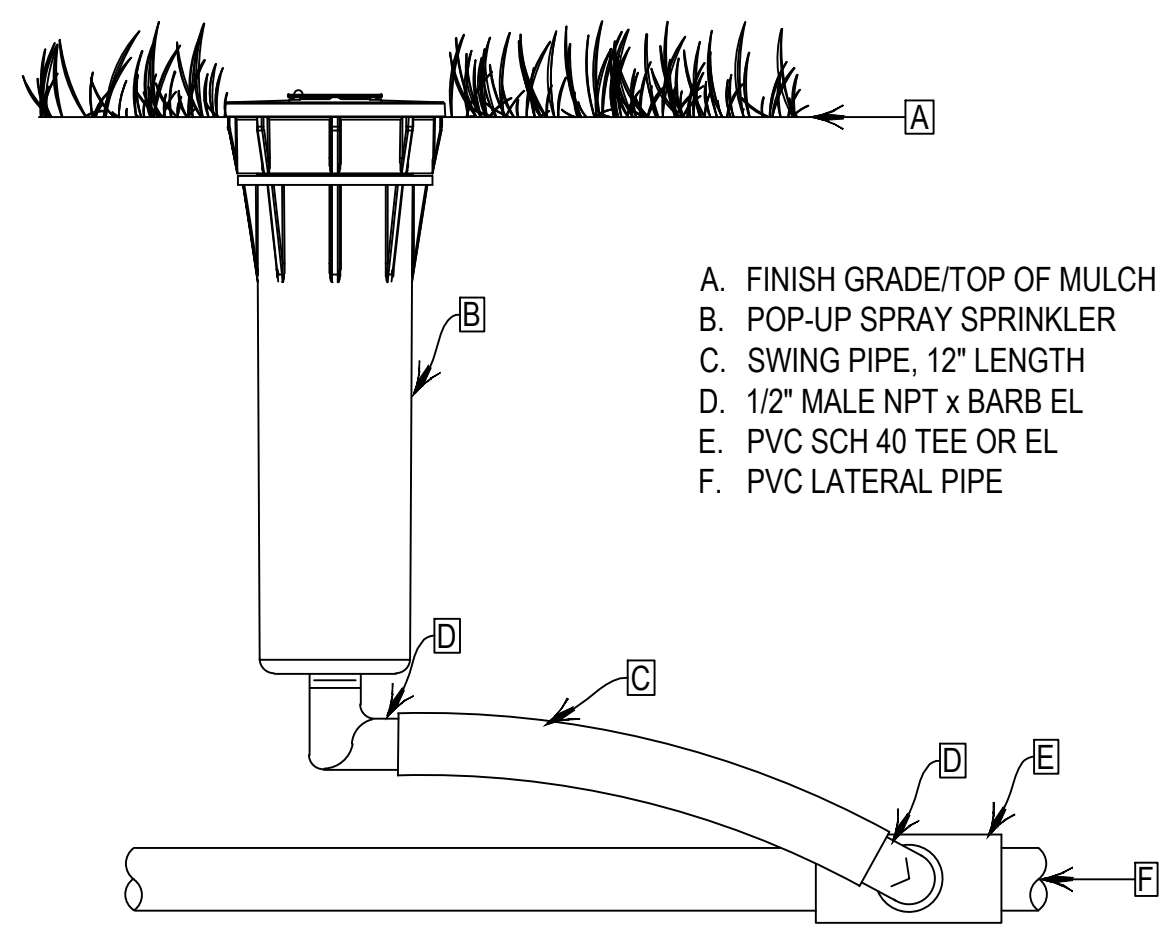


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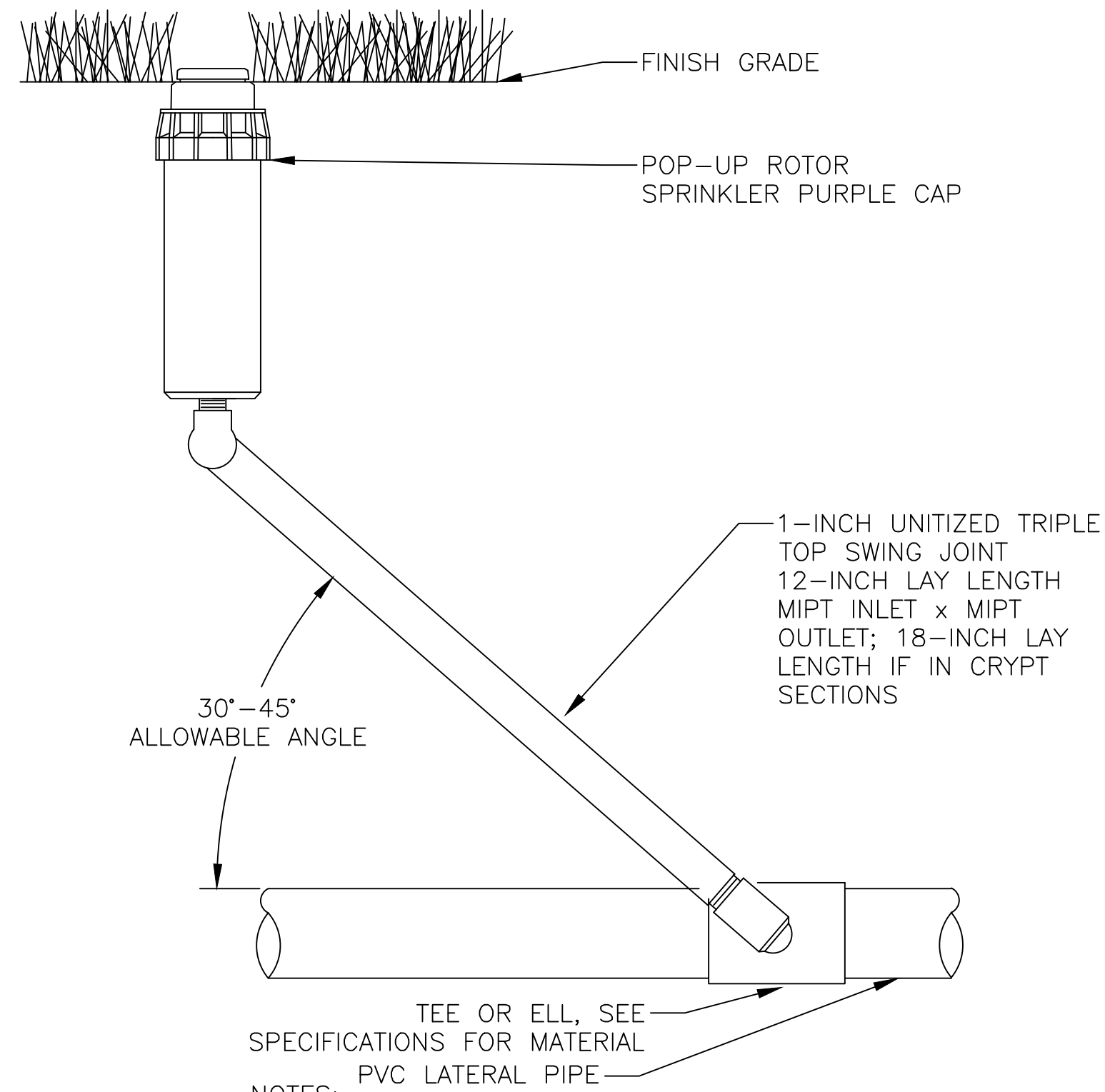
SHEET NO. **IR3.1**
PAGE 61 OF 65

1 SPRAY SPRINKLER ASSEMBLY N.T.S.



- A. FINISH GRADE/TOP OF MULCH
- B. POP-UP SPRAY SPRINKLER
- C. SWING PIPE, 12" LENGTH
- D. 1/2" MALE NPT x BARB EL
- E. PVC SCH 40 TEE OR EL
- F. PVC LATERAL PIPE

2 ROTOR SPRINKLER ASSEMBLY N.T.S.

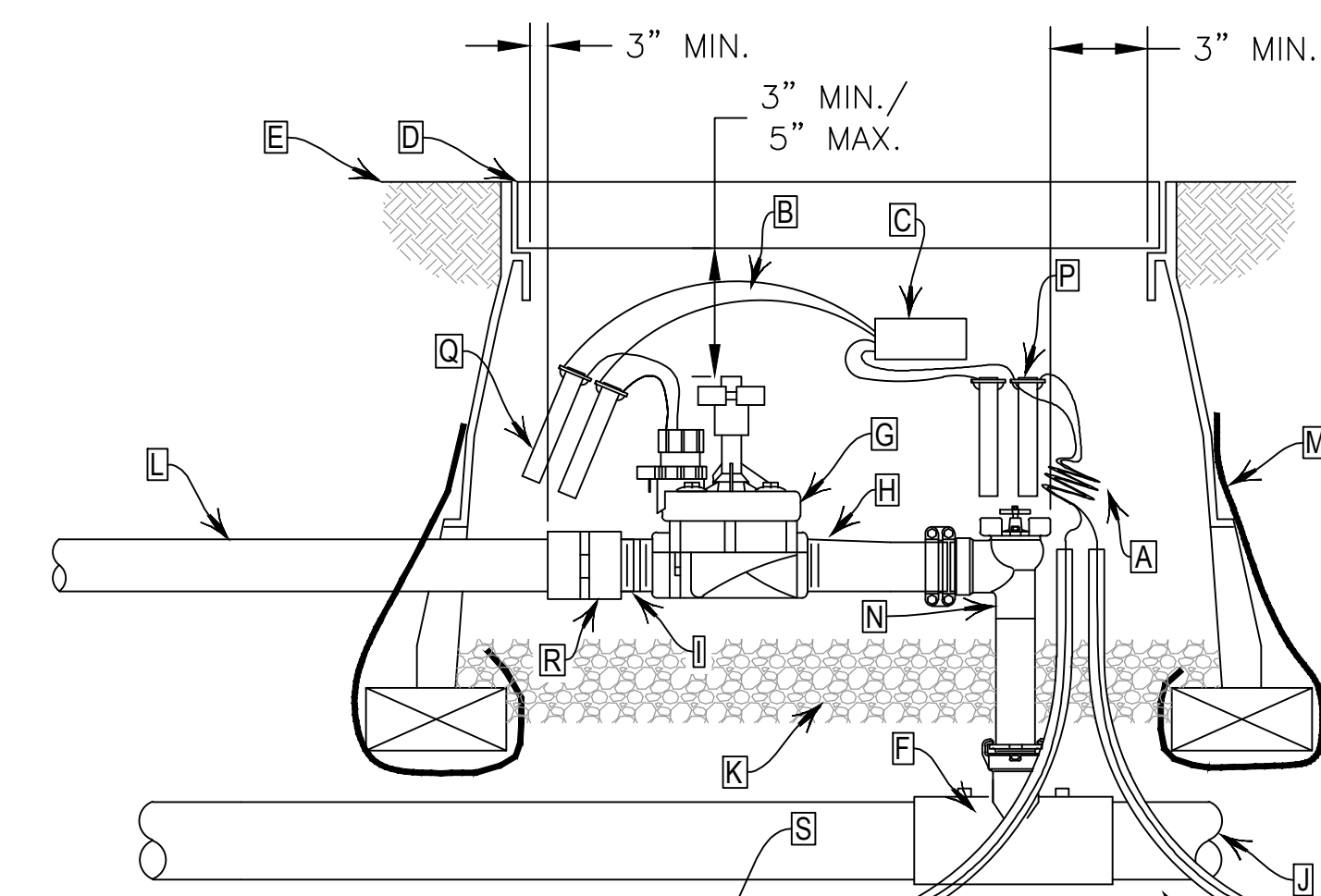


1-INCH UNITIZED TRIPLE TOP SWING JOINT
12-INCH LAY LENGTH MIPT INLET x MIPT OUTLET; 18-INCH LAY LENGTH IF IN CRYPT SECTIONS

TEE OR ELL, SEE SPECIFICATIONS FOR MATERIAL PVC LATERAL PIPE

- NOTES:
1. INSTALL SWING JOINT LAY ARM BETWEEN 30° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT. IF SWING JOINT CAN NOT BE INSTALLED AT SPECIFIED ANGLE, CONSULT COR/SRE PRIOR TO INSTALLATION OF SWING JOINT.
 2. INSTALL SPRINKLER 12-INCHES OFF OF BACK OF CURB.

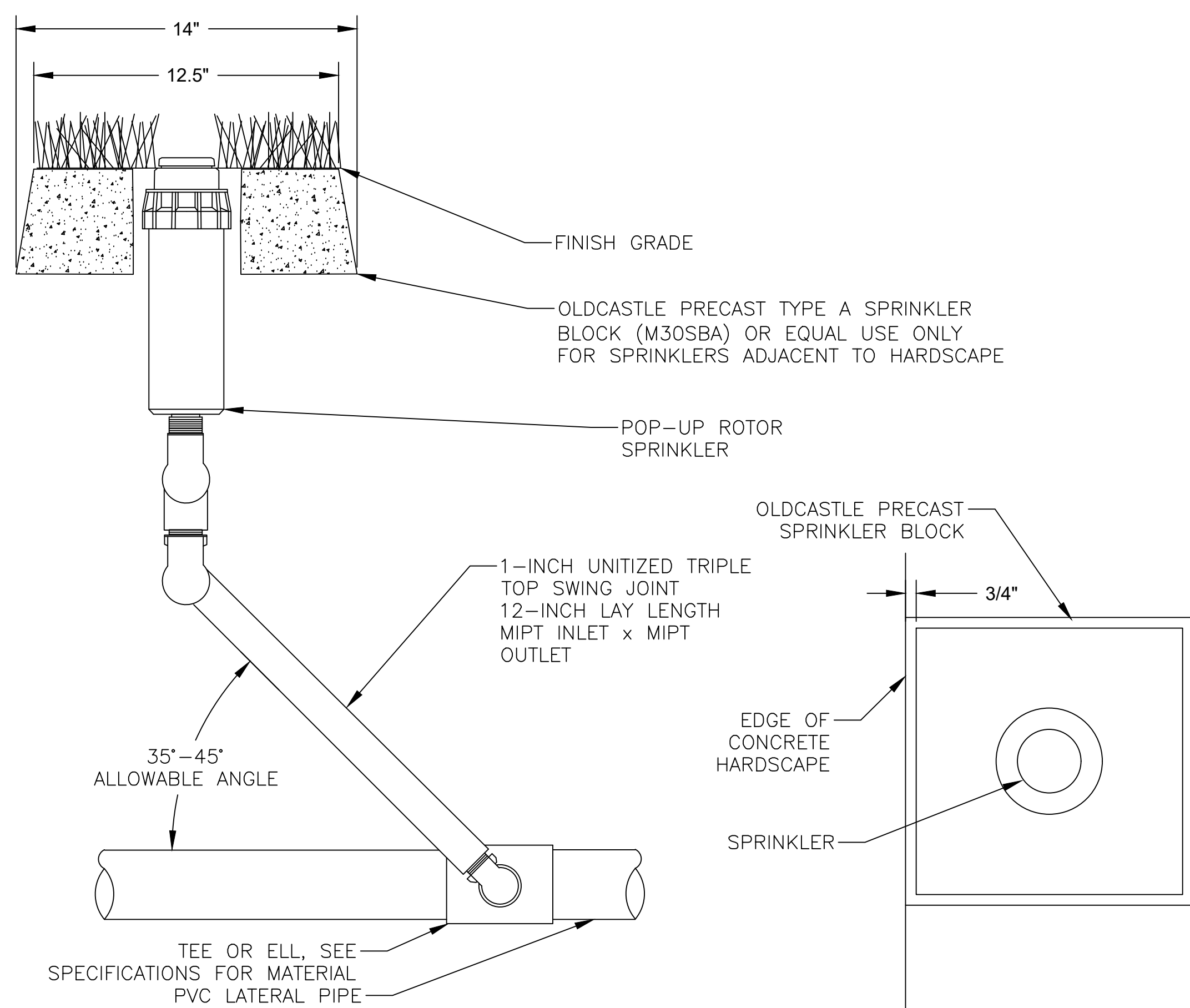
3 REMOTE CONTROL VALVE ASSEMBLY N.T.S.



- A. TWO-WIRE CABLE
- B. WIRE FROM BICODER TO VALVE SEE SPECIFICATIONS
- C. DECODER: ATTACH TO VALVE BOX WITH ZIP TIE
- D. JUMBO VALVE BOX WITH PURPLE LID
- E. FINISH GRADE
- F. HDPE ELECTROFUSION WELD SERVICE TEE AND ADAPTOR FOR LEEMCO LV-200
- G. REMOTE CONTROL VALVE
- H. LEEMCO LMNP SERIES ADAPTER, OUTLET SIZE TO MATCH REMOTE CONTROL VALVE SIZE.
- I. PVC SCH 80 NIPPLE
- J. HDPE MAINLINE PIPE
- K. 3-INCH DEPTH OF 3/4-INCH WASHED GRAVEL
- L. PVC LATERAL PIPE
- M. FILTER FABRIC
- N. 2-INCH DUCTILE IRON ANGLE VALVE: LEEMCO LV-200. SECURE ANGLE VALVE POSITION WITH LEEMCO LV CLIPS PER MANUFACTURER'S GUIDELINES.
- O. NOT USED
- P. WIRE SPLICE FROM TWO-WIRE CABLE TO BICODER (1 OF 2; REFER TO SPECIFICATIONS)
- Q. WIRE CONNECTOR FROM BICODER TO SOLENOID VALVE (1 OF 2)
- R. PVC SCH40 FEMALE ADAPTER
- S. 1" PVC SCH 40 CONDUIT AND LONG RADIUS SWEEP EL. (TYPICAL)

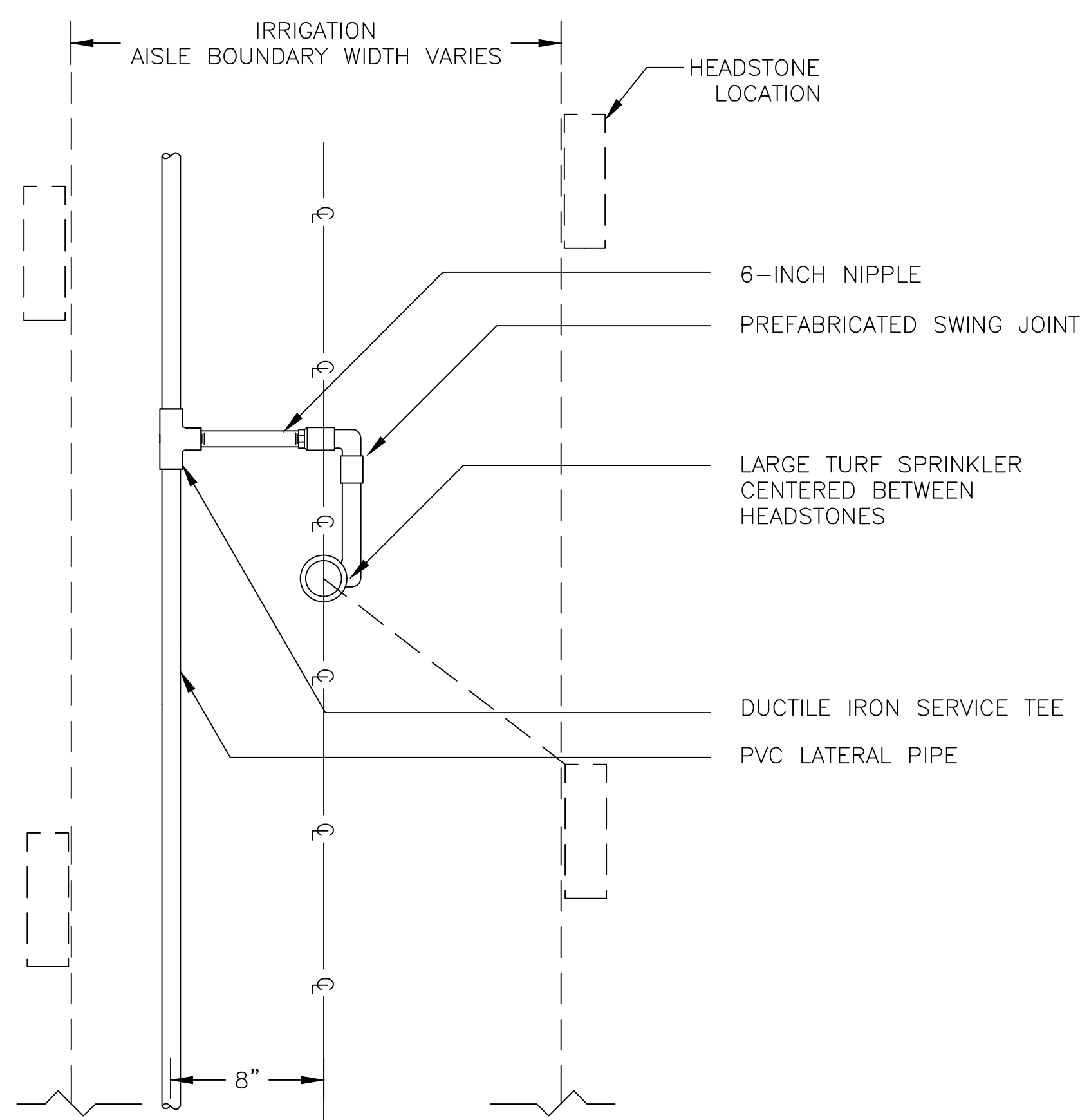
- NOTES:
1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
 2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
 3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
 4. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
 5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
 6. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID AND PROPER OPERATION OF BALL VALVE.
 7. INSTALL SO THAT NO GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.
 8. COIL 3- FEET OF WIRE FOR EACH BICODER FOR SERVICE PURPOSES.

5 ROTOR SPRINKLER ADJACENT TO ROAD DETAIL N.T.S.



- NOTES:
1. INSTALL SWING JOINT LAY ARM BETWEEN 35° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT. IF SWING JOINT CAN NOT BE INSTALLED AT SPECIFIED ANGLE, CONSULT RESIDENT ENGINEER PRIOR TO INSTALLATION OF SWING JOINT.

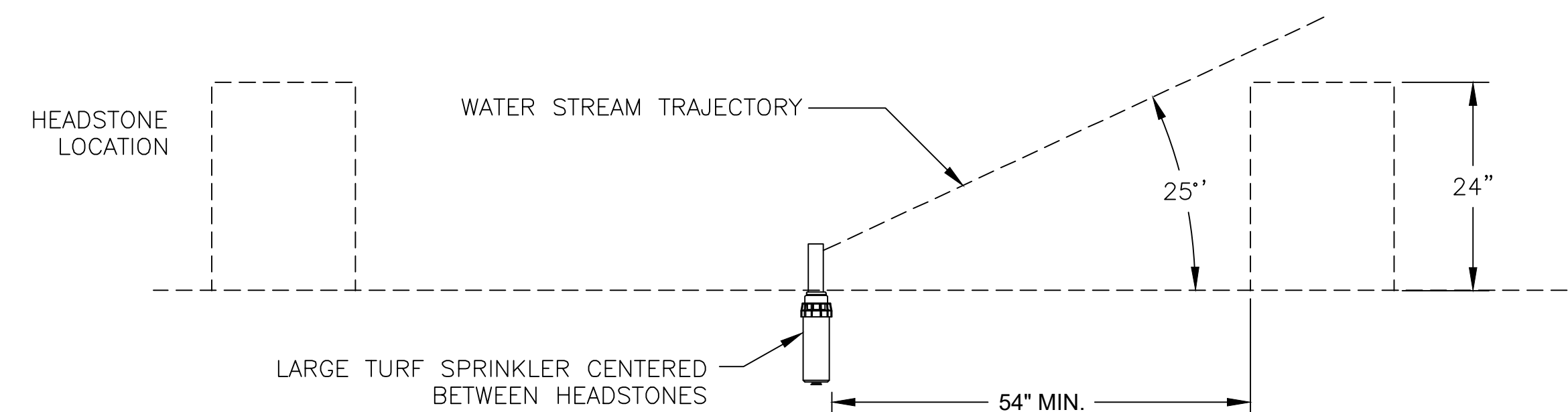
5 SPRINKLER PLACEMENT DETAIL N.T.S.



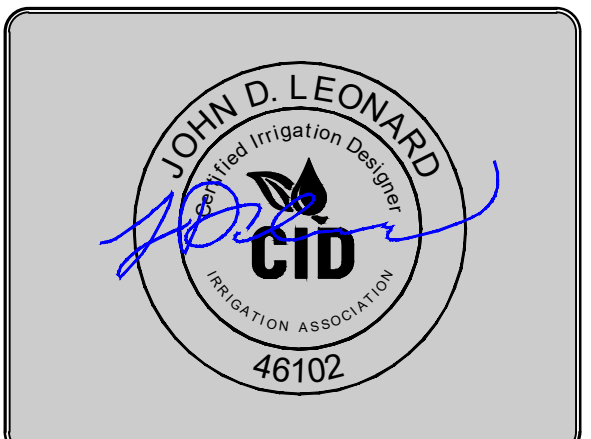
- NOTES:
1. CONTRACTOR RESPONSIBLE FOR STAKING TRENCH LOCATION IN THE CORRECT LOCATION WITHIN AISLES.
 2. CENTER OF SPRINKLER WILL BE ALIGNED WITH CENTERLINE OF AISLE.
 3. MEASURE DISTANCE AND HEIGHT OF HEADSTONES TO DETERMINE LOCATION OF SPRINKLER THAT MINIMIZES HEADSTONE INTERFERENCE.

DISTANCE REQUIRED FOR 25° SPRAY ANGLE

HEADSTONE HEIGHT (IN)	MINIMUM DISTANCE (IN)
15	32
20	43
25	54
30	64
35	75
40	86



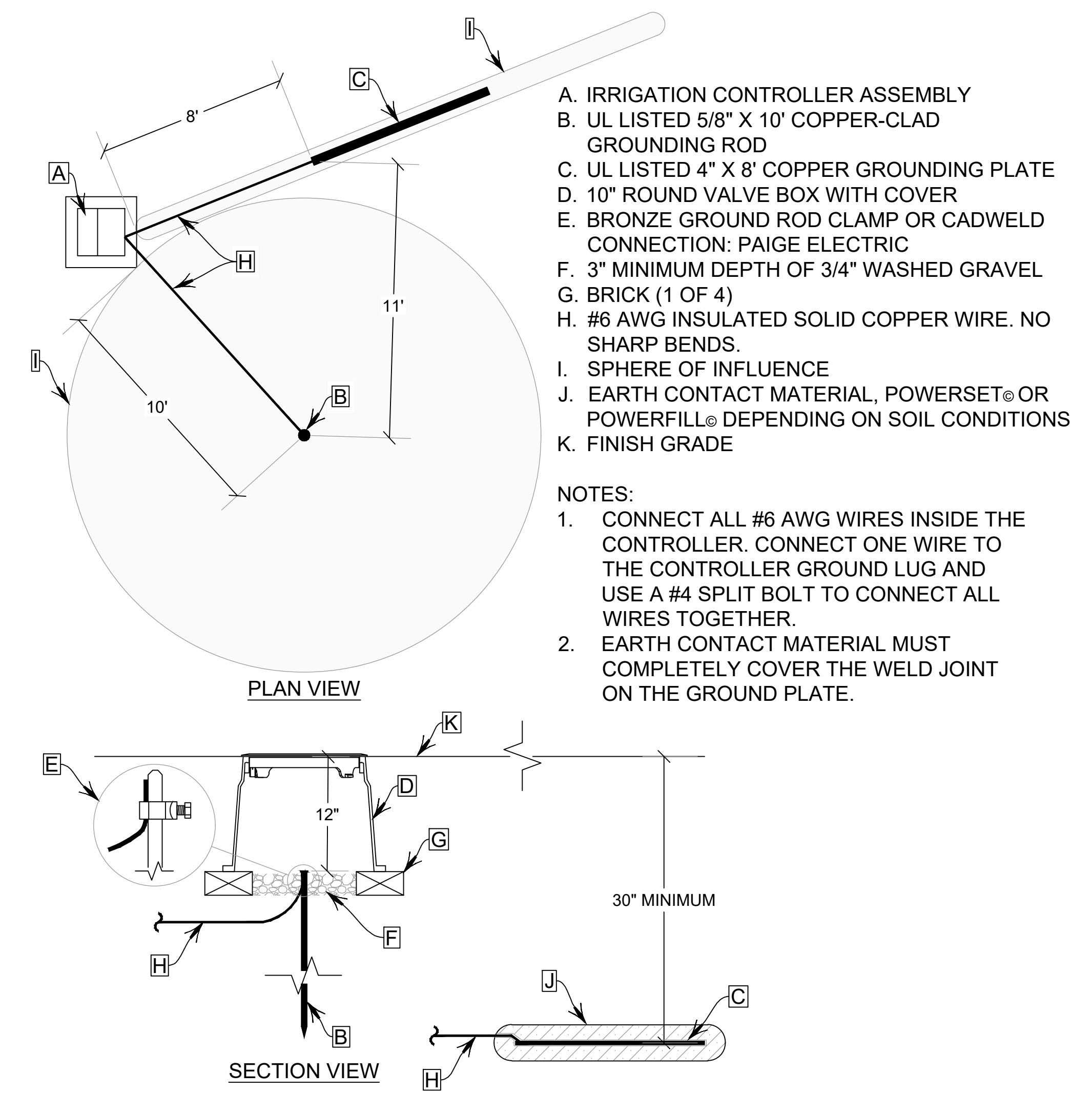
100% FOR REVIEW
NOT FOR CONSTRUCTION



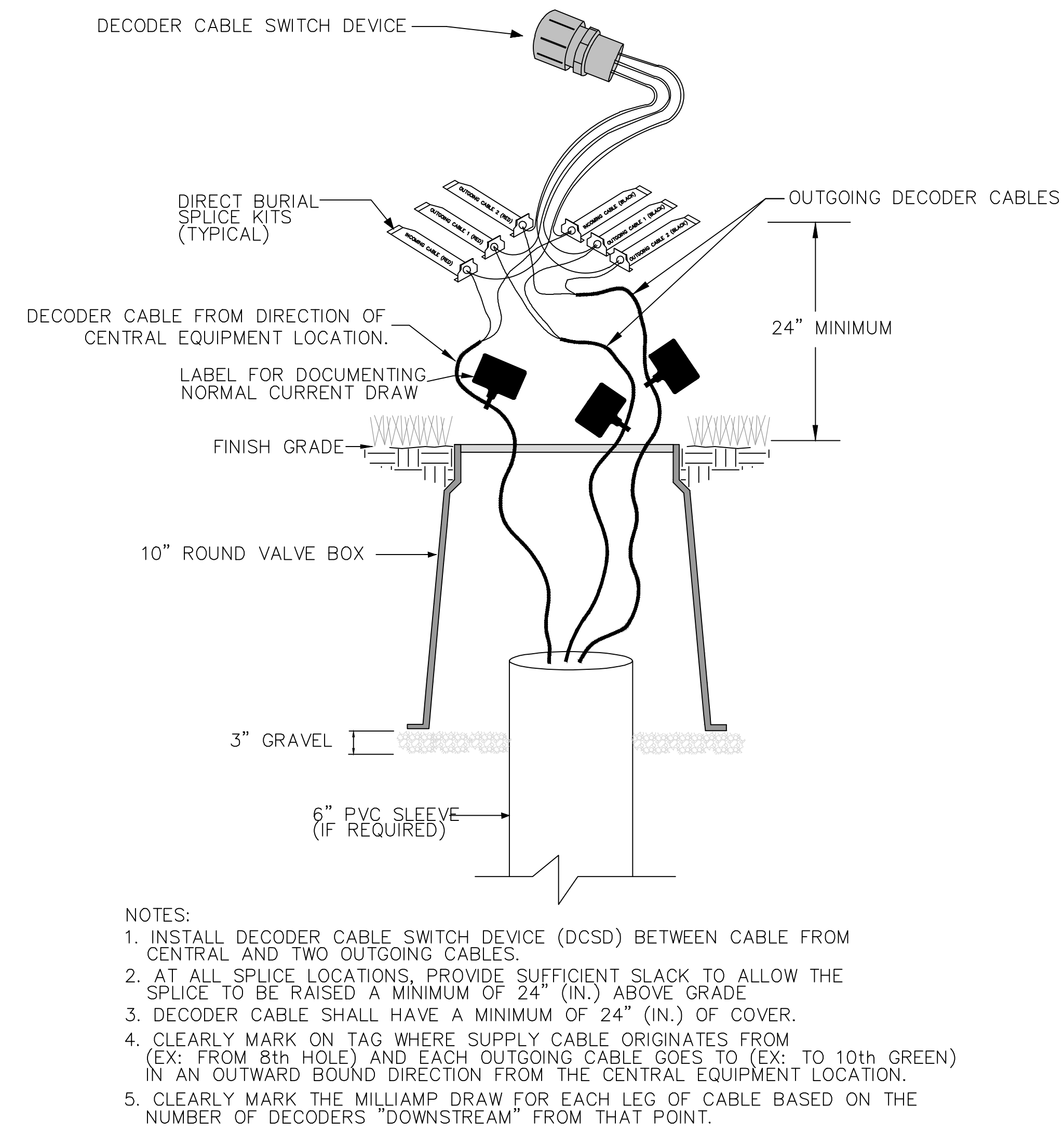
DATE	05/08/2024
DESIGNED BY	CCT
DRAWN BY	CCT
CHECKED BY	RWB

REVISIONS

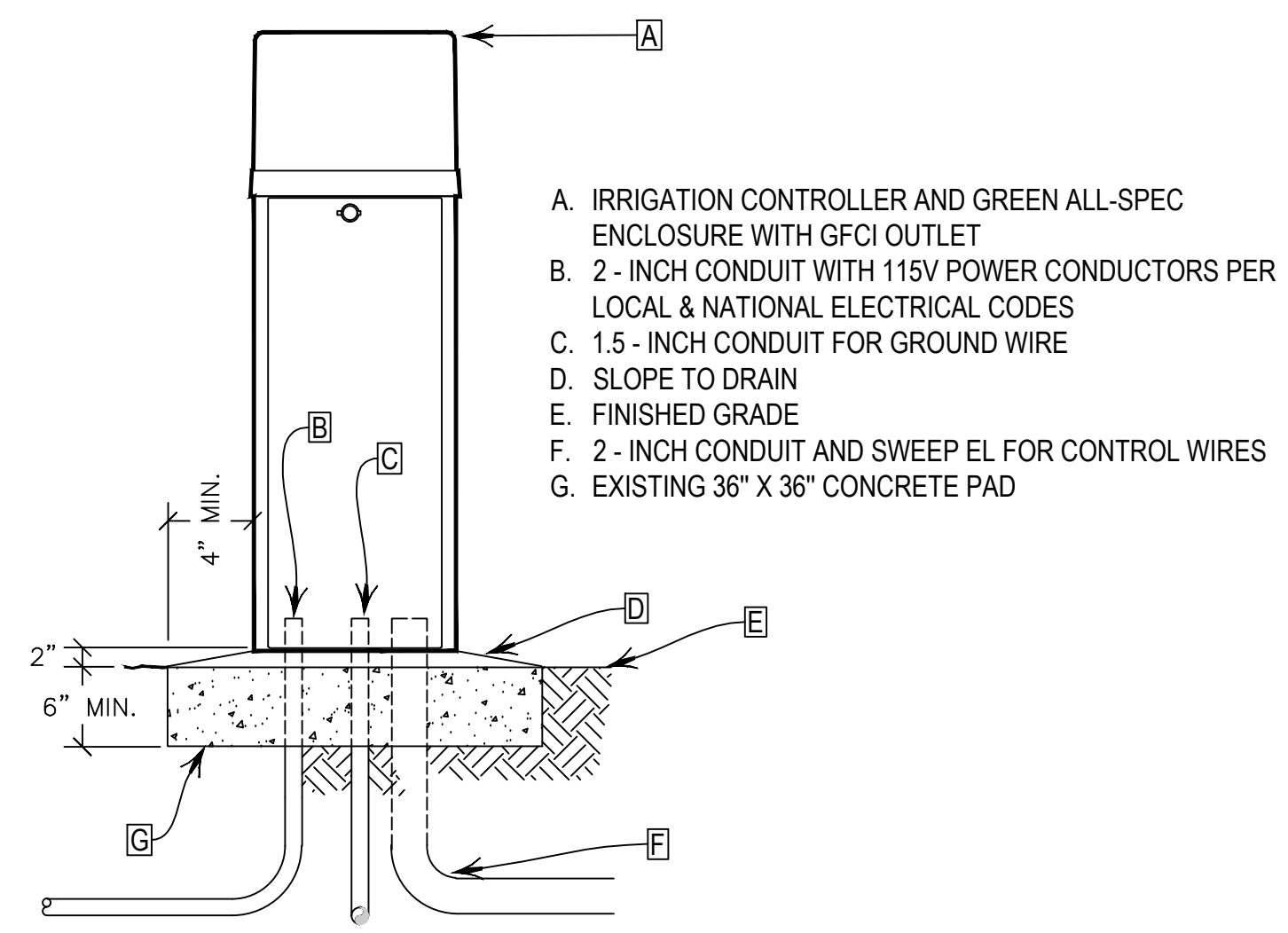
SHEET NO.	IR3.2
PAGE	62 OF 65



3 GROUNDING DETAIL
N.T.S.

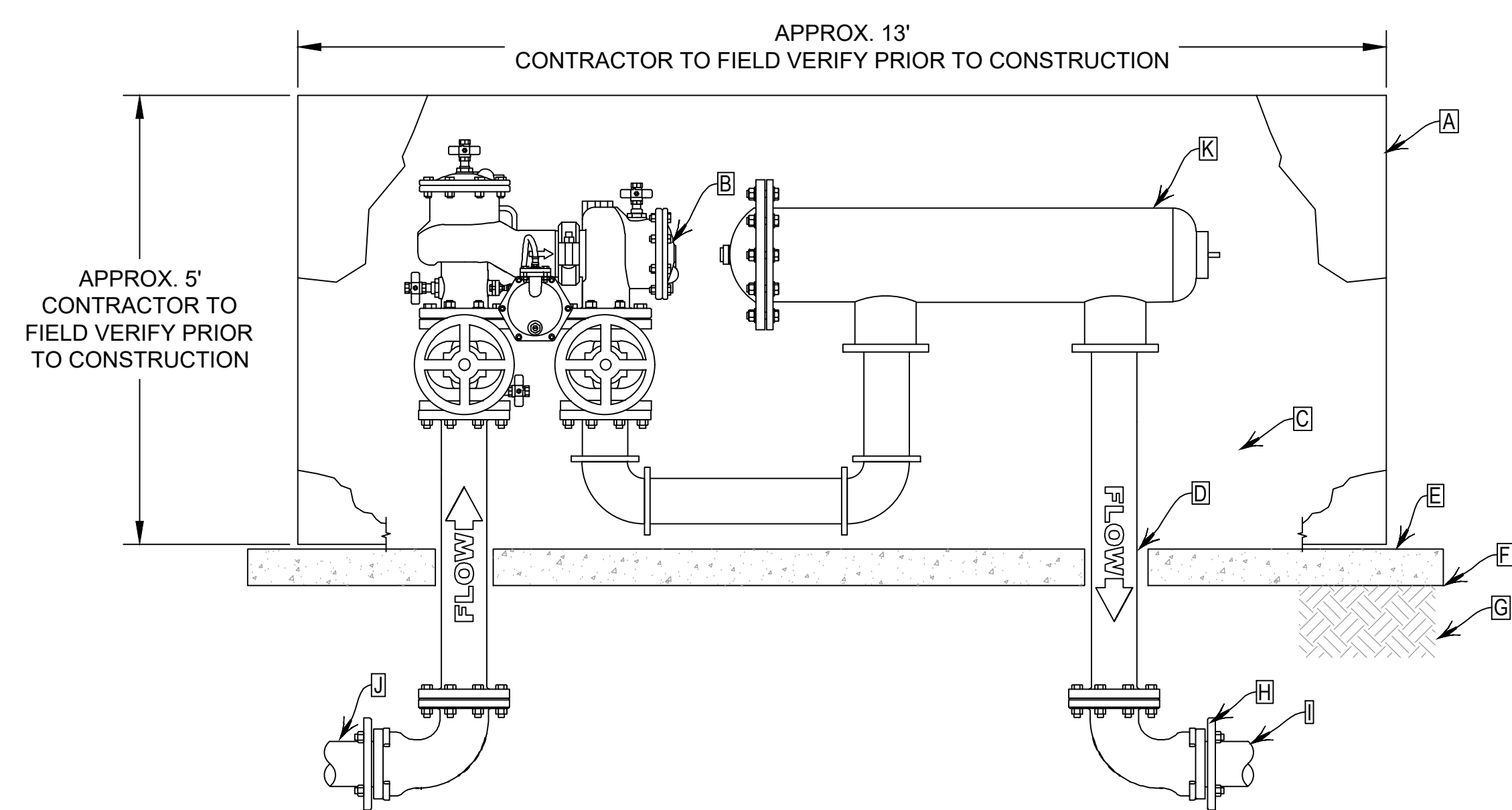


2 DECODER CABLE FUSE DEVICE
N.T.S.



- NOTES:
1. IN ACCORDANCE WITH AMERICAN SOCIETY OF IRRIGATION CONSULTANTS GUIDELINE 100-2002 "FOR EARTH GROUNDING ELECTRONICS EQUIPMENT IN IRRIGATION SYSTEMS", SECTION 12 PARAGRAPH 1: "ELECTRONIC EQUIPMENT AND WIRES/CABLES SHALL BE INSTALLED OUTSIDE OF THE SPHERE OF INFLUENCE OF THE GROUNDING GRID. THIS IS NECESSARY TO AVOID RE-INJECTING THE DISCHARGED LIGHTNING ENERGY INTO THE EQUIPMENT AND THE UNDERGROUND WIRES AND CABLES."
 2. SEAL OPENING IN TOP OF CONDUITS WITH EXPANDING FOAM AFTER WIRE INSTALLATION.

1 CONTROLLER ASSEMBLY
N.T.S.

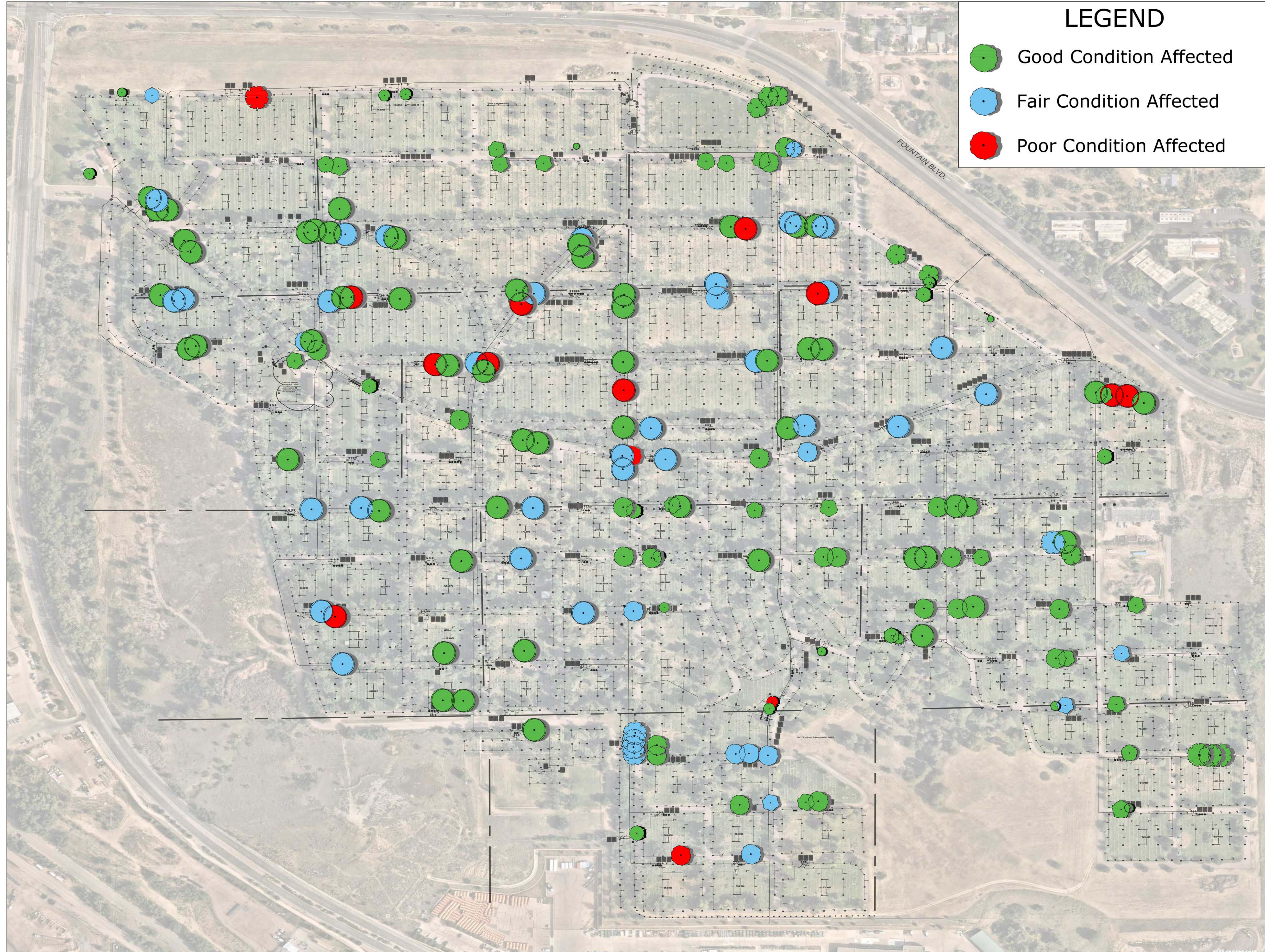


- NOTES:
1. EXTEND CONCRETE BASE MINIMUM 6\"/>




4 BACKFLOW PREVENTION ASSEMBLY
N.T.S.

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\\aquae\engineering\inc\evergreen\cemetery\Drawings\GIS\evergreen tree points.dwg (Tree Points) 7/26/2012 9:42:14 AM bwilliams



LEGEND

-  Good Condition Affected
-  Fair Condition Affected
-  Poor Condition Affected



N.E.S. Inc.
619 N. Cascade Avenue, Suite 200
Colorado Springs, CO 80903
Tel. 719.471.0073
Fax 719.471.0267
www.nescolorado.com
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PLANNER / LANDSCAPE ARCHITECT

IN ASSOCIATION WITH

EVERGREEN CEMETERY

IRRIGATION DESIGN & CONSTRUCTION MANAGEMENT

1005 HANCOCK EXPY
COLORADO SPRINGS, CO
80903

PROJECT INFO
DATE: 07.26.23
PROJECT MGR: C. LIEBER
PREPARED BY: B. WILLIAMS

STAMP

SITE TREE INVENTORY & ANALYSIS

ISSUE INFO

DATE:	BY:	DESCRIPTION:

ISSUE / REVISION

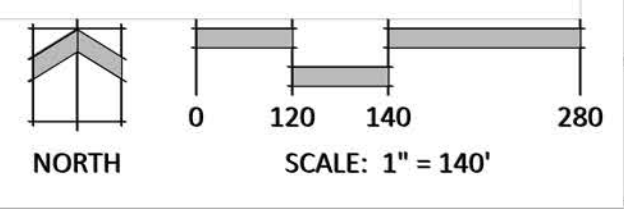
TREE INVENTORY

SHEET TITLE

S1














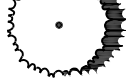


1 OF 2

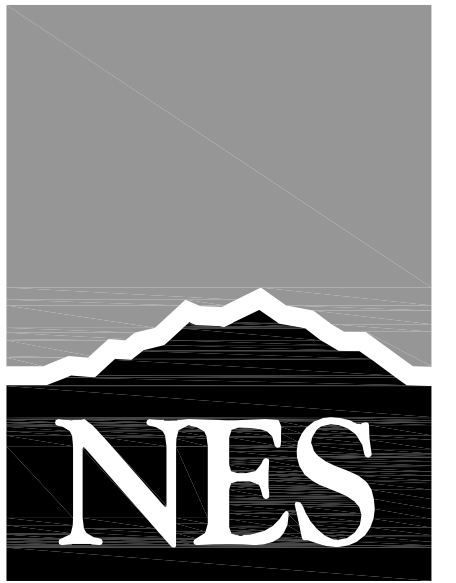
SHEET NUMBER



PLAN FILE #

TREES AFFECTED

<u>DECIDUOUS TREES</u>		<u>QTY</u>	<u>BOTANICAL / COMMON NAME</u>	<u>HEIGHT</u>	<u>WIDTH</u>
	As	29	Acer saccharum/ Silver Maple	65'	25'
	As2	3	Acer saccharum/ Sugar Maple	70'	50'
	Ct	1	Celtis tetrandra / Hackberry	100`	50`
	Fg	93	Fraxinus pennsylvanica / Green Ash	60`	30`
	Ma	1	Malus angustifolia/ Crabapple	35'	15'
	Ma2	1	Morus alba/ White Mulberry	40'	30'
	Po	2	Prunus spp. / Flowering Deciduous Tree	35`	15`
	Qa	7	Quercus alba/ White Oak	60'	60'
	Qr	7	Quercus rubra / Red Oak	60`	50`
	Ta	6	Tilia americana/ American Linden	60'	50'
	Ua	13	Ulmus americana/ American Elm	40'	50'
<u>EVERGREEN TREES</u>		<u>QTY</u>	<u>BOTANICAL / COMMON NAME</u>	<u>HEIGHT</u>	<u>WIDTH</u>
	Js	9	Juniperus scopulorum / Rocky Mountain Juniper	45`	25`
	Pg	7	Picea pungens 'Glauca' / Blue Colorado Spruce	70`	35`
	Pr	4	Pinus resinosa/ Red Pine	70'	30'
	Ps	1	Pinus strobus / White Pine	80`	40`
	Tp	1	Thuja plicata / Western Red Cedar	80`	55`



N.E.S. Inc.
619 N. Cascade Avenue, Suite 200
Colorado Springs, CO 80903
Tel. 719.471.0073
Fax 719.471.0267
www.nescolorado.com
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EVERGREEN CEMETERY

IRRIGATION DESIGN & CONSTRUCTION MANAGEMENT

1005 HANCOCK EXPY.
COLORADO SPRINGS, CO 80903

DATE: 07.26.23
PROJECT MGR: C. LIEBER
PREPARED BY: B. WILLIAMS

SITE TREE INVENTORY & ANALYSIS

DATE:	BY:	DESCRIPTION:

TREE INVENTORY

S2

2 OF 2

Aqua Engineering Inc.
Evergreen Cemetery Irrigation Plan
Existing Trees Inventory and Analysis

Affected tree species and quantity on site:

1. (29) Silver Maple: *Acer saccharum*
2. (3) Sugar Maple: *Acer saccharum*
3. (1) Hackberry: *Celtis tetrandra*
4. (93) Green Ash: *Fraxinus pennsylvanica*
5. (1) Crabapple: *Malus angustifolia*
6. (1) White Mulberry: *Morus alba*
7. (2) Flowering Deciduous Tree: *Prunus* spp.
8. (7) White Oak: *Quercus alba*
9. (7) Red Oak: *Quercus rubra*
10. (6) American Linden: *Tilia americana*
11. (13) American Elm: *Ulmus americana*
12. (9) Rocky Mountain Juniper: *Juniperus scopulorum*
13. (7) Colorado Blue Spruce: *Picea pungens* 'Glauca'
14. (4) Red Pine: *Pinus resinosa*
15. (1) White Pine: *Pinus strobus*
16. (1) Western Red Cedar: *Thuja plicata*

185 total trees affected organized into 3 categories:

- **Good Condition Affected**
 - 126 trees of mixed species
 - Trees of good condition and high value measured within 30' of valve boxes that will be affected by close proximity to irrigation valve boxes
 - Trees' critical root zones may be damaged from trenching or irrigation lines may be affected by root growth
 - It is recommended to save these trees to either to move valve boxes or use boring method for new irrigation installation instead of trenching
- **Fair Condition Affected**
 - 47 trees of mixed species
 - Trees of fair condition and low value measured within 30' of valve boxes that will be affected by close proximity to irrigation valve boxes
 - It is recommended to either remove these trees and keep valve box placements or move valve boxes to save trees
- **Poor Condition Affected**
 - 14 trees of mixed species
 - Trees of poor condition and low value measured within 30' of valve boxes that will be affected by close proximity to irrigation valve boxes
 - It is recommended that these trees be removed for ease of new valve installation and overall performance