



# College Station, TX

## Meeting Agenda Design Review Board

1101 Texas Ave, College Station, TX 77840

Internet: [www.microsoft.com/microsoft-teams/join-a-meeting](http://www.microsoft.com/microsoft-teams/join-a-meeting)

Meeting ID: 251 602 874 091 8 | Passcode: tk2Ky6Qz

Phone: +1 979-431-4880 | Phone Conference: 620 089 875#

The City Council may or may not attend this meeting.

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December 5, 2025

11:00 AM

City Hall 1938 Executive  
Conference Room

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**Notice is hereby given that a quorum of the meeting body will be present in the physical location stated above where citizens may also attend in order to view a member(s) participating by videoconference call as allowed by 551.127, Texas Government Code. The City uses a third-party vendor to host the virtual portion of the meeting; if virtual access is unavailable, meeting access and participation will be in-person only.**

**1. Call meeting to order and consider absence requests.**

**2. Hear Visitors.**

At this time, the Chairperson will open the floor to citizens wishing to address issues not already scheduled on today's agenda. Each citizen's presentation will be limited to three minutes in order to allow adequate time for the completion of the agenda items. Comments will be received and city staff may be asked to look into the matter, or the matter may be placed on a future agenda for discussion. A recording may be made of the meeting; please give your name and address for the record.

**3. Agenda Items.**

**3.1. Consideration, discussion, and possible action to approve meeting minutes.**

**Attachments:** 1. July 11, 2025

**3.2. Presentation, discussion, and possible action to consider an appeal to the landscape buffer standards in the Unified Development Ordinance Section 6.4.AB. "Specific Use Standards" and Section 7.7.F. "Buffer Requirements" for 11720 Old Wellborn Road, which is zoned R Rural. Case #AWV2025-000034**

**Sponsors:** Jeff Howell

**Attachments:**

1. Staff Report
2. Applicants Supporting Information
3. Landscape Buffer Appeal Exhibit (Landscape Plans)
4. Landscape Buffer Appeal Exhibit (Buffer)
5. Site Plan (in process)

**4. Discussion and possible action on future agenda items.**

A member may inquire about a subject for which notice has not been given. A statement of specific factual information or the recitation of existing policy may be given. Any deliberation shall be limited to a proposal to place the subject on an agenda for a subsequent meeting.

**5. Adjourn.**

Adjournment into Executive Session may occur in order to consider any item listed on the agenda if a matter is raised that is appropriate for Executive Session discussion.

I certify that the above Notice of Meeting was posted on the website and at College Station City Hall, 1101 Texas Avenue, College Station, Texas, on November 25, 2025 at 5:00 p.m.



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City Secretary

This building is wheelchair accessible. Persons with disabilities who plan to attend this meeting and who may need accommodations, auxiliary aids, or services such as interpreters, readers, or large print are asked to contact the City Secretary's Office at (979) 764-3541, TDD at 1-800-735-2989, or email [adaassistance@cstx.gov](mailto:adaassistance@cstx.gov) at least two business days prior to the meeting so that appropriate arrangements can be made. If the City does not receive notification at least two business days prior to the meeting, the City will make a reasonable attempt to provide the necessary accommodations.

**Penal Code § 30.07. Trespass by License Holder with an Openly Carried Handgun.**

"Pursuant to Section 30.07, Penal Code (Trespass by License Holder with an Openly Carried Handgun) A Person Licensed under Subchapter H, Chapter 411, Government Code (Handgun Licensing Law), may not enter this Property with a Handgun that is Carried Openly."

**Codigo Penal § 30.07. Traspasar Portando Armas de Mano al Aire Libre con Licencia.**

"Conforme a la Seccion 30.07 del codigo penal (traspasar portando armas de mano al aire libre con licencia), personas con licencia bajo del Sub-Capitulo H, Capitulo 411, Codigo de Gobierno (Ley de licencias de arma de mano), no deben entrar a esta propiedad portando arma de mano al aire libre."



**Minutes  
Design Review Board  
July 11, 2025  
City Hall 1938 Executive Conference Room**

**Board Members Present:** Chairperson Jason Cornelius, Board Members Dr. Keith Sylvester, Nicole Gallucci, Barry Ely, Ivan Rustyn and Andrew Arizpe

**Board Members Absent:** Board Member Ray Holiday

**Staff Present:** Director of Planning and Development Services Anthony Armstrong, Assistant Director of Planning and Development Services Molly Hitchcock, Land Development Review Administrator Robin Macias, Senior Planner Jeff Howell, and Staff Assistant II Tiffany Romero

**1. Call to order**

Chairperson Jason Cornelius called the meeting to order at 11:33 a.m.

**2. Hear Visitors**

No visitors spoke.

**3. Agenda Items**

**3.1 Consideration, discussion, and possible action to approve meeting minutes.**

- July 14, 2023

**Board Member Rustyn motioned to approve the minutes. Board Member Sylvester seconded the motion, which passed (6-0).**

**3.2 Presentation, discussion, and possible action to consider an appeal to the landscape buffer standards in the Unified Development Ordinance Section 6.4.AB. “Specific Use Standards” for 111 Cooner Street, which is zoned GC General Commercial and R-4 Multi-Family. Case #AWV2025-000028**

Senior Planner Howell presented the request explaining the buffer requirements from UDO Section 7.7. He stated the applicant is requesting to reduce the required 20-foot wide landscape buffer to 15 feet wide so BTU can expand existing utilities. The applicant is proposing to install an 8-foot tall wall along the project boundary and utilize existing trees to meet the buffer planting requirements. He mentioned staff is recommending denial of the appeal request. BTU stated it is not possible to meet the required maintenance and operational electrical safety clearances with the 20-foot buffer requirement. However,

Senior Planner Howel stated that the applicant indicated that the project could be redesigned to provide the required buffer. He also stated that the buffer serves not only as a visual separation but also as a means to mitigate the negative impacts of more intense land uses. This location is planning to expand and double in size.

Board Member Gallucci asked for images of where the trees are being used for the buffer. Senior Planner Howell showed a visual of the location. There was general discussion amongst the board.

Board Member Arizpe asked if the Design Review Board had granted buffers variances before, and if it is five feet, does it really make a difference. Senior Planner Howell stated that the Board granted a variance in 2019 for landscaping and streetscaping for the existing BTU site. There was discussion amongst the board.

Board Member Sylvester asked what were the general safety concerns of the neighborhood. Director Armstrong stated that the physical separation is a safety measure.

Spenser Ferguson and Sam Kramer with Burns & McDonnell presented additional information on the item stating that the Shady Lane Substation was constructed in the early 1960's and that upgrades and expansion happened in 1980's. Mike McMillan from BTU was available for questions. The applicant stated that the purpose of the project is updating the substation, which is necessary to improve overall reliability and personnel safety with an improved visual impact to the surrounding area. He also indicated that aging and outdated equipment need upgrading and that there is limited capacity for load growth. The applicant also stated that they need to keep already existing infrastructure energized while in construction so there is limited space for construction. There was general discussion amongst the Board.

Chairperson Cornelius stated he would entertain a motion to approve the appeal with conditions that no other development occur other than pavement within 25 feet of the property line, with the wall being no less than 15 feet to the property line. He continued stating that the wall needs to be a version or equivalent to durable precast with a minimum height of 8 feet. He concluded stating that the alleyway needs to be maintained by BTU, seeded, and fenced off with an accessible gate per structural plans.

**Board Member Arizpe motioned to approve the waiver as presented by Chairperson Cornelius, Board Member Rustyn seconded the motion, which passed (6-0).**

#### **4. Possible action and discussion on future agenda items.**

There were no items presented.

#### **5. Adjourn**

The meeting was adjourned at 12:57 p.m.

**APPROVED:**

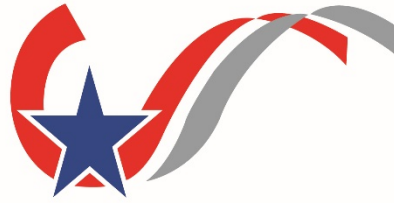
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**Chairperson, Jason Cornelius**

**ATTEST:**

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**Tiffany Romero, Board Secretary**



CITY OF COLLEGE STATION  
*Home of Texas A&M University®*

**DESIGN REVIEW BOARD**

**Appeal to Landscape  
Buffer Standards  
for**

**BTU Holleman Substation  
AWV2025-000034**

**REQUEST:** A waiver to the landscape buffer standards in UDO Section 6.4.AB. “Specific Use Standards” in order to reduce the landscape buffer width and UDO Section 7.7.F. “Buffer Requirements” in order to reduce the plantings.

**SCALE:** 5.009 acres for the substation  
Approximately 1,363 linear feet required to be buffered

**LOCATION:** 11720 Old Wellborn Road

**ZONING DISTRICT:** R Rural

**APPLICANT:** CDS Muery

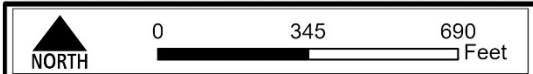
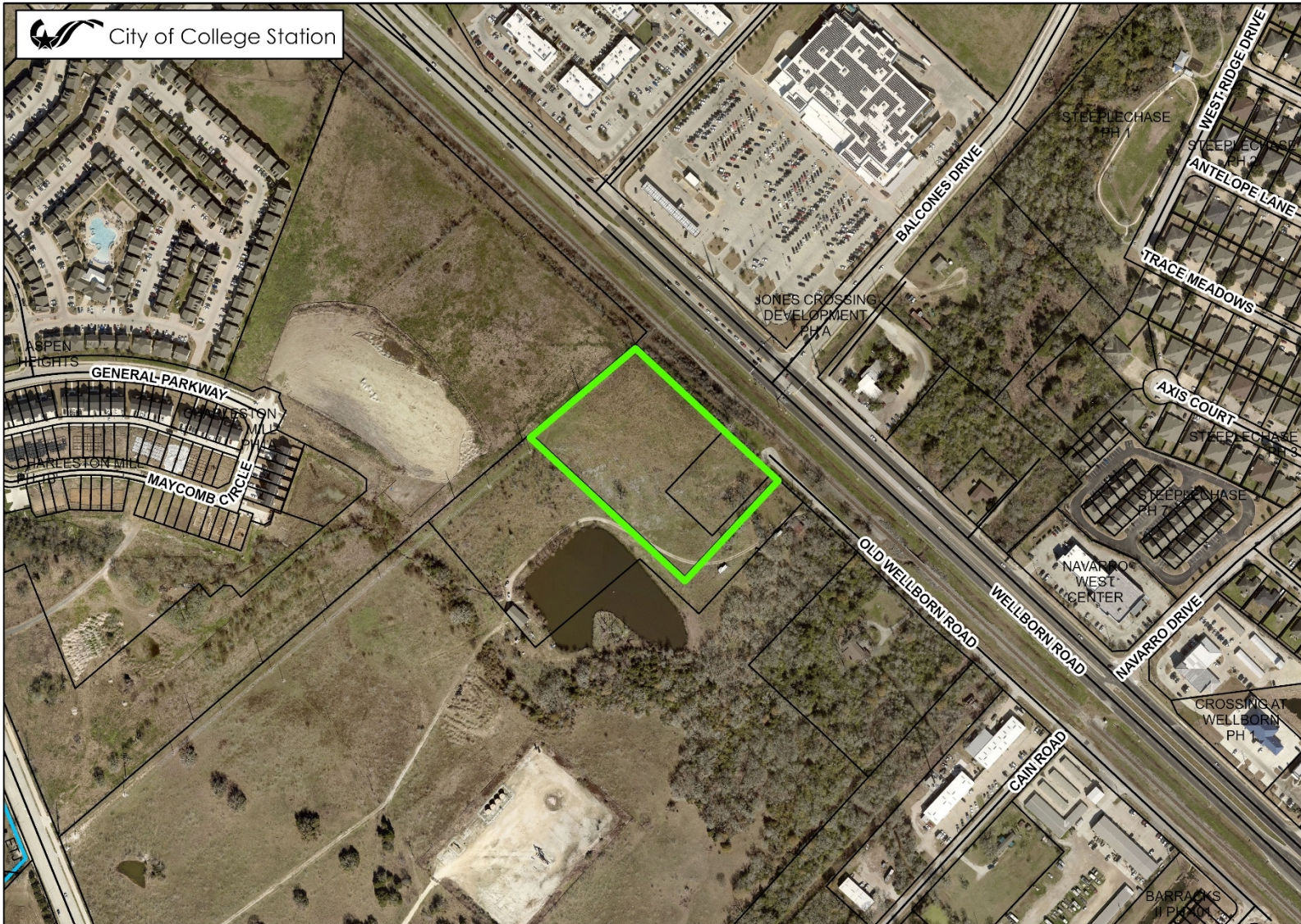
**PROJECT MANAGER:** Jeff Howell, Senior Planner  
jhowell@cstx.gov

**RECOMMENDATION:** Staff recommends denial of waiver request.

**SUMMARY:** The applicant is requesting to modify the requirement of a 20-foot wide landscape buffer and reduce it to a 15-foot wide buffer along the western and northern property boundary, as well as a reduction to 10’ for the southern boundary for the BTU Wellborn Substation. The applicant is also requesting to modify the planting requirements to not provide canopy trees within the buffer area. While the property has been subdivided and is currently vacant, there is additional developable area for the development to be redesigned and provide the required buffer and plantings. The applicant states the substation electrical spacing and clearance necessary to meet power requirements for the new substation cannot be met with current buffer requirements. The applicant is proposing to install an 8’ high masonry wall, as opposed to the 6’ fence required, and proposes only non-canopy trees to partially meet the UDO planting requirement within the buffer.

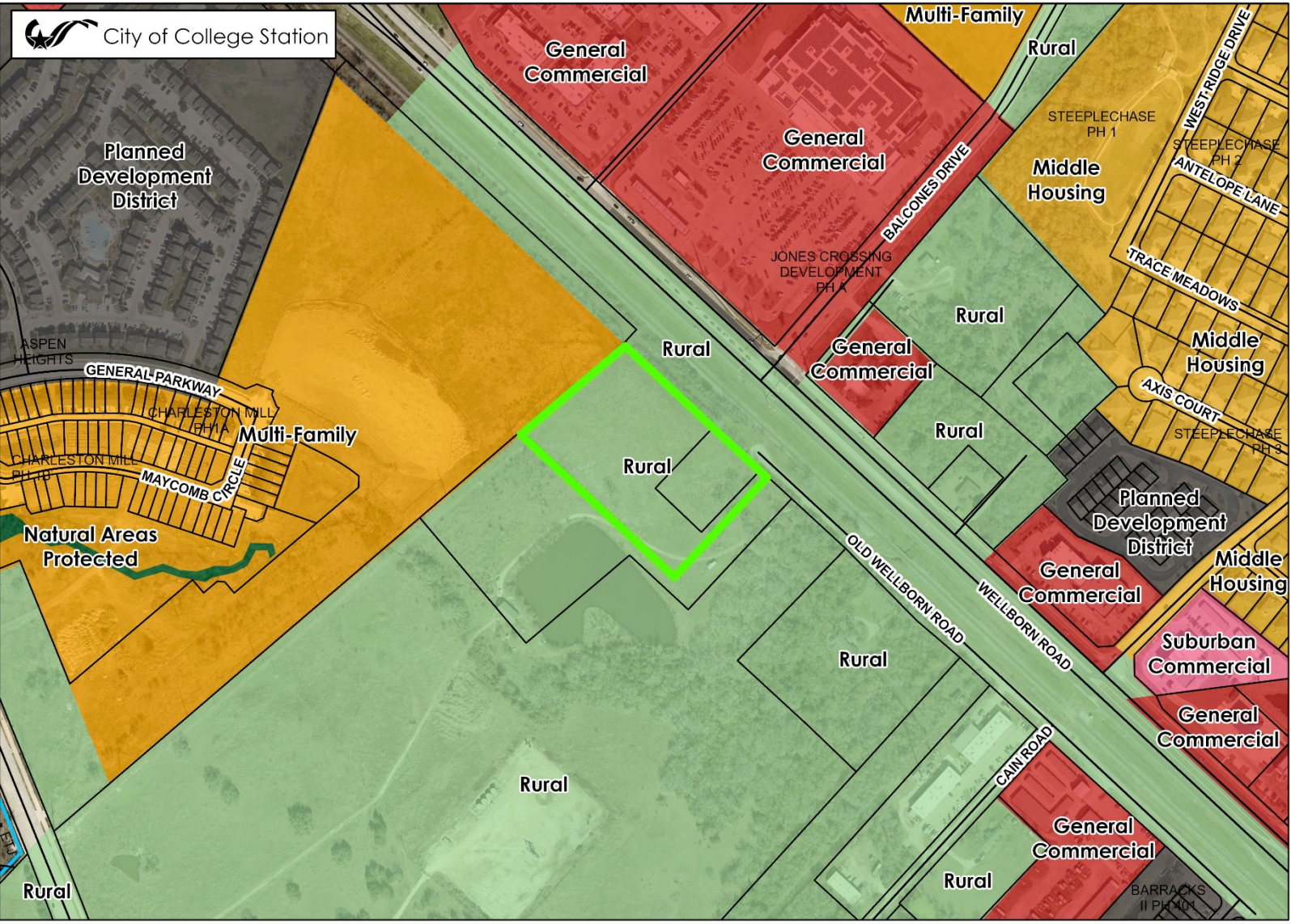


City of College Station



**BTU HOLLEMAN SUBSTATION  
LANDSCAPE BUFFER REDUCTION**

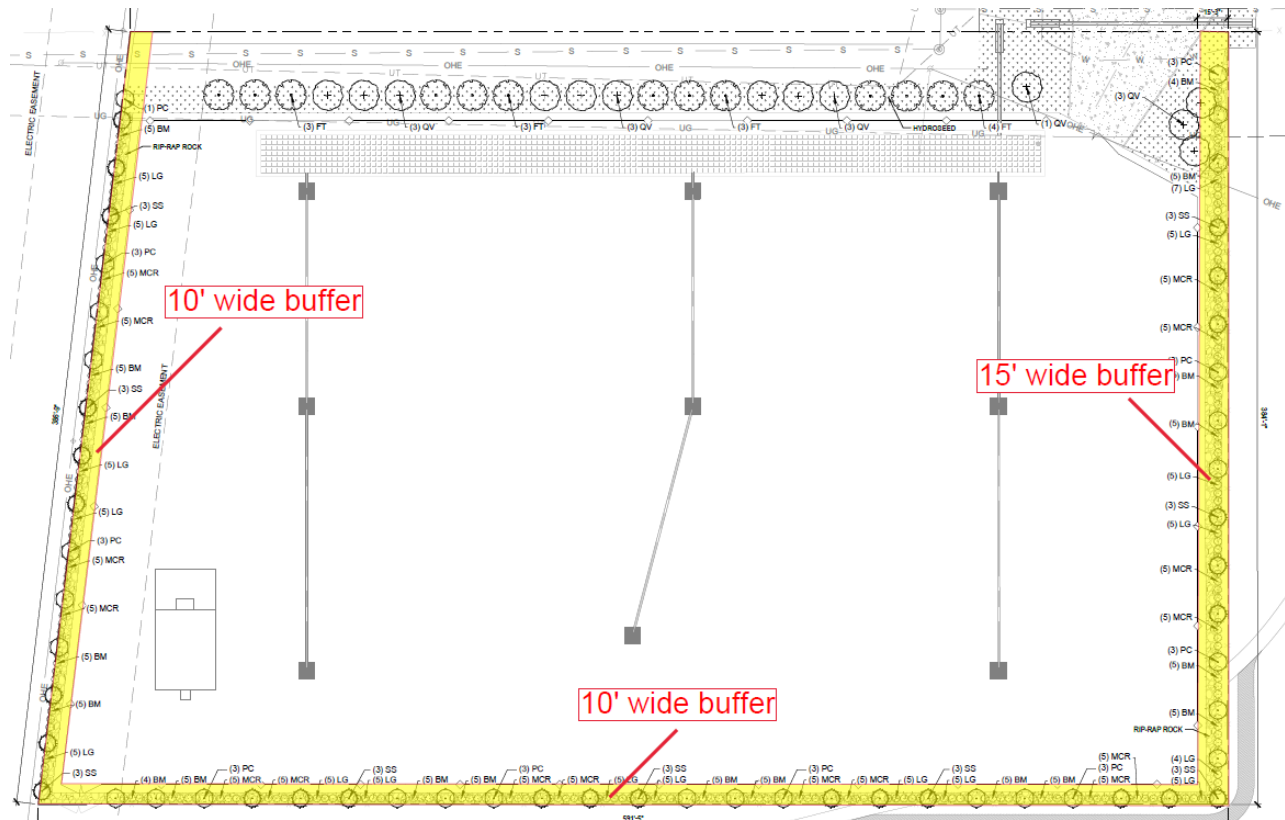
Case: APPEALS WAIVERS VARIANCES  
AWV2025-000034



**BTU HOLLEMAN SUBSTATION  
 LANDSCAPE BUFFER REDUCTION**

Case: APPEALS WAIVERS VARIANCES  
 AWW2025-000034

**BACKGROUND:** The applicant is presently site planning for the proposed BTU Wellborn Substation. The surrounding property is zoned MF Multi-Family and R Rural. The property is also adjacent to Old Wellborn Road and Union Pacific Railroad towards the east side of the property. The applicant is requesting the Board to waive the 20-foot landscape buffer requirement and instead allow for the landscape buffer to be to 15-foot wide on two sides of the property and 10-foot wide on the other. The applicant is also requesting the Board to waive the planting requirement which includes both canopy and non-canopy trees. The applicant is proposing to install an 8-foot high masonry wall along the project boundary and provide non-canopy trees within the buffer yard to meet the planting requirements per Section 7.7.F. "Minimum Buffer Standards" of the UDO. The 20' buffer is required because the adjacent property is being used as a townhome development, while the other side is zoned R Rural with a house (single-family residential). The applicant is requesting the reduction to the landscape buffer width as they have stated it not be possible for BTU to meet their required maintenance and operational electrical equipment safety clearances.



**Proposed Buffer Widths**



**BOARD AUTHORITY:** UDO Section 7.7.H.3. "Appeals" of the UDO states that, "The Design Review Board may authorize on appeal alternative buffer standards for a specific property or a waiver to this Section when such standards or variance will not be contrary to the public interest where, owing to unique and special conditions not normally found in like areas, strict enforcement of the provisions of the ordinance by the Administrator would result in unnecessary hardship, and so that the spirit of this Section shall be observed and substantial justice done."

**STAFF RECOMMENDATION:** Staff recommends denial of this request. Requiring a larger buffer between the utility and the adjacent residential development would not negatively affect this development. Based on the proposal, while the substation is able to be developed, it could be redesigned in order to provide the required area and plantings between these two uses. The purpose of the buffer is to not only provide a visual separation, but is also to help mitigate any negative impacts of adjacent land uses on existing or developing properties that are more intense. The applicant has proposed the buffer to be reduced to 15-feet and 10-feet, proposed to add a wall, and provide non-canopy trees and shrubs thus creating a visual barrier between the two uses. The non-canopy trees within the buffer exceed the number of plantings required by Section 7.7.F., however the required number of canopy trees are not provided. The reduced buffer may be injurious to the interest of adjacent landowners as the substation is proposed. Utilities are identified in the Specific Use Standards as needing to provide a 20' buffer and reducing the physical distance and number of plantings between the existing residential use and the utility substation does not meet the intent of the buffer section of the UDO. The applicant states a hardship exists as the substation electrical spacing and clearance necessary to meet power requirements for the new substation cannot be met with current buffer requirements.

**SUPPORTING MATERIALS:**

- 1. Applicant's Supporting Information
- 2. Zoning Map
- 3. Landscape Buffer Appeal Exhibit
- 4. Site Plan (in process)



# APPEAL/WAIVER APPLICATION SUPPORTING INFORMATION

AWV2025-000034

**Name of Project:** BTU HOLLEMAN SUBSTATION (AWV2025-000034)

**Address:** 11720 OLD WELLBORN RD

**Legal Description:** A000701, CRAWFORD BURNETT (ICL), TRACT 33.2, 1. ACRES

**Applicant:** CDS MUERY

**Property Owner:** CITY OF BRYAN TEXAS

**Current Zoning:**

Rural (R)

**Applicable ordinance section being appealed/seeking waiver from:**

Article Section 6.4.AB / Article Section 7.7

**The following specific alternative to, or waiver from, the ordinance is requested:**

- a. For the buffer yard and 8' masonry wall along Plan West and Plan South to be 10' from the property line and for the buffer yard and 8' masonry wall along Plan East to be 15' from the property line.
- b. To only provide the required non-canopy tree buffer plantings and not the required canopy trees. Permanent irrigation to be provided for all buffer plantings.

**The unnecessary hardship(s) involved by meeting the provisions of the ordinance is/are:**

The substation electrical spacing and clearance necessary to meet power requirements for the new substation cannot be met with current buffer requirements.

**The following alternatives to the requested appeal/waiver are possible:**

Adjust the buffer zone to go only as far as the proposed station fence (10' minimum) and allow for the 50% reduced screening plants.

**Substitution of building materials explanation:**

N/A

**Alternative materials on facade work on an existing building explanation:**

N/A

**Provide additional information for alternate colors or materials for a franchised or chain restaurant:**

N/A

**Facade articulation and/or roofline waiver:**

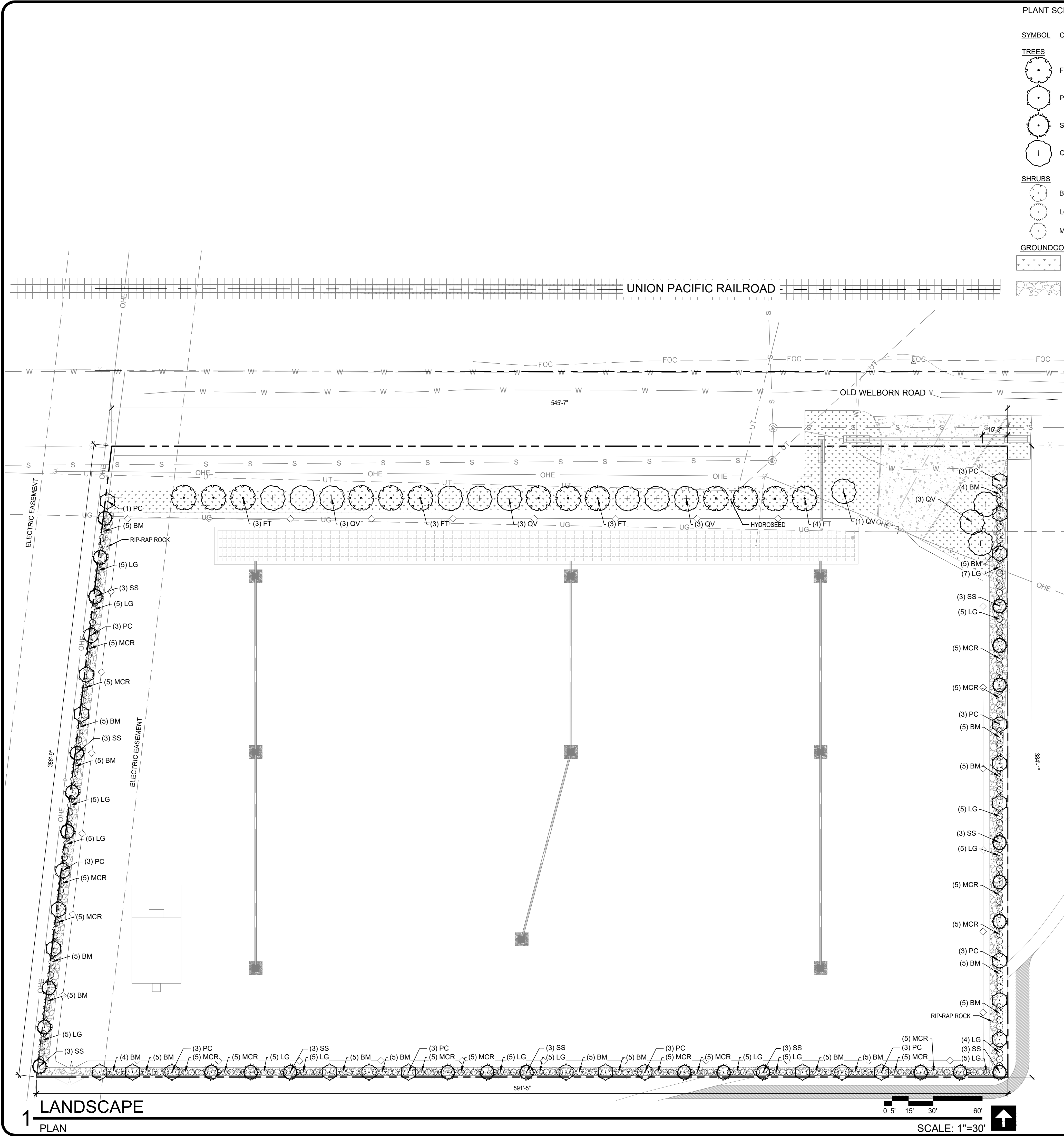
N/A

**Not financially feasible explanation:**

N/A

**Not structurally feasible explanation:**

The substation electrical spacing and clearance necessary to meet power requirements for the new substation cannot be met with current buffer requirements.



### PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
<b>TREES</b>						
	FT	13	FRAXINUS TEXENSIS	TEXAS ASH	3" CAL.	SINGLE TRUNK CONTAINER GROWN; STRAIGHT TRUNK WITH FULL AND UNIFORM CANOPY; PARK GRADE NOT ACCEPTABLE
	PC	28	PRUNUS CAROLINIANA	CAROLINA CHERRY LAUREL	2" CAL.	SINGLE-TRUNK ; STRAIGHT TRUNK WITH FULL AND UNIFORM CANOPY; PARK GRADE NOT ACCEPTABLE
	SS	27	SOPHORA SECUNDFLORA	TEXAS MOUNTAIN LAUREL	2" CAL.	MULTI-TRUNK ; STRAIGHT TRUNK WITH FULL AND UNIFORM CANOPY; PARK GRADE NOT ACCEPTABLE
	QV	13	ULMUS CRASSIFOLIA	CEDAR ELM	3" CAL.	SINGLE TRUNK CONTAINER GROWN; STRAIGHT TRUNK WITH FULL AND UNIFORM CANOPY; PARK GRADE NOT ACCEPTABLE
<b>SHRUBS</b>						
	BM	93	BUXUS MICROPHYLLA JAPONICA	JAPANESE BOXWOOD	15 GAL.	DEEP GREEN, FULL; PLANT 48" O.C.
	LG	86	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD'	GREEN CLOUD TEXAS SAGE	15 GAL.	DEEP SILVER GREEN WITH PURPLE FLOWERS; FULL; PLANT 48" O.C.
	MCR	80	MYRICA CERIFERA	WAX MYRTLE	15 GAL.	DEEP GREEN; FULL; PLANT 48" O.C.
<b>GROUND COVER</b>						
			CYNODON DACTYLON	BERMUDA GRASS W/ FLEXIBLE GROWTH MEDIUM		CONTRACTOR TO FIELD VERIFY ALL SEED QUANTITIES
			4"-8" RIP-RAP ROCK			INSTALL WITH WEED BARRIER.

### LANDSCAPE ORDINANCE

PROPERTY DESCRIPTION: HOLLEMAN SUBSTATION | OLD WELBORN ROAD | ZONE: RURAL

LANDSCAPING POINT CALCULATIONS					
SYMBOL	SIZE	NAME	QUANTITY	POINT VALUE	POINT
	3" CALIPER	TEXAS ASH (CANOPY TREE NATIVE TO TEXAS)	13 (NEW)	225	2,925
	3" CALIPER	CEDAR ELM (CANOPY TREE NATIVE TO TEXAS)	13 (NEW)	225	2,925

STREETSCAPE:  
 15.25 - LINEAR FEET X 6 = 91.5 = 92 POINTS  
 15.25 - LINEAR FEET / 32 = 0.4 = 1 CANOPY TREE

POINTS PER PROJECT AREA:  
 218,339 SQ.FT. OF SITE AREA - 15,286 SQ.FT. OF AREA DEVOTED TO BUFFER = 203,053 SQ.FT.  
 203,053 / 1000 = 203.05  
 203.05 X 30 = 6,091.5 = 6,092 POINTS

STREETSCAPE 92 POINTS + POINTS PER PROJECT AREA 6,092 POINTS = 6,184 POINTS  
 6,184 POINTS X .9 (10% REGISTERED LANDSCAPE ARCHITECT CREDIT) = 5,566 POINTS

**GRAND TOTAL POINTS REQUIRED: 5,566**  
**GRAND TOTAL POINTS PROVIDED: 5,850**

### PROPOSED BUFFER PLANTINGS

SYMBOL	SIZE	NAME	QUANTITY
	2" CAL.	CAROLINA CHERRY LAUREL	28
	2" CAL.	TEXAS MOUNTAIN LAUREL	27
	15 GAL.	JAPANESE BOXWOOD	93
	15 GAL.	GREEN CLOUD TEXAS SAGE	86
	15 GAL.	WAX MYRTLE	80

NOTE: SCREENING SHRUBS SHALL BE OF THE EVERGREEN VARIETY, WITH A MINIMUM OF THREE FEET IN HEIGHT AT PLANTING AND GROW TO A MAXIMUM SIX FEET IN HEIGHT.

NO. \_\_\_\_\_
DATE \_\_\_\_\_
REVISIONS \_\_\_\_\_

BY \_\_\_\_\_
DATE \_\_\_\_\_
REVISIONS \_\_\_\_\_

DESIGN BY: RA
DATE: SEPT 2025
APPROVED BY: JMC

DRAWN BY: RA
CDS JOB NO.: 122338

CHECKED BY: MWP
REVIEWED BY: MWP

PLANTING PLAN
HOLLEMAN SUBSTATION  
SITE DEVELOPMENT PLANS  
COLLEGE STATION, TEXAS

ISSUED FOR PERMIT 11/27/2024

M&S ENGINEERING  
ELECTRICAL/LOW VOLT

10-24-2025

SHEET  
LP 1.1

CSTX PERMIT #:

1 LANDSCAPE PLAN

SCALE: 1"=30'

# GENERAL LANDSCAPE NOTES

## PART 1:

LANDSCAPE CONTRACTOR SHALL ACCEPT THE SITE IN ITS EXISTING CONDITION AND SHALL TIE NEW WORK TO EXISTING CONDITIONS AND CONTROLS (SUCH AS EXISTING GRADES AND WALK ELEVATIONS) AS NECESSARY TO MEET THE INTENT OF THE PLANS.

BEFORE PROCEEDING WITH ANY WORK IN AN AREA, LANDSCAPE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LAYOUTS AND SIZES AND SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL SITE CONDITIONS. IF ANY UTILITIES OR OBSTRUCTIONS ARE DISCOVERED DURING CONTRACT WHICH MAY NOT HAVE BEEN KNOWN DURING DESIGN, CONTRACTOR SHALL STOP WORK AND IMMEDIATELY NOTIFY LANDSCAPE ARCHITECT BEFORE PROCEEDING. LANDSCAPE CONTRACTOR SHALL BE LIABLE FOR ALL MODIFICATIONS AND DAMAGE IF WORK PROCEEDS IN EITHER OF THE ABOVE SITUATIONS WITHOUT NOTIFYING LANDSCAPE ARCHITECT. PRIOR TO ANY EXCAVATION, LANDSCAPE CONTRACTOR SHALL CONTACT APPROPRIATE AUTHORITIES INCLUDING, BUT NOT LIMITED TO, TEXAS ONE CALL SYSTEM AT 1-800-245-4545 TO LOCATE EXISTING UNDERGROUND UTILITIES.

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY DAMAGE TO ANY UTILITIES OR PROPERTY THAT MAY OCCUR IN THE EXECUTION OF HIS CONTRACT WORK. WHEN WORK REQUIRES CROSSING EXISTING WALKS OR CURBS WITH EQUIPMENT, LANDSCAPE CONTRACTOR SHALL PROVIDE APPROVED BRIDGE MATERIAL SUCH AS WOOD PLANKS AND EARTH TO PREVENT DAMAGE TO FINISHED WORK. LANDSCAPE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS THAT MAY BE WORKING ON THE SITE SIMULTANEOUSLY AND SHALL COORDINATE STAGING OF HIS WORK WITH OWNER AND LANDSCAPE ARCHITECT. ALL TRASH AND DEBRIS GENERATED FROM CONTRACT OPERATIONS SHALL BE REMOVED ON A DAILY BASIS. ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND ORDINANCES. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY IN CONJUNCTION WITH HIS CONTRACT WORK.

### REFERENCES

- A) AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) Z60.1 - NURSERY STOCK.
- B) TEXAS STATE DEPARTMENT OF AGRICULTURE (TDA) - NURSERY FLORAL LICENSING PROGRAM.

### 1.1 SUBMITTALS FOR REVIEW

- A) PRODUCT DATE: LIST OF CHEMICALS TO BE USED ON SITE.
- B) SAMPLES:
  1. 1 QUART SAMPLES OF EACH SOIL AMENDMENT WITH ANALYTICAL DATA FROM A RECOGNIZED TESTING LABORATORY SHOWING MANUFACTURER'S GUARANTEED ANALYSIS.
  2. 1 CUBIC FOOT SAMPLES OF PREMIXED BACKFILL MIXES.
- C) TEST RESULTS:
  1. PROVIDE SOIL SAMPLE TEST RESULTS INDICATING PH, FERTILITY LEVELS, AND PERCENTAGES OF SAND, SILT, AND CLAY.
  2. PROVIDE RECOMMENDATIONS FOR SOIL AMENDMENTS AND FERTILIZERS BASED ON SOIL ANALYSIS; FOR CONTRACT PURPOSES, USE MIXTURE SPECIFIED IN THIS SECTION.
- D) NURSERY QUALIFICATIONS: COMPANY SPECIALIZING IN GROWING AND CULTIVATING PLANTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEAR DOCUMENTED EXPERIENCE, AND CERTIFIED BY THE STATE OF TEXAS.
- E) INSTALLER QUALIFICATIONS:
  1. COMPANY SPECIALIZING IN LANDSCAPE INSTALLATION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.
  2. PROVIDE FULL-TIME SUPERINTENDENT ON-SITE DURING INSTALLATION.

### F) PLANT MATERIALS:

- 1. PLANT MATERIALS ARE SUBJECT TO EXAMINATION BY LANDSCAPE ARCHITECT AT PLACE OF GROWTH OR UPON DELIVERY TO PROJECT.
- 2. DELIVERY, STORAGE AND HANDLING
  - A) DELIVER FERTILIZER IN WATERPROOF BAGS SHOWING WEIGHT, GUARANTEED CHEMICAL ANALYSIS, MANUFACTURER AND BRAND NAME, AND APPROVALS OF AUTHORITIES HAVING JURISDICTION.
  - B) DELIVER PLANT MATERIAL WITH IDENTIFICATION TAG SHOWING BOTANICAL NAME AND PLANT SIZE.
  - C) DELIVER PLANT MATERIAL IMMEDIATELY PRIOR TO INSTALLATION; PLANT MATERIALS ON SAME DAY AS DELIVERED. IF PLANTING CANNOT BE ACCOMPLISHED ON SAME DAY AS DELIVERY, PROVIDE ADDITIONAL PROTECTION TO MAINTAIN PLANTS IN HEALTHY AND VIGOROUS CONDITION.
  - D) KEEP PLANT MATERIAL MOIST AND PROTECT FROM DAMAGE AND DESICCATION OF LEAVES UNTIL PLANTING.
  - E) DO NOT HANDLE PLANT MATERIALS BY STEM OR TRUNK.
  - F) KEEP CONTAINERS INTACT UNTIL JUST PRIOR TO PLANTING.

### 1.3 SEQUENCING

- A) INSTALL TREES, SHRUBS, AND LINER STOCK PLANT MATERIALS PRIOR TO INSTALLATION OF LAWNS.
- 1.4 WARRANTY
  - A) FURNISH WRITTEN WARRANTY THAT PLANT MATERIALS WILL BE IN HEALTHY, VIGOROUS, GROWING CONDITION ONE (1) YEAR AFTER FINAL ACCEPTANCE. DAMAGE DUE TO ACTS OF GOD, VANDALISM, OR NEGLIGENCE BY OWNER IS EXCLUDED.
  - B) REPLACE DEAD, UNHEALTHY AND UNSIGHTLY PLANT MATERIALS WITHIN WARRANTY PERIOD, UPON NOTIFICATION BY OWNER OR LANDSCAPE ARCHITECT.
  - C) NOTIFY OWNER AND LANDSCAPE ARCHITECT 30 DAYS PRIOR TO EXPIRATION OF WARRANTY PERIOD AND ARRANGE FINAL ACCEPTANCE INSPECTION BY ALL PARTIES.
    1. REMOVE DEAD, UNHEALTHY, AND UNSIGHTLY PLANT MATERIALS.
    2. REMOVE GUYING AND STAKING MATERIALS.
    3. WARRANT REPLACEMENT PLANTS UNDER SAME PROVISIONS AND FOR SAME TIME PERIOD AS ORIGINAL PLANTS.
- 1.5 MAINTENANCE
  1. MAINTAIN PLANT LIFE IMMEDIATELY AFTER PLACEMENT AND FOR NINETY (90 DAYS) AFTER FINAL ACCEPTANCE...
  2. REPLACE DEAD OR DYING PLANTS WITH PLANTS OF SAME SIZE AND SPECIES SPECIFIED.
  3. REMOVE TRASH, DEBRIS, AND LITTER, WATER, PRUNE, FERTILIZE, WEED, AND MOW. SPOT APPLY HERBICIDES, AND FUNGICIDE ONLY AS REQUIRED.
  4. REMOVE CLIPPINGS AND DEBRIS FROM SITE PROMPTLY.
  5. COORDINATE WITH OPERATION OF IRRIGATION SYSTEM TO ENSURE THAT PLANTS ARE ADEQUATELY WATERED. HAND WATER AREAS NOT RECEIVING ADEQUATE WATER FROM IRRIGATION SYSTEM.
  6. RESET SETTLED PLANTS.
  7. REAPPLY MULCH TO BARE AND THIN AREAS.

### 1.6 MATERIALS

- A) PLANT MATERIALS:
  1. CERTIFIED IN ACCORDANCE WITH TDA REQUIREMENTS.
  2. SPECIES AND SIZE AS INDICATED IN PLANT SCHEDULE. LARGER SIZE MAY BE SUBSTITUTE WITHOUT ADDITIONAL COST TO OWNER, PROVIDED ROOT BALL OR SPREAD INCREASES PROPORTIONATELY.
  3. WHERE MATERIALS ARE PLANTED IN MASSES, PROVIDE PLANTS OF UNIFORM SIZE.
  4. GROWN IN CLIMATIC CONDITIONS SIMILAR TO THOSE AT SITE. FREE FROM DISEASE, INSECT INFESTATIONS, DEFECTS INCLUDING WEAK OR BROKEN LIMBS, CROTCHES, AND DAMAGED TRUNKS, ROOTS OR LEAVES, SUN SCALD, FRESH BARK ABRASIONS, EXCESSIVE ABRASIONS, AND OBJECTIONABLE DISFIGUREMENTS.
  5. EXHIBIT NORMAL GROWTH HABITS, VIGOROUS, HEALTHY, FULL, WELL-PROPORTIONED, AND SYMMETRICAL.
  6. TREE TRUNKS TO BE STURDY AND EXHIBIT HARDENED SYSTEMS AND VIGOROUS AND FIBROUS ROOT SYSTEMS, NOT ROOT OR POT BOUND.
  7. NOT PRUNED, TRIMMED, OR TOPPED.
  8. CONTAINER-GROWN STOCK: GROWN IN CONTAINERS FROM SEEDING.
- B) TOPSOIL:
  1. USE SITE GENERATED SOIL FROM PLANTING PREPARATIONS, REASONABLY FREE FROM CLAY LUMPS, COARSE SANDS, STONES, ROOTS, FOREIGN MATTER.
  2. IF SUFFICIENT ON-SITE MATERIALS DO NOT EXIST, PROVIDE SIMILAR OFF-SITE TOPSOIL FROM APPROVED LOCAL SOURCE. SUBMIT SAMPLE AND SOURCE FOR APPROVAL PRIOR TO DELIVERY OF ANY SOIL TO SITE.
  3. IN ADDITION TO CONTAINING SUITABLE SOIL PARTICLE SIZE AND DEPTH OF SOIL ZONE, THE SOIL MUST CONTAIN SUFFICIENT ORGANIC MATTER AND NUTRIENTS. TESTING AND CONFIRMATION BY A LANDSCAPE ARCHITECT, OR A TEXAS LICENSED SOIL TESTING FIRM SHALL BE COMPLETED TO ENSURE THE SOILS ARE SUITABLE. IN LIEU OF CONFIRMATION BY A LANDSCAPE ARCHITECT, OR A TEXAS LICENSED SOIL TESTING FIRM, SOIL MAY BE AMENDED WITH COMPOST BY ADDING THREE (3) INCHES OF COMPOST BLENDED INTO EVERY ONE (1) FOOT OF SOIL. FOR COMPLETE SOIL REPLACEMENT, SUCH AS TREE PLANTINGS, AN AMOUNT OF TWENTY-FIVE (25) PERCENT COMPOST MAY BE ADDED TO SEVENTY-FIVE (75) PERCENT NATIVE SOIL.
- C) MULCH:
  1. SHREDDED, COMPOSTED HARDWOOD BARK OF VARYING LENGTH BY DEMALI CORP. PH. 210-661-5180 OR APPROVED SUBSTITUTE, PARTIALLY DECOMPOSED, FREE FROM STICKS, STONES, CLAY, AND GROWTH AND GERMINATION-INHIBITING INGREDIENTS.
- D) SOIL AMENDMENTS:
  1. SOIL SULFUR: AGRICULTURAL GRADE SULFUR CONTAINING MINIMUM 99 PERCENT SULFUR EXPRESSED AS ELEMENTAL.
  2. IRON SULFATE: 20 PERCENT IRON EXPRESSED AS METALLIC IRON DERIVED FROM FERRIC AND FERROUS SULFATE AND 10 PERCENT SULFUR EXPRESSED AS ELEMENTAL, WHEN REQUIRED BY SOIL TESTS.
  3. GYPSUM: AGRICULTURAL GRADE, CONTAINING MINIMUM 98 PERCENT CALCIUM SULFATE, WHEN REQUIRED BY SOIL TEST.
  4. HERBICIDE: PRE-EMERGENT TYPE; SURFLAN OR APPROVED SUBSTITUTE.
  5. FERTILIZER FOR TREES AT PLANTING: PLANT HEALTH CARE GROUP "PHC TREE SAVER" APPLIED AS PER P.H.C.G. DIRECTIONS AND APPLICATION RATES.
  6. FERTILIZER FOR LAWN, PLANT HEALTH CARE GROUP "PHC FOR TURF 15-16" APPLIED AT A RATE OF SEVEN (7) POUNDS PER 1,000 SQUARE FEET.
  7. SOIL INOCULATES FOLLOWING TREE PLANTING: PLANT HEALTH CARE GROUP "PHC INJECTABLE INOCULANT FOR TREES" APPLIED AS PER PHCG MIXING DIRECTIONS AND APPLICATION RATES.
  8. FERTILIZER FOR PLANTER BED MIX: PLANT HEALTH CARE GROUP "HEALTHY START 3-4-3" APPLIED AT A RATE OF 25 POUNDS CUBIC YARD OF PLANT BED MIX.
- H) TURF:
  1. ALL SEED USED SHALL BE HIGH QUALITY, EXTRA FANCY, TREATED LAWN TYPE SEED AT 98% PURITY AND 85% GERMINATION, AND SHALL BE FURNISHED IN SEALED STANDARD CONTAINERS WITH SIGNED COPIES OF A STATEMENT FROM THE VENDOR CERTIFYING THAT EACH CONTAINER OF SEED DELIVERED IS FULLY LABELED IN ACCORDANCE WITH THE TEXAS STATE AGRICULTURE CODE AND IS EQUAL TO OR BETTER THAN THE REQUIREMENT OF THESE SPECIFICATIONS. LAWN SEED TO BE FREE OF WEEDS OR NOXIOUS GRASS SEEDS.
  2. SEED WHICH HAS BECOME WET, MOLDY OR OTHERWISE DAMAGED IN TRANSIT OR STORAGE WILL NOT BE ACCEPTED.
  3. GRASS SEED SCHEDULE:
    - A. BERMUDA GRASS SEED:
      - B. MARCH- OCTOBER SHALL BE SPECIFIED BERMUDA.
      - C. OCTOBER- MARCH SHALL BE ANNUAL RYE GRASS.
    4. "HYDROMULCH" AS MANUFACTURED BY CONWED, OR APPROVAL EQUAL.
    5. THE HYDROMULCH SHALL BE COMPOSED OF WOOD CELLULOSE FIBER AND CONTAIN NO GERMINATION OR GROWTH-INHIBITING FACTORS.
    6. HYDRO-SEEDING ADDITIVE (BINDER): ECOLOGY CONTROL-M BINDER ORGANIC SEEDING ADDITIVE.
    7. SOD: PROVIDE FULL, DARK GREEN, UNIFORM, STRONGLY ROOTED SOD IN 16" X 24" STRIPS FREE FROM WEEDS, UNDESIRABLE GRASSES, DISEASES AND PESTS. SOD SHALL BE CUT FROM THE FIELD NO LONGER THAN 48 HOURS BEFORE PLANTING. ROOTS OF SOD SHALL BE KEPT MOIST.
    8. BRACING: TREE ANCHORS SHALL BE AS PER DETAILS.
    9. TREE PAINT: MORRISON TREE SEAL, CABORT TREE PAINT, OR OTHER PRODUCT APPROVED BY LANDSCAPE ARCHITECT.
    10. PLANTER BED EDGING SHALL BE 3/16" X 4" STEEL EDGING WITH MANUFACTURERS STANDARD GREEN FINISH.
- F) MIXES:
  1. PLANT BED MIX: PLANT BED MIX (BACKFILL MIX) SHALL BE NEW EARTHS 4 WAY MIX AS PRODUCED BY DEMALI CORP. PH. 210-661-5180. DOCUMENTATION OF PURCHASE OF THIS SPECIFIC MIX SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT. IF EQUAL IS PROPOSED, CONTRACTOR SHALL SUBMIT SAMPLE AND COMPLETE ANALYSIS WITH TEST RESULTS AND METHOD OF PRODUCTION FOR EVALUATION AS AN EQUAL SUBSTITUTE.

### PART 2 EXECUTION

- 2.1 PREPARATION: LANDSCAPE CONTRACTOR SHALL RECEIVE THE SITE AT APPROXIMATELY FINISH GRADE LESS ANY SETTLEMENT THAT MAY HAVE OCCURRED SINCE SITE CONSTRUCTION AND BACKFILLING. THIS GRADE SHALL BE RAKED TO REMOVE ALL DEBRIS INCLUDING STICKS, CLODS, AND STONES AND SHALL BE FINE GRADED TO ELIMINATE ALL HUMPS, RUTS, DEPRESSIONS AND ABRUPT CHANGES IN GRADE AND ANY AREA THAT COULD CAUSE WATER TO POND.
  - A) IF VEGETATION IS GROWING IN PLANTING/LAWN AREA, APPLY HERBICIDE AT RATES RECOMMENDED BY MANUFACTURER. ALLOW TO DIE, AND THEN GRUB OUT ROOTS TO MINIMUM 1/2 INCH DEPTH.
  - B) MARK LOCATION OF TREES AND OUTLINES OF PLANTERS BEDS USING COLORED WOOD STAKES OR FLAGS PRIOR TO BEGINNING PLANTING, OBTAIN LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO PROCEEDING.
- 2.2 PLANTING TREES AND SHRUBS
  - A) REMOVE CONTAINERS WITHOUT DAMAGE TO ROOTS.
  - B) REMOVE BOTTOM OF PLANT BOXES PRIOR TO PLACING PLANTS; REMOVE SIDES AFTER PLACEMENT AND PARTIAL BACKFILLING. PREVENT DAMAGE TO ROOTS.
  - C) REMOVE UPPER THIRD OF BURLAP FROM BALLED AND BURLAP TREES AFTER PLACEMENT.
  - D) ALL TREES SHALL BE INSPECTED FOR ROOT-BOUND CONDITIONS PRIOR TO PLANTING. TREES EXHIBITING CIRCLING, GIRDLING, OR EXCESSIVELY COMPACTED ROOTS SHALL BE REJECTED OR CORRECTED BEFORE INSTALLATION. IF ROOTS ARE FOUND TO BE CIRCLING OR BOUND, THEY MUST BE MANUALLY LOOSENED OR CUT TO ENCOURAGE OUTWARD GROWTH. ROOT PRUNING SHALL BE PERFORMED PER ANSI A300 STANDARDS FOR TREE CARE OPERATIONS. THE CONTRACTOR SHALL ENSURE THAT TREES ARE PLANTED WITH ROOTS PROPERLY SPREAD IN A WELL-PREPARED PLANTING HOLE. ANY TREES FAILING TO ESTABLISH DUE TO IMPROPER ROOT CONDITIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- E) PLACE PLANT UPRIGHT AND PLUMB IN CENTER OF HOLE. PULL ANY WEEDS GROWING IN TREE BALL AND EXPOSE ROOT FLARE (THIS WILL BE THE TOP MOST IDENTIFIABLE ROOT). REMOVE ANY GIRDLING ROOTS AND SET PLANT SO THAT ROOT FLARE IS 1" ABOVE FINISH GRADE. ORIENT PLANTS FOR BEST APPEARANCE. BACKFILL THE BOTTOM 1/3 OF THE EXCAVATION WITH SOIL CUT FROM EXCAVATION OF PIT AND THOROUGHLY WATER THIS SOIL TO SETTLE IN. BACKFILL THE REMAINDER OF THE EXCAVATION WITH A 50/50 MIX OF NEW EARTHS 4 WAY MIX AND NATIVE SOIL EXCAVATED FROM THE PIT. PLACE PLANT HEALTH CARE GROUP'S "TREE SAVER" IN BACKFILL AS PER P.H.C.G. DIRECTION AND APPLICATION RATES. LIGHTLY TAMP AND WATER SOIL TO REMOVE ALL AIR POCKETS. FOR PLANTS OUTSIDE OF PLANTING BEDS, CONSTRUCT 3 INCH HIGH WATER CONTAINMENT RING AROUND PLANT. SPREAD MULCH TO MINIMUM 4 INCH DEPTH OVER PLANT BASIN.
- F) ADJUST PLANT HEIGHT IF SETTLEMENT OCCURS AFTER BACKFILL AND STAKE AS DETAILED.
  1. TWO TO THREE WEEKS FOLLOWING PLANTING, INJECT PLANT HEALTH CARE INJECTABLE INOCULANT AROUND ROOT BALL FOLLOWING MANUFACTURER'S DIRECTIONS AND APPLICATION RATES. CONTACT LANDSCAPE ARCHITECT TO OBSERVE THIS OPERATION.
- G) TRIM PLANTS TO REMOVE DEAD AND INJURED BRANCHES ONLY. TREAT CUTS OVER 3/4 INCH DIAMETER WITH TREE PAINT.
- H) BRACE PLANTS OVER 65 GALLONS SIZE IMMEDIATELY AFTER PLANTING:
  1. FOR TREES 2" CAL. AND GREATER PROVIDE STAKING AS DETAILED. POSITION TO PREVENT HAZARDS TO PEDESTRIANS.
  2. DO NOT RESTRICT PLANT MOVEMENT UNDER LIGHT WIND LOADS OR DAMAGE BARK.

### 2.3 PLANTING MASS SHRUBS, GROUNDCOVERS, AND ANNUALS (SEE DETAILS)

- A) EXCAVATE PLANT BED TO DEPTH AS DETAILED ON PLANS.
- B) BACKFILL WITH SPECIFIED 4-WAY MIX AND TILL IN SPECIFIED PLANT HEALTH CARE'S, "HEALTHY START 3-4-3" AT A RATE OF 25 LBS. PER CUBIC YARD OF PLANT BED MIX.
- C) INSTALL METAL EDGINGS TO SEPARATE ALL PLANTER BEDS FROM TURF AND AT LOCATIONS INDICATED ON PLANS.
- D) PLACE PLANTS IN STRAIGHT, EVENLY SPACED ROWS AT SPACING INDICATED ON DRAWINGS, TO UNIFORMLY FILL BEDS. USE TRIANGULAR SPACING METHOD UNLESS OTHERWISE INDICATED.
- E) WATER PLANTS THOROUGHLY IMMEDIATELY AFTER PLANTING. REPAIR SETTLED AREAS.
- F) ADJUST FINAL GRADES TO 1/2 INCH BELOW ADJACENT PAVING CURBS.
- G) SPREAD MULCH TO MINIMUM 4 INCH DEPTH OVER PLANTING BEDS AS DETAILED.

### 2.4 CLEANING AND ADJUSTING

- A) REMOVE PLANT CONTAINERS, TRASH, RUBBISH, AND EXCESS SOILS FROM SITE DAILY AND AT COMPLETION OF TREE, SHRUBS AND GROUNDCOVER PLANTING.
- B) REPAIR RUTS, HOLES AND SCARS IN GROWING SURFACE.

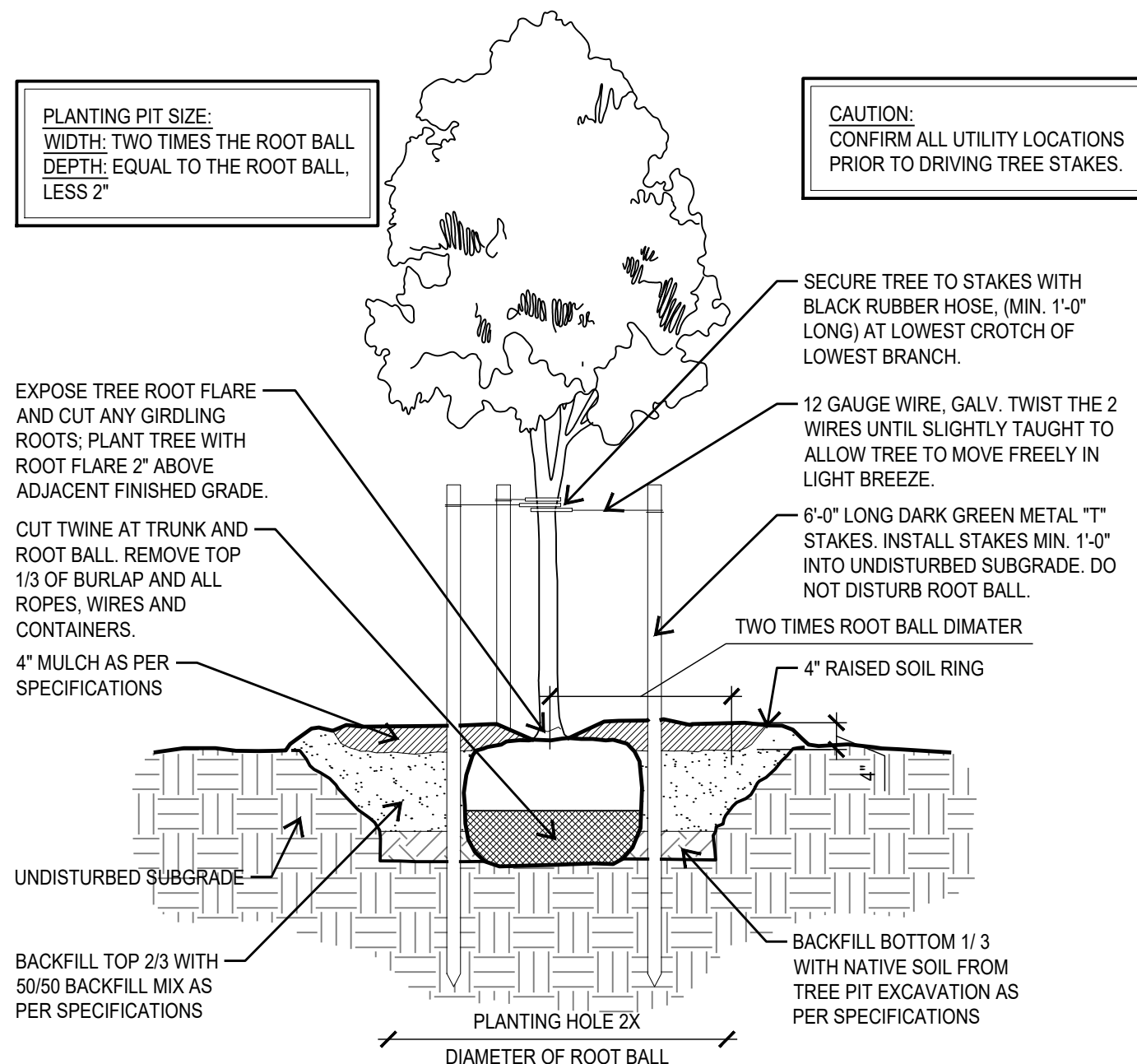
### 2.4 LAWN APPLICATION (AT COMPLETION OF TREE, SHRUB AND GROUNDCOVER PLANTINGS)

- A) COORDINATION:
    1. HYDROMULCH AND SOD AFTER TREE, SHRUB AND GROUNDCOVER INSTALLATION IS COMPLETE.
    2. CONTRACTOR TO COORDINATE WITH IRRIGATION CONTRACTOR TO INSURE FUNCTIONAL IRRIGATION SYSTEM PRIOR TO ANY LAWN INSTALLATION.
  - B) PREPARATION:
    1. PRE-PLANT WEED CONTROL:
      - IF WEEDS EXIST WITHIN PROPOSED LANDSCAPE AREAS AT THE BEGINNING OF WORK, SPRAY WITH A NON SELECTIVE SYSTEMIC CONTACT HERBICIDE, AS RECOMMENDED AND APPLIED BY AN APPROVED LICENSED APPLICATOR. CLEAR AND REMOVE THESE EXISTING WEEDS UPON HERBICIDES COMPLETED ACTION BY GRUBBING OFF ALL PLANTS AT LEAST 1/2"-1" BELOW THE SURFACE OF THE SOIL.
      2. CONTRACTOR TO SCARIFY GROUND SURFACE TO A MINIMUM 2" DEPTH FOR ALL GRASSES AND REMOVE ALL STICKS, TRASH, ROCKS AND OTHER DEBRIS AND DISPOSE OFF SITE.
      3. IF EXISTING SOIL IN AN AREA IS FOUND TO BE CONTAMINATED OR OTHERWISE UNSUITABLE, CONTRACTOR SHALL PROVIDE COST PER CUBIC YARD TO REPLACE WITH SOIL SUITABLE FOR TURF.
      4. CONTRACTOR TO RAKE ENTIRE AREA, LEVELING ANY IMPERFECTIONS IN THE GRADE. LANDSCAPE CONTRACTOR TO ENSURE THAT THERE WILL BE POSITIVE DRAINAGE AND NO PONDING ON SITE. FINISHED GRADE OF LAWN AREAS TO BE 1/2" BELOW TOP OF CURBS, SIDEWALKS AND OTHER PAVEMENTS. REMOVE ANY LARGE (GREATER THAN 1") DIRT CLODS, ROCKS, AND TRASH AND PREPARE A SMOOTH, LEVEL, LOOSE AND COARSE SURFACE. LANDSCAPE ARCHITECT TO APPROVE FINE GRADING PRIOR TO ANY LAWN INSTALLATION. LAWN BED SHALL BE MOIST (BUT NOT MUDDY) TO RECEIVE SEED AND SOD.
    2. HYDROMULCH APPLICATION:
      - A. SEED (REF. SCHEDULE, 1.6 H-3):
        1. BERMUDA (HULLED) - 2 LBS./1,000 S.F.
        2. ANNUAL RYE GRASS - 8 LBS./1,000 S.F.
      - B. WOOD CELLULOSE FIBER MULCH - 60 LBS./1,000 S.F.
      - C. FERTILIZER "PHC FOR TURF" AT A RATE OF SEVEN (7) POUNDS PER 1,000 SQUARE FEET.
      - D. INCORPORATE A TACKIFIER WITH MULCH CAP. DELAY IRRIGATION 8 HOURS TO PERMIT TACKIFIER TO SET.
    3. SEED AREAS WITHIN SEEDING LIMITS INDICATED ON THE PLAN AND AREAS DISTURBED BY CONSTRUCTION OPERATIONS.
    4. PROTECT EXISTING UTILITIES (INCLUDING IRRIGATION SYSTEM), PLANTING, PAVING, FENCING, AND OTHER SITE AMENITIES FROM DAMAGE CAUSED BY HYDROMULCHING OPERATION.
    5. IMMEDIATELY FOLLOWING APPLICATION OF HYDROMULCH, THE CONTRACTOR SHALL WASH EXCESS HYDROMULCHING MATERIAL FROM PREVIOUSLY PLANTED MATERIAL ARCHITECTURAL FEATURES, ETC. CARE SHALL BE EXERCISED TO AVOID WASHING OR ERODING MULCH MATERIALS FROM LAWN AREA.
    6. UPON ESTABLISHMENT OF LAWN, APPLY A POST-EMERGENT HERBICIDE FOR CONTROL OF NUT GRASS AND WEEDS. FERTILIZE AT 45 DAY INTERVALS WITH SPECIFIED PLANT HEALTH GROUP'S FERTILIZER AT A RATE OF SEVEN (7) POUNDS PER 1,000 SQUARE FEET DURING AT 45 DAY INTERVALS DURING THE 90 DAY MAINTENANCE PERIOD.
    7. DURING THE MONTHS OF OCTOBER THROUGH MARCH CONTRACTOR SHALL HYDROSEED ALL LAWN AREAS WITH ANNUAL RYE GRASS. THE CONTRACTOR SHALL RETURN TO THE SITE BETWEEN APRIL 1ST AND MAY 15 TO RE-PREPARE SEED BED AND HYDROMULCH WITH SPECIFIED BERMUDA SEED IN ORDER TO ESTABLISH A PERMANENT TURF COVER IN ALL LAWN AREAS.
- D) SOD INSTALLATION:
  1. INCORPORATE SPECIFIED LAWN FERTILIZER AT SEVEN (7) POUNDS PER 1000 SQUARE FEET OF LAWN AREA FOR SOD.
  2. PRE-EMERGE HERBICIDE APPLICATION: APPLY RECOMMENDED HERBICIDE TO LABEL INSTRUCTIONS IN TWO APPLICATIONS. THE FIRST APPLICATION WILL BE UP TO 10 DAYS PRIOR TO PLANTING. THE SECOND APPLICATION WILL BE 5 DAYS PRIOR TO PLANTING. USE CARE TO AVOID WIND DRIFT OR RUNOFF TO ADJACENT ORNAMENTAL TREE OR SHRUB PLANTINGS.
  3. LAY SOD WITHIN 24 HOURS FROM TIME OF STRIPPING.
  4. LAY SOD TO FORM SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD STRIPS STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. WORK SIFTED SOIL INTO MINOR CRACKS BETWEEN PIECES OF SOD; REMOVE EXCESS SOD TO AVOID SMOTHERING ADJACENT GRASS.
  5. SOD PADS SHALL BE OF FULLEST SIZE POSSIBLE-NO SOD SLIVERS WILL BE PERMITTED.
  6. FINISHED GRADE OF NEW SOD SHALL BE FLUSH WITH ADJACENT LAWN AND PAVEMENT. ENSURE POSITIVE DRAINAGE.
  7. ROLL ENTIRE SODDED AREA WITH SOD ROLLER. WATER SOD THOROUGHLY.
  8. CONTRACTOR SHALL OVERSEED SOD AREAS WITH ANNUAL RYE GRASS IF LAWN INSTALLATION OCCURS BETWEEN APRIL 15 THROUGH APRIL 15 AT 8 LBS., 1,000 S.F.
  9. SHOULD LAWN AREAS BE SEED WITH ANNUAL RYE GRASS THE CONTRACTOR SHALL RETURN TO THE SITE BETWEEN APRIL 15 AND MAY 15 TO RE-PREPARE SEED BED AND SEED WITH BERMUDA.

### 2.5 ACCEPTANCE

- A) PRIOR TO SCHEDULING A SUBSTANTIAL COMPLETION INSPECTION LANDSCAPE CONTRACTOR SHALL THOROUGHLY CLEAN SITE OF ALL DEBRIS AND TRASH AND REPAIR ANY DAMAGE TO FINISH GRADE. WHEN LANDSCAPE WORK IS COMPLETE A SUBSTANTIAL COMPLETION INSPECTION WILL BE HELD. FOLLOWING COMPLETION OF ANY PUNCH LIST ITEMS GENERATED FROM THE SUBSTANTIAL COMPLETION INSPECTION A FINAL INSPECTION WILL BE HELD AND IF FOUND ACCEPTABLE A CERTIFICATE OF FINAL ACCEPTANCE WILL BE ISSUED.
- B) LANDSCAPE CONTRACTOR SHALL CONTINUE MAINTENANCE UNTIL FINAL ACCEPTANCE AT WHICH TIME THE SPECIFIED MAINTENANCE PERIOD WILL BEGIN.

### END OF SPECIFICATIONS



## WATERING SCHEDULE

PRECIPITATION RATE (IN/HR)	WATER DESIRED (IN/WK)	TIME/CYCLE (MIN)	NUMBER OF ZONES	TOTAL TIME MIN.    HRS
TREE BUBBLERS (3.87)	.80	12.0	5	60    1.00
DRIP/EMITTER ZONE (.64)	.80	75.0	3	225    3.75
<b>TOTAL SYSTEM HOURS OF OPERATION PER WEEK:</b>				<b>34.26</b>

NOTE: A TYPICAL SCHEDULE WOULD ALLOW WATERING TO OCCUR TWO TIMES PER WEEK. TOTAL WATERING TIME WOULD BE DIVIDED BY THE NUMBER OF WATERING DAYS. THIS SCHEDULE IS DESIGNED FOR SUMMER WATER USAGE AND ESTABLISHMENT OF NEW PLANTING.

## PRESSURE CALCULATIONS - Zone #7

DESIGN STATISTICS FOR CALCULATIONS	
TOTAL ZONE FLOW:	24.0 g.p.m.
ELECTRIC VALVE SIZE:	1.5"
STATIC PRESSURE LESS 10% (STATIC @ 65 psi):	58.5 p.s.i.
ACCUMULATIVE LOSSES FROM CITY MAIN TO FURTHEST HEAD:	
SPRINKLER HEAD REQUIREMENT:	30.0 p.s.i.
ZONE PIPE/FITTING LOSS:	1.3 p.s.i.
1.5" ELECTRIC VALVE LOSS:	1.8 p.s.i.
ELEVATION NET LOSS: (+ - FT):	n/a
SYSTEM MAINLINE LOSS (2" SCH 40 LOOP):	2.8 p.s.i.
BACKFLOW PREVENTOR LOSS (1"):	4.0 p.s.i.
WATER METER LOSS (1" EXISTING):	3.4 p.s.i.
MASTER ELECTRIC VALVE LOSS (1.5"):	1.5 p.s.i.
TYPE K COPPER SERVICE LOSS:	
<b>TOTAL NET LOSS:</b>	<b>14.8 p.s.i.</b>
DESIGN PRESSURE:	44.8 p.s.i.

NOTE: ACTUAL STATIC WATER PRESSURE WAS UNAVAILABLE AT THE TIME OF IRRIGATION DESIGN. 65 PSI IS USED AS A STANDARD PRESSURE FOR DESIGN. PRESSURE MUST BE CONFIRMED 65 OR GREATER BY IRRIGATION CONTRACTOR BEFORE ANY INSTALLATION. PIPE HAS BEEN SIZE TO INSURE THAT VELOCITY DOES NOT EXCEED 5 FPS. DO NOT CHANGE PIPE SIZE IN THE FIELD WITHOUT CONSULTING SYSTEM DESIGNER.

## IRRIGATION CONSTRUCTION NOTES

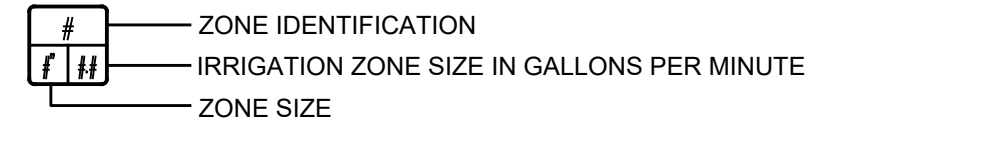
1. IT IS THE IRRIGATION CONTRACTORS SOLE RESPONSIBILITY TO CONFIRM THE ACTUAL ONSITE WATER PRESSURE FROM THE SOURCE. IF WATER PRESSURE IS LESS THAN MANDATED THEN IMMEDIATELY NOTIFY THE OWNERS REPRESENTATIVE. IF ACTUAL SITE STATIC PRESSURE EXCEEDS DESIGN PRESSURE BY 15 P.S.I. IN ANY ZONE, A PRESSURE REDUCING VALVE SHALL BE INSTALLED.
2. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGN WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE. THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. THE IRRIGATION CONTRACTOR IS REQUIRED BY LAW TO NOTIFY TEXAS ONE CALL (800-245-4545) 72 HOURS PRIOR TO ANY EXCAVATION. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THEMSELVES FAMILIAR WITH ALL UNDERGROUND UTILITIES AND PIPES. IRRIGATION CONTRACTORS SHALL TAKE SOLE RESPONSIBILITY FOR ANY COSTS INCURRED DUE TO DAMAGE OF SAID UTILITIES WHETHER OR NOT TEXAS ONE CALL IS NOTIFIED.
4. DUE TO SCALE OF DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC. WHICH MAY BE REQUIRED. IRRIGATION CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS WORK AND PLAN HIS WORK ACCORDINGLY. FURNISHINGS SUCH FITTINGS, ETC AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM, PLANTING, AND ARCHITECTURAL FEATURES. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS AND WITHIN PROPERTY LINES.
5. LATERAL PIPE SHALL BE INSTALLED AT MIN. DEPTH OF 12" WITH MAINLINE PIPE / WIRE TO BE INSTALLED AT A MINIMUM OF 18". NO MACHINE TRENCHING IS TO BE DONE WITHIN DRIPLINE OF TREES. TRENCHING IS TO BE DONE BY HAND OR BY TUNNELING UNDER ROOT SYSTEM BY METHOD APPROVED BY OWNER'S REPRESENTATIVE. PIPING LAYOUT IS DIAGRAMMATIC AND PIPING SHALL BE ROUTED AROUND EXISTING PLANT MATERIAL TO AVOID DAMAGE TO EXISTING PLANTS. DO NOT CUT ANY ROOT OVER 3/4" DIAMETER. ANY CUTS MADE SHALL BE CLEAN AND WITHOUT FRAYED ENDS.
6. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR SLEEVES WHEREVER PIPING OR CONDUIT PASSES, UNDER ALL PAVING, THROUGH WALLS, ETC. ALL SLEEVE LOCATIONS MAY NOT BE SHOWN ON PLAN, COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS, GENERAL CONTRACTOR, AND OTHER SUBCONTRACTORS AS REQUIRED. ALL SLEEVES SHALL BE SCH 40 PVC, SIZED TWICE THE DIAMETER OF PIPE OR COMBINATION OF PIPES ENCLOSED WITHIN THE SLEEVE.
7. ALL PIPE CONNECTIONS SHALL BE PRIMED WITH AN APPROVED COLOR PRIMER BEFORE BEING CHEMICAL WELDED.
8. IT IS THE IRRIGATION CONTRACTORS RESPONSIBILITY TO COORDINATE PIPING WITH THE LANDSCAPE SUBCONTRACTOR TO AVOID CONFLICT WITH PLANTING BEDS. IT WILL BE THE RESPONSIBILITY OF THE IRRIGATION SUBCONTRACTOR TO MOVE PIPING TO ALLOW PROPER ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
9. ALL ROTORS SHALL BE LOCATED 12" FROM PAVEMENT, CURBS OR EDGE OF STRUCTURE, ALL SPRAY HEADS SHALL BE LOCATED 6" FROM PAVEMENT, CURBS OR EDGE OF STRUCTURE.
10. USE RIGID SCH 80 PVC SWING JOINT ASSEMBLIES TO CONNECT ALL ROTARY HEADS AND QUICK COUPLERS.
11. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12" MINIMUM LENGTH OF 1/2" FLEX PVC.
12. ALL LANDSCAPE PLANTING AREAS IRRIGATED WITH DRIP SHOULD BE INSTALLED AT 18" SPACING.
13. ALL TURF AREAS IRRIGATED WITH DRIP SHOULD BE INSTALLED 12" SPACING.
14. ALL IRRIGATION WIRES SHALL BE UL LISTED FOR DIRECT BURIAL AND BE A MINIMUM #14 GAUGE. WIRE SPLICES SHALL INCLUDE DBY CONNECTORS AS RECOMMENDED BY 3M COMPANY.
15. ELECTRIC POWER SHALL BE PROVIDED TO CONTROLLER LOCATION BY GENERAL CONTRACTOR. IRRIGATION CONTRACTOR SHALL PROVIDE FINAL HARD-WIRE TO CONTROLLERS.
16. VALVE BOXES SHALL BE INSTALLED FLUSH WITH GRADE, SUPPORTED BY BRICKS IF NECESSARY. INSTALL 3" OF PEA GRAVEL BELOW THE VALVE. USE 12" X 17" RECTANGULAR VALVE BOXES WITH A PURPLE LID FOR QUICK COUPLING VALVES AND 10" ROUND BOXES FOR ELECTRIC VALVES UNLESS NOTED OTHERWISE.
17. VALVE AND CIRCUIT SHALL BE SEPARATED BASED ON WATER USE, SO THAT TURF AREAS ARE WATERED SEPARATELY FROM SHRUB AND GROUNDCOVER AREAS. IRRIGATION HEADS IN THE TURF AREAS WILL BE VALVED SEPARATELY FROM SHRUB AND/OR GROUNDCOVER AREAS. IT IS RECOMMENDED THAT SEASONAL COLOR AREAS BE WATERED SEPARATELY. UNDER NO CIRCUMSTANCES ARE ZONE TYPES TO BE COMBINED.
18. FINAL LOCATION OF CONTROLLER, WATER METER, BACKFLOW DEVICE, MASTER VALVE, FLOW SENSOR, AND WEATHER SENSOR SHALL BE APPROVED BY GENERAL CONTRACTOR, LANDSCAPE ARCHITECT, OR AN OWNERS REPRESENTATIVE.
19. AFTER AWARD OF CONTRACT AND BEFORE ANY IRRIGATION SYSTEM MATERIALS ARE ORDERED FROM SUPPLIERS OR DELIVERED TO THE JOB SITE, SUBMIT TO THE OWNER A COMPLETE LIST OF ALL IRRIGATION SYSTEM MATERIALS, OR PROCESSES PROPOSED TO BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT. THE LANDSCAPE ARCHITECT OR OWNERS'S AUTHORIZED REPRESENTATIVE WILL ALLOW NO SUBSTITUTIONS WITHOUT PRIOR WRITTEN ACCEPTANCE.
20. IRRIGATION CONTRACTOR WILL SUPPLY A COMPLETE AS BUILT DRAWING TO INCLUDE EXACT LOCATION OF ALL MAINLINE, VALVES, CONTROLLERS, QUICK COUPLERS, POINT OF CONNECTION, AND WIRE PATH. IRRIGATION CONTRACTOR WILL SUPPLY A COMPLETE SET OF OPERATION AND MAINTENANCE MANUALS.
21. PROVIDE A COLORED LAMINATED ZONE MAP AND INSTALL AT THE CONTROLLER.
22. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND SHALL SECURE ALL NECESSARY PERMITS AND PAY ALL ASSOCIATED FEES UNLESS OTHERWISE NOTED. ANY DISCREPANCIES SHALL BE DISCUSSED PRIOR TO CONSTRUCTION.

Statement of Conformance:  
I, JOSEPH A. FERDIN, LICENSED IRRIGATOR #0022076, HEREBY CERTIFIES THAT THIS IRRIGATION DESIGN CONFORMS TO THE DESIGN AND INSTALLATION PARAMETERS OF THE IRRIGATION DESIGN AND EQUIPMENT STANDARDS SET OUT 35-510(J) AND 35-511(C) (6) OF THE CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE.

Joseph A Ferdin TX LI # 22076

## IRRIGATION LEGEND

KEY	EXPLANATION
W	1" EXISTING IRRIGATION METER
DC	1" DOUBLE CHECK BACKFLOW DEVICE IN SEPARATE VALVE BOX PER LOCAL CODES.
MV	1.5" MASTER VALVE, HUNTER ICV-151G NORMALLY CLOSED VALVE
TB	TREE BUBBLER ASSEMBLY - ON 6" POP UP
C	IRRIGATION CONTROLLER HUNTER ACC-99D, FINAL LOCATION TO BE DETERMINED AFTER CONSULTING WITH LANDSCAPE ARCHITECT
WS	WEATHER SENSOR HUNTER SOLAR-SYNC, FINAL LOCATION TO BE DETERMINED AFTER CONSULTING WITH LANDSCAPE ARCHITECT
H	HUNTER ICV-AS-ADJ SERIES - REMOTE CONTROL VALVE
R	RAINBIRD DRIP CONTROL ZONE VALVE - REF DETAILS
I	MANUAL ISOLATION VALVE - SIZE OF MAINLINE
D	DRIFLINE: RAINBIRD XF SERIES DRIFLINE, FOR BED AREAS USE XFD-09-18, FOR TURF AREAS USE XFS-09-12
M	MAIN LINE - USE SCH-40 PVC PIPE AS DESIGNATED ON PLANS
L	LATERAL LINE - SIZE AS NOTED ON PLANS. USE CLASS 315 ON 1/2" PIPE AND CLASS 200 IPS PVC ON 3/4" AND LARGER PIPE.
S	IRRIGATION SLEEVE - USE 2 SIZES LARGER THAN TOTAL DIAMETER OF PIPE/S DESIGNATED FOR CROSSING PAVING. VALVE WIRING MAY RUN IN THE SAME SLEEVES. USE SCH 40 PVC PIPE.

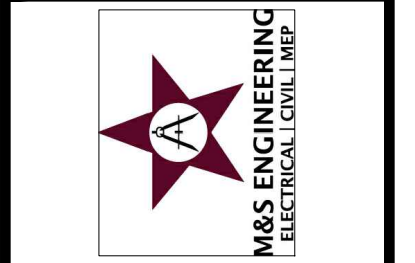


NO.	DATE	REVISIONS	BY

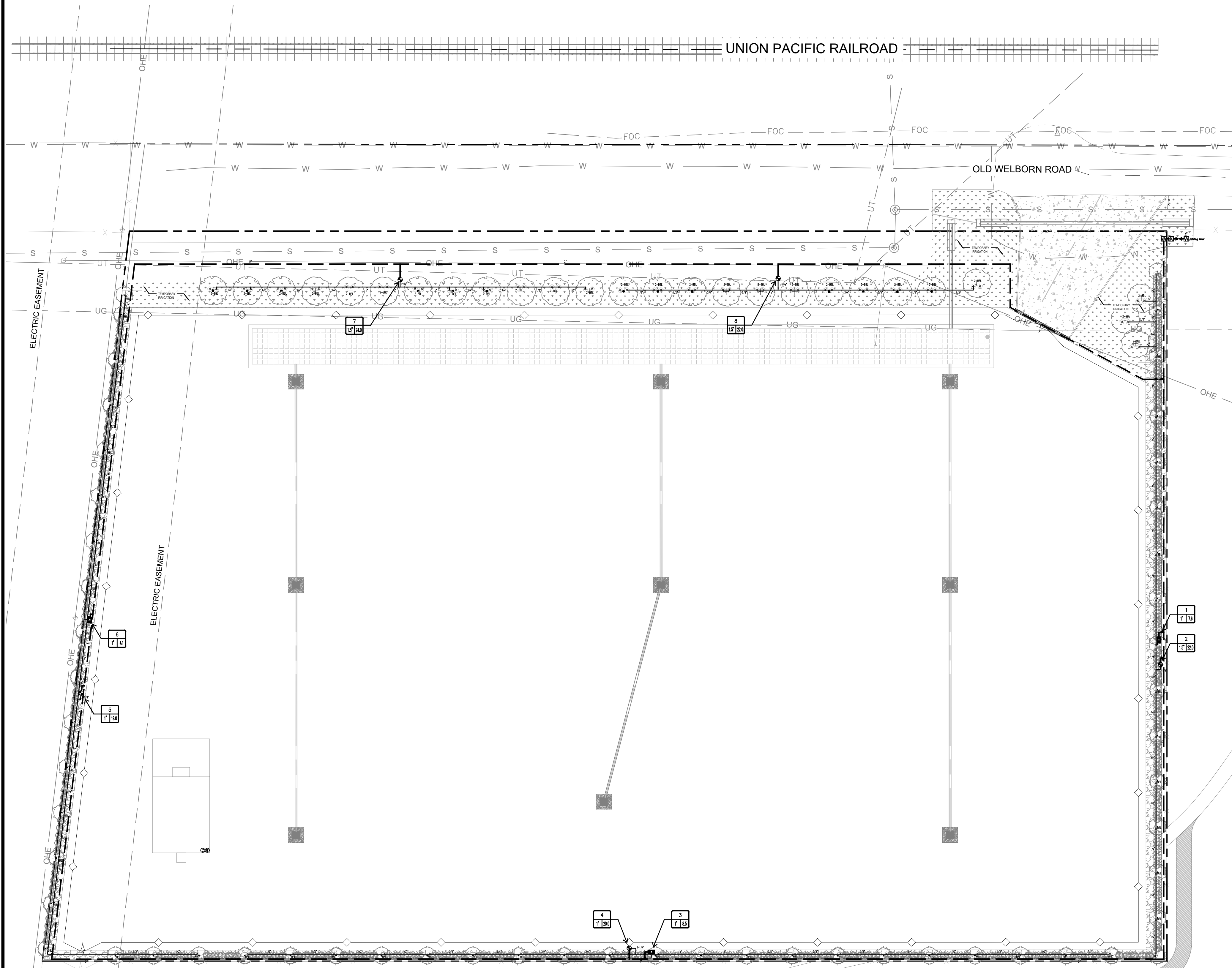
**CDS muerly**  
ENGINEERS & SURVEYORS  
10000 Katy Freeway, Suite 1000  
Houston, TX 77025

DESIGN BY: RA    DATE: SEPT 2025  
 DRAWN BY: RA    APPROVED BY: JMC  
 CHECKED BY: MVP    CDS JOB NO.:  
 REVIEWED BY: MVP    122338

IRRIGATION NOTES, LEGEND & CALCS  
 HOLLEMAN SUBSTATION  
 SITE DEVELOPMENT PLANS  
 COLLEGE STATION, TEXAS  
 ISSUED FOR PERMIT 11/27/2024



SHEET  
**LI 1.0**  
 CSTX PERMIT #:



1 IRRIGATION  
PLAN

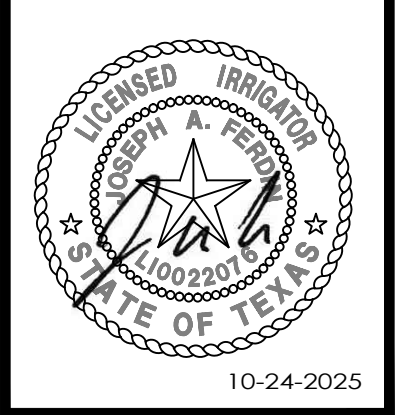
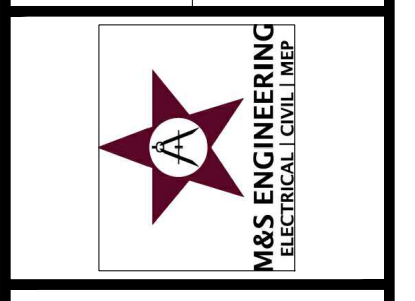
0 5' 15' 30' 60'  
SCALE: 1"=30'

NO.	DATE	REVISIONS	BY

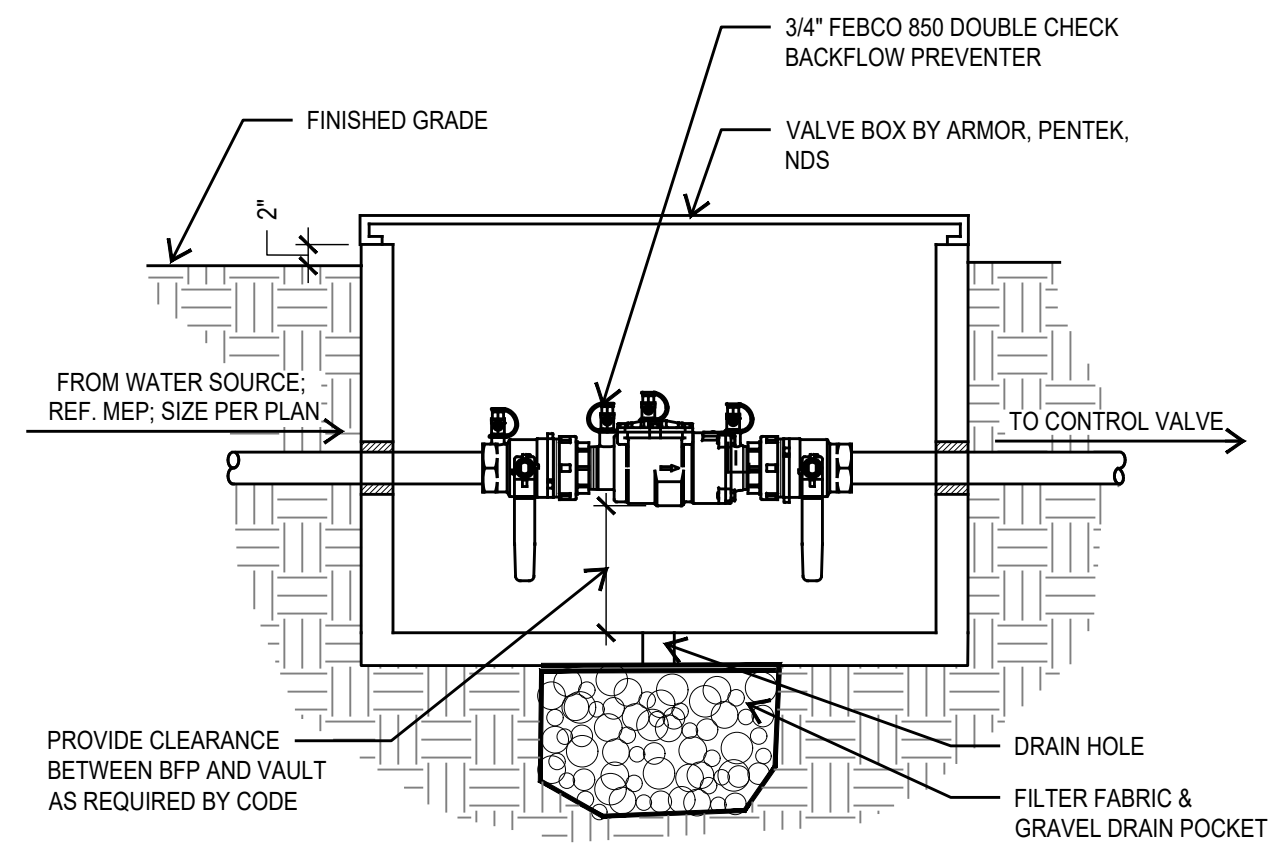
**CD S m u e r y**  
ENGINEERS & SURVEYORS  
2009 S. 11th Street, Suite 100, Fort Worth, TX 76104  
TEL: 817.335.1111 FAX: 817.335.1112

DESIGN BY: RA DATE: SEPT 2025 APPROVED BY: JMC  
DRAWN BY: RA  
CHECKED BY: MVP CD S JOB NO.:  
REVIEWED BY: MVP 122338

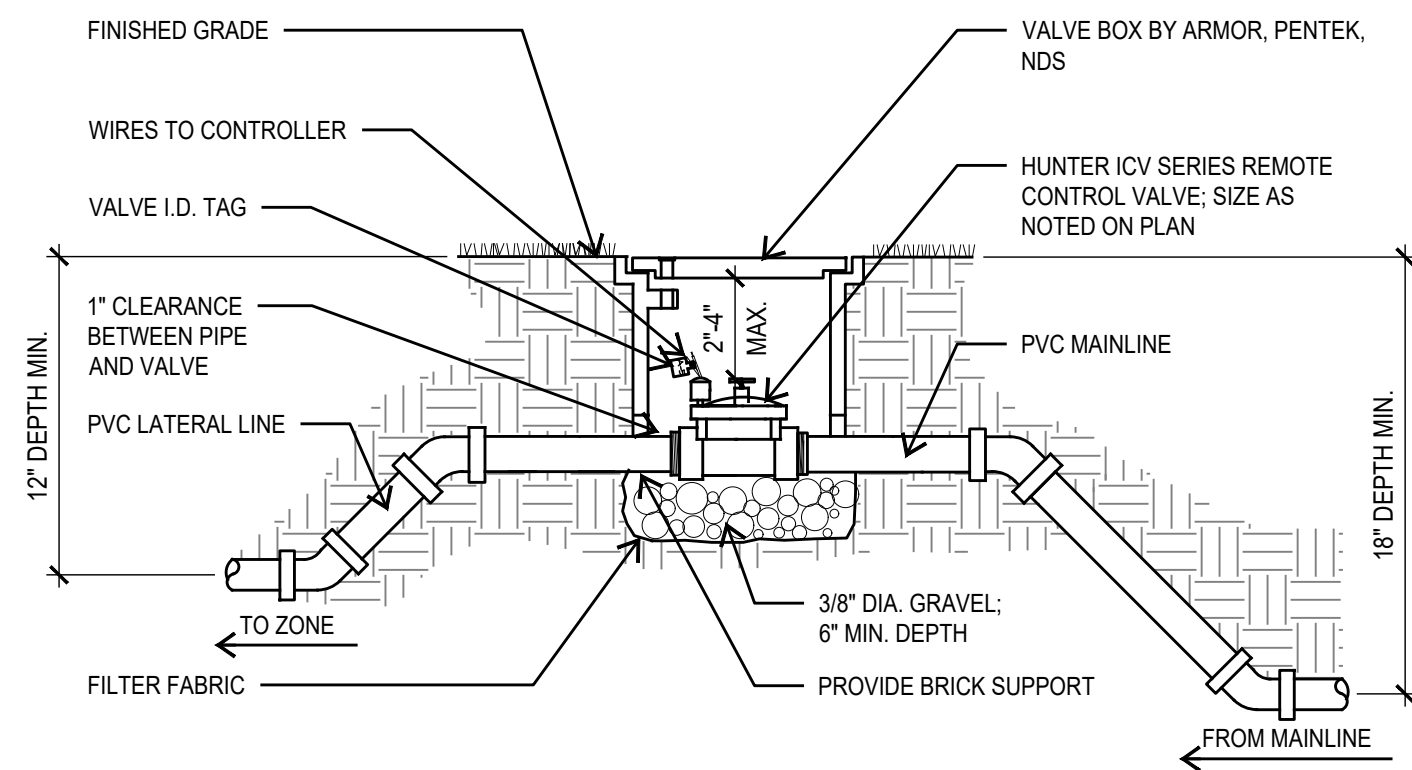
IRRIGATION PLAN  
**HOLLEMAN SUBSTATION**  
SITE DEVELOPMENT PLANS  
COLLEGE STATION, TEXAS  
ISSUED FOR PERMIT 11/27/2024



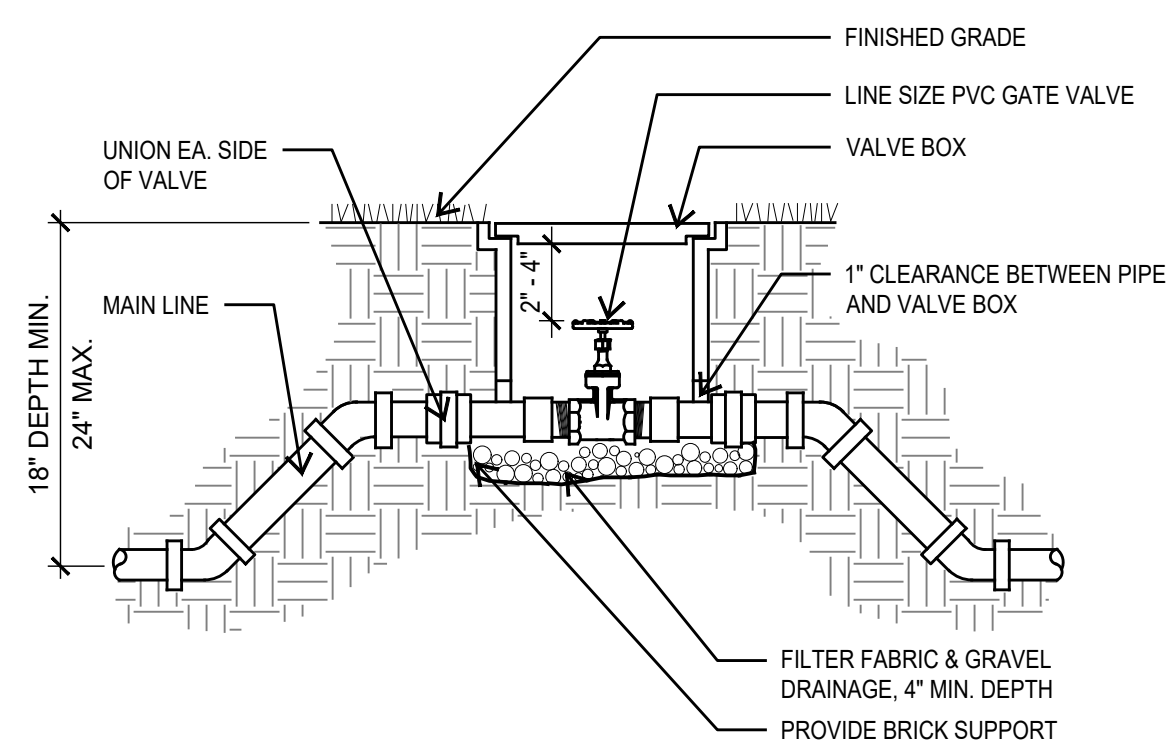
SHEET  
LI 1.1  
CSTX PERMIT #:



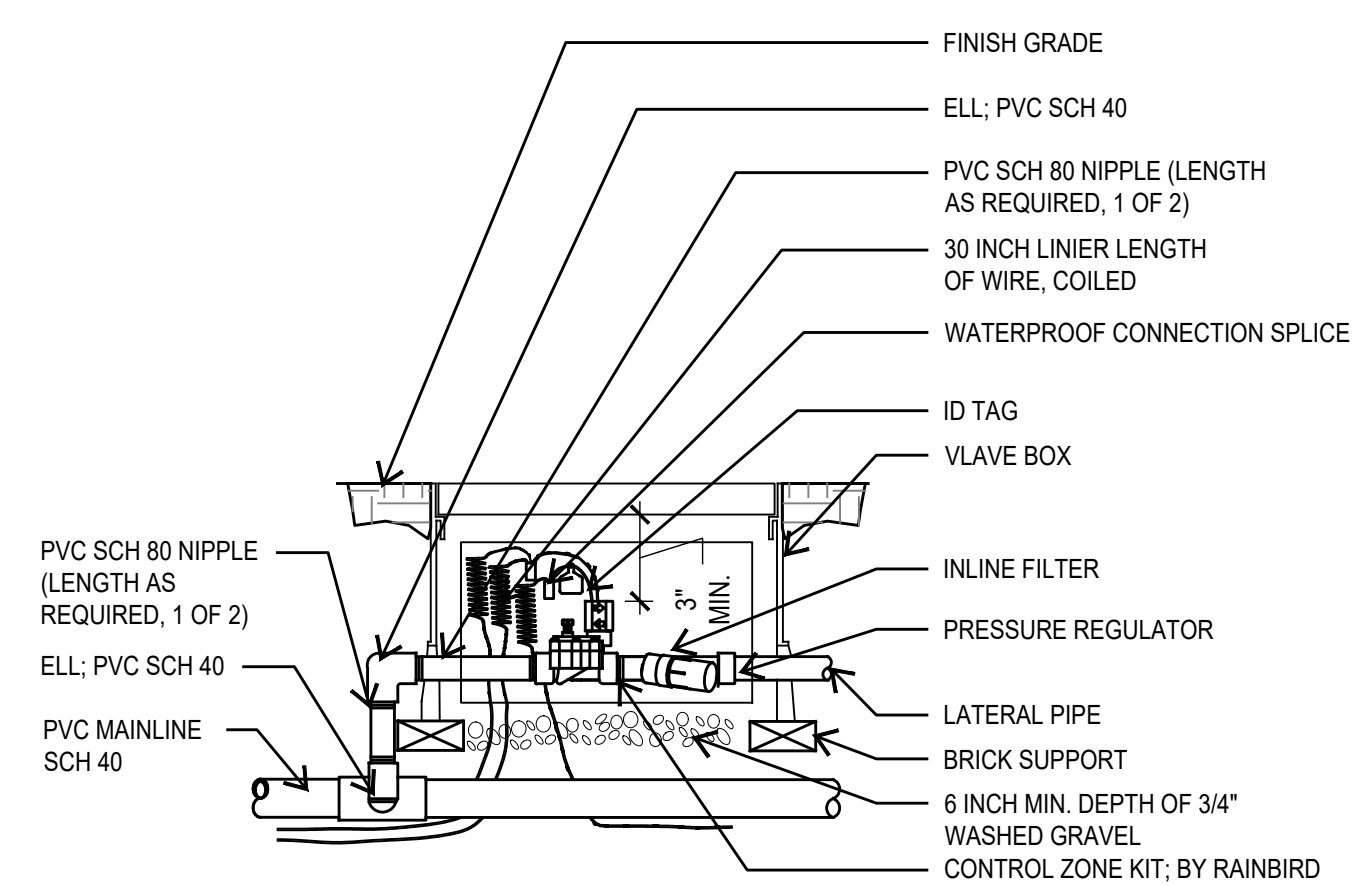
**1 BACKFLOW DEVICE**  
SECTION NOT TO SCALE



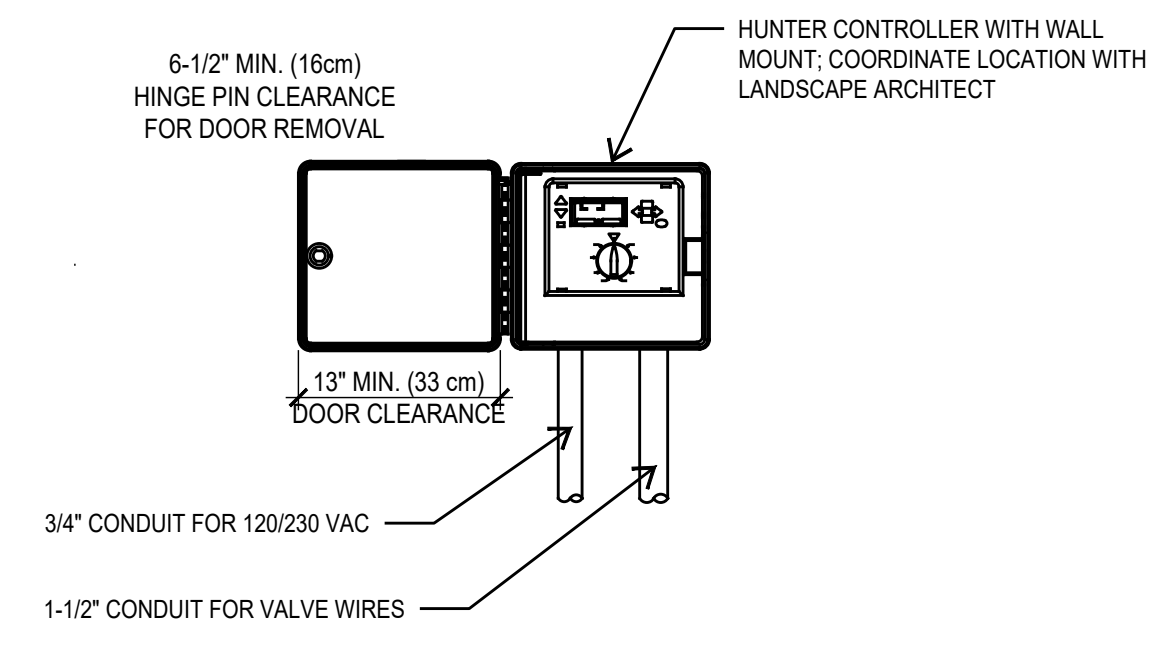
**2 ZONE VALVE**  
SECTION NOT TO SCALE



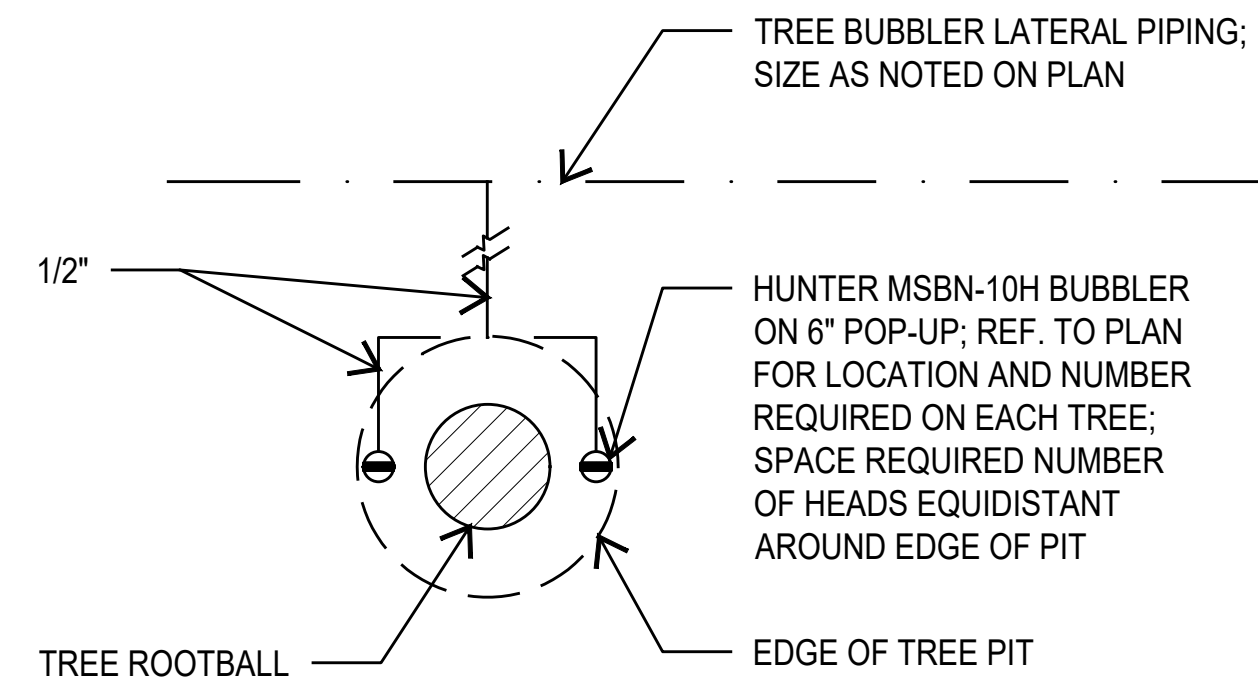
**3 MANUAL ISOLATION VALVE**  
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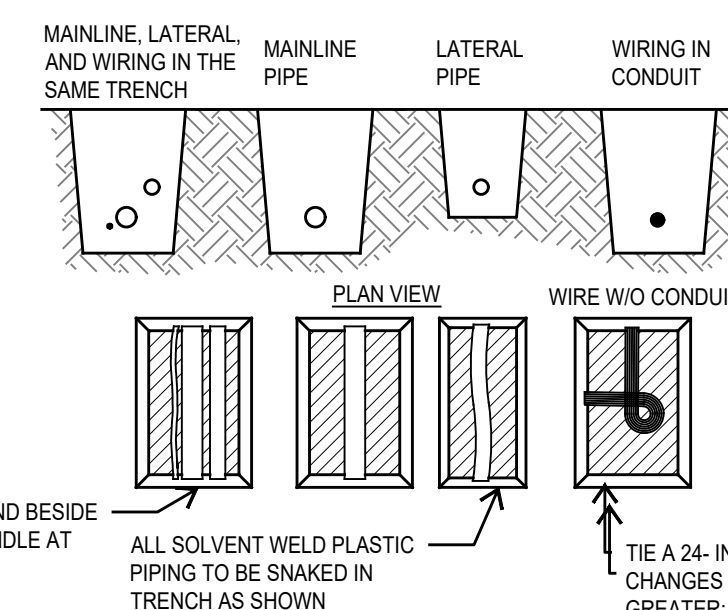
**4 DRIP CONTROL ZONE KIT**  
SECTION NOT TO SCALE



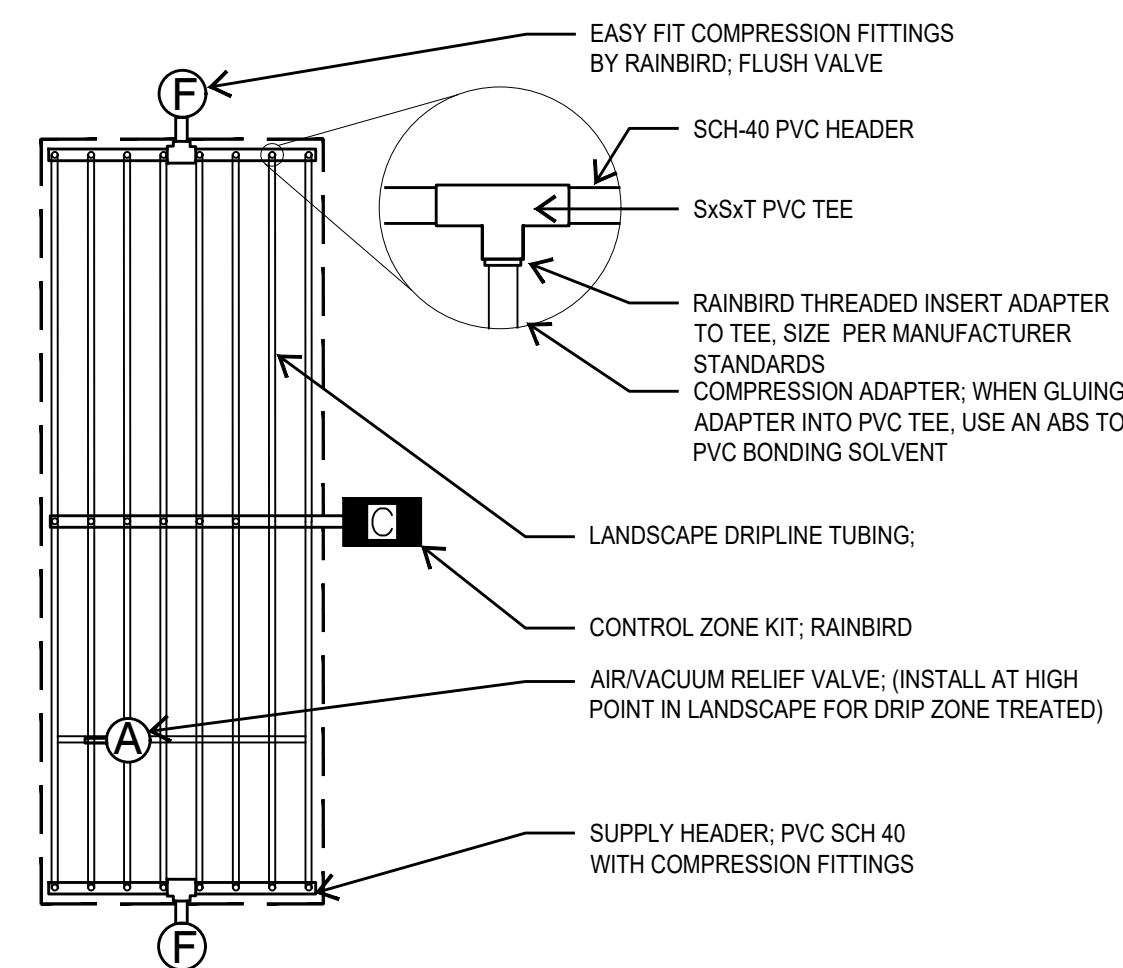
**5 IRRIGATION CONTROLLER**  
SECTION NOT TO SCALE



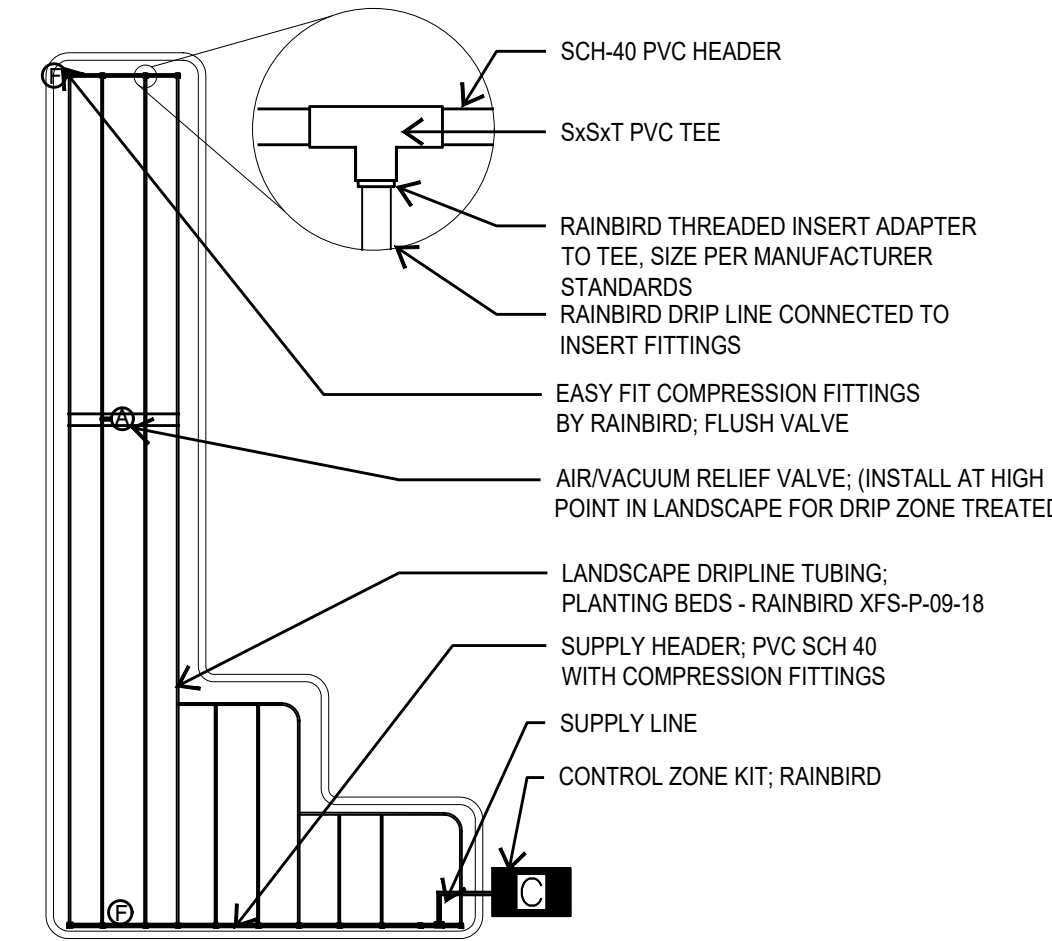
**6 TREE BUBBLER ASSEMBLY**  
SECTION NOT TO SCALE



**7 IRRIGATION TRENCH**  
SECTION NOT TO SCALE



**8 DRIPLINE (CENTER FEED)**  
SECTION NOT TO SCALE



**9 DRIPLINE (END FEED)**  
SECTION NOT TO SCALE

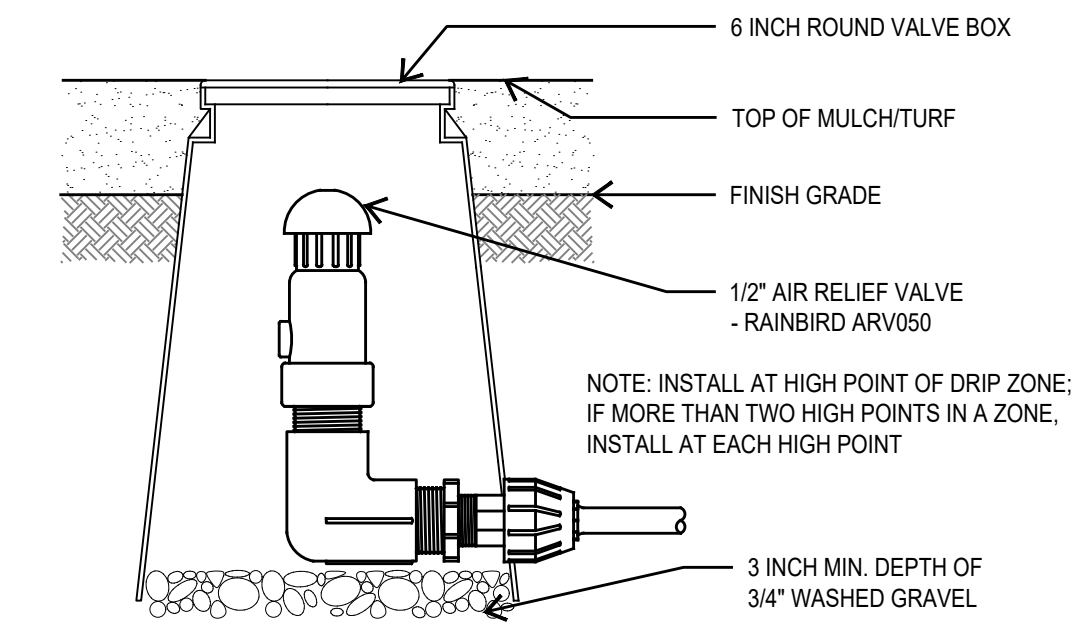
PROPER SIZING OF SUPPLY AND EXHAUST HEADERS

TOTAL ZONE FLOW	PIPE SIZE
UP TO 5 GPM	1/2" SCH 40 PVC OR 1/2" CLASS 315 PVC
5.1 TO 8 GPM	3/4" CLASS 200 PVC
8.1 TO 13 GPM	1" CLASS 200 PVC
13 GPM TO 22 GPM	1 1/4" CLASS 200 PVC
22.1 TO 31 GPM	1 1/2" CLASS 200 PVC

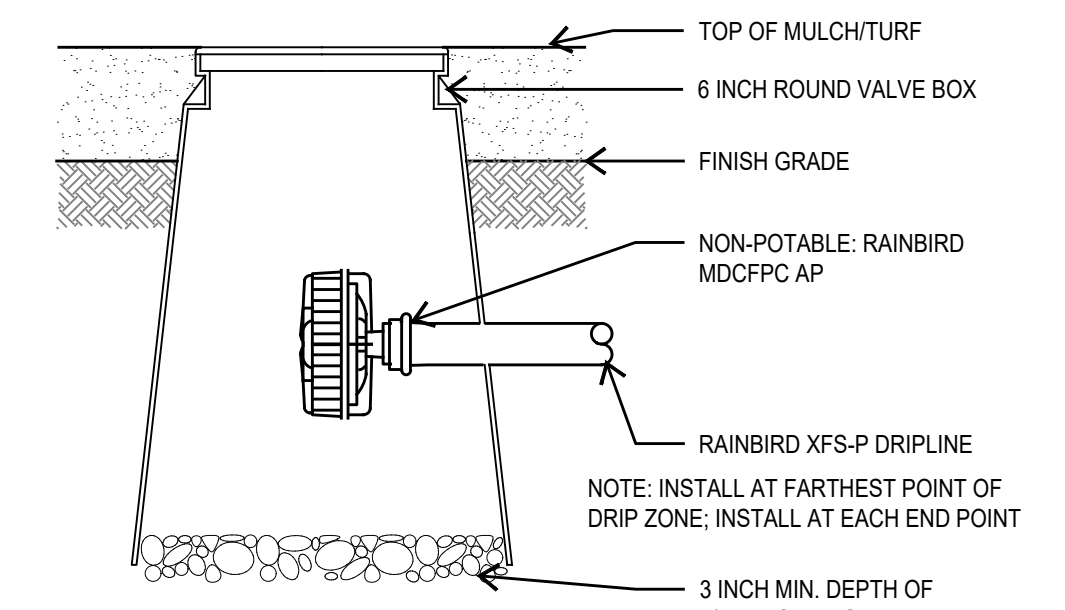
NOTE: A 45 PSI PRESSURE REGULATOR IS RECOMMENDED TO OBTAIN MAXIMUM RUN LENGTHS AND MAXIMIZE ZONE SIZE WHEN INSTALLING XF SERIES DRIPLINE

**DRIP IRRIGATION DESIGN NOTES**

- DRIPLINE SHALL BE BURIED 3" TO 5" BELOW FINISHED SOIL GRADE IN PLANTING BEDS AFTER PLANTING AND BEFORE MULCH AND 4" TO 6" BELOW FINISHED GRADE IN TURF AREAS.
- ALL DRIPLINE SHALL BE SECURED USING SOIL STAPLES AS SUPPLIED BY THE MANUFACTURER SPACED A MAXIMUM OF 3' ON CENTER.
- DRIPLINE LATERALS SHOWN ON THE PLANS ARE USED TO INDICATE ZONING SIZES AND RELATIONSHIPS. INSTALLATION OF DRIP ZONES SHALL FOLLOW ONE OF THE TWO METHODS DESCRIBED IN DETAILS 10/11 LI 2.2. AND RAINBIRD'S RECOMMENDED INSTALLATION SPECIFICATIONS.
- RAINBIRD XFS SERIES DRIPLINE SHALL BE USED AS FOLLOWS; TURF AREAS - XFS-06-12 AND BED AREAS - XFS-09-12. IN BED AREAS WITH A SLOPE OF 3:1 OR MORE USE RAINBIRD XFCV-06-18.
- WHEN CONFLICTS OCCUR BETWEEN THESE DRAWINGS AND THE MANUFACTURER'S SPECIFICATIONS DEFER TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS.
- EACH DRIP ZONE SHALL HAVE A DRIP SYSTEM OPERATION INDICATOR, RAINBIRD MODEL OPERIND. INSTALL PER RAINBIRD RECOMMENDATIONS.



**10 AIR RELIEF VALVE**  
SECTION NOT TO SCALE



**12 FLUSH VALVE**  
SECTION NOT TO SCALE

**csds muary**  
ENGINEERS | SURVEYORS  
1000 West Loop South, Suite 1000  
Houston, Texas 77027  
PH: 281.410.1100 FAX: 281.410.1101  
WWW.CSDSMUARY.COM

DESIGN BY: RA DATE: SEPT 2025  
DRAWN BY: RA APPROVED BY: JMC  
CHECKED BY: MWP CDS JOB NO.:  
REVIEWED BY: MWP 122338

IRRIGATION DETAILS

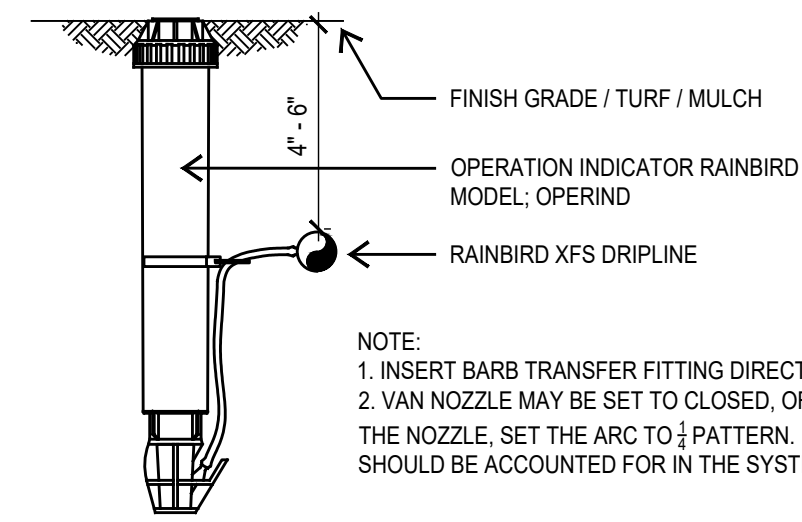
**HOLLEMAN SUBSTATION**  
SITE DEVELOPMENT PLANS  
COLLEGE STATION, TEXAS

ISSUED FOR PERMIT 11/27/2024

**M&S ENGINEERING**  
ELECTRICAL CONSULTING

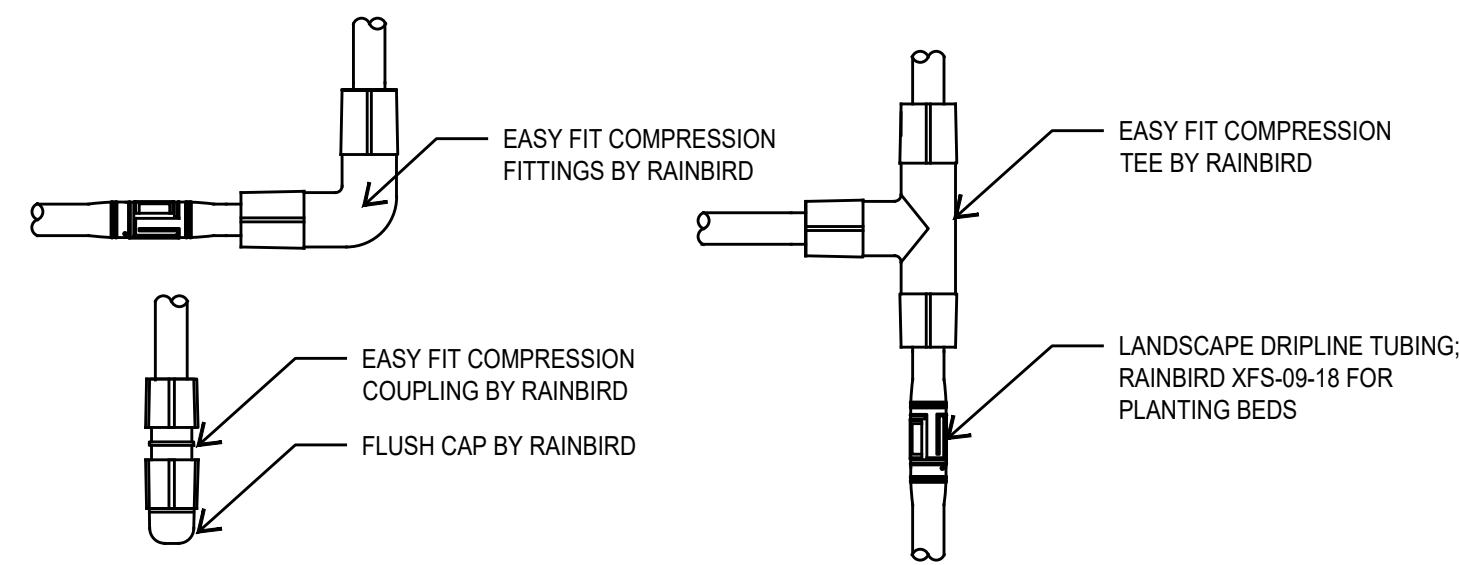
REGISTERED IRRIGATION ENGINEER  
AUSTIN A. FORD  
1002201  
STATE OF TEXAS  
10-24-2025

SHEET  
LI 2.1  
CSTX PERMIT #:

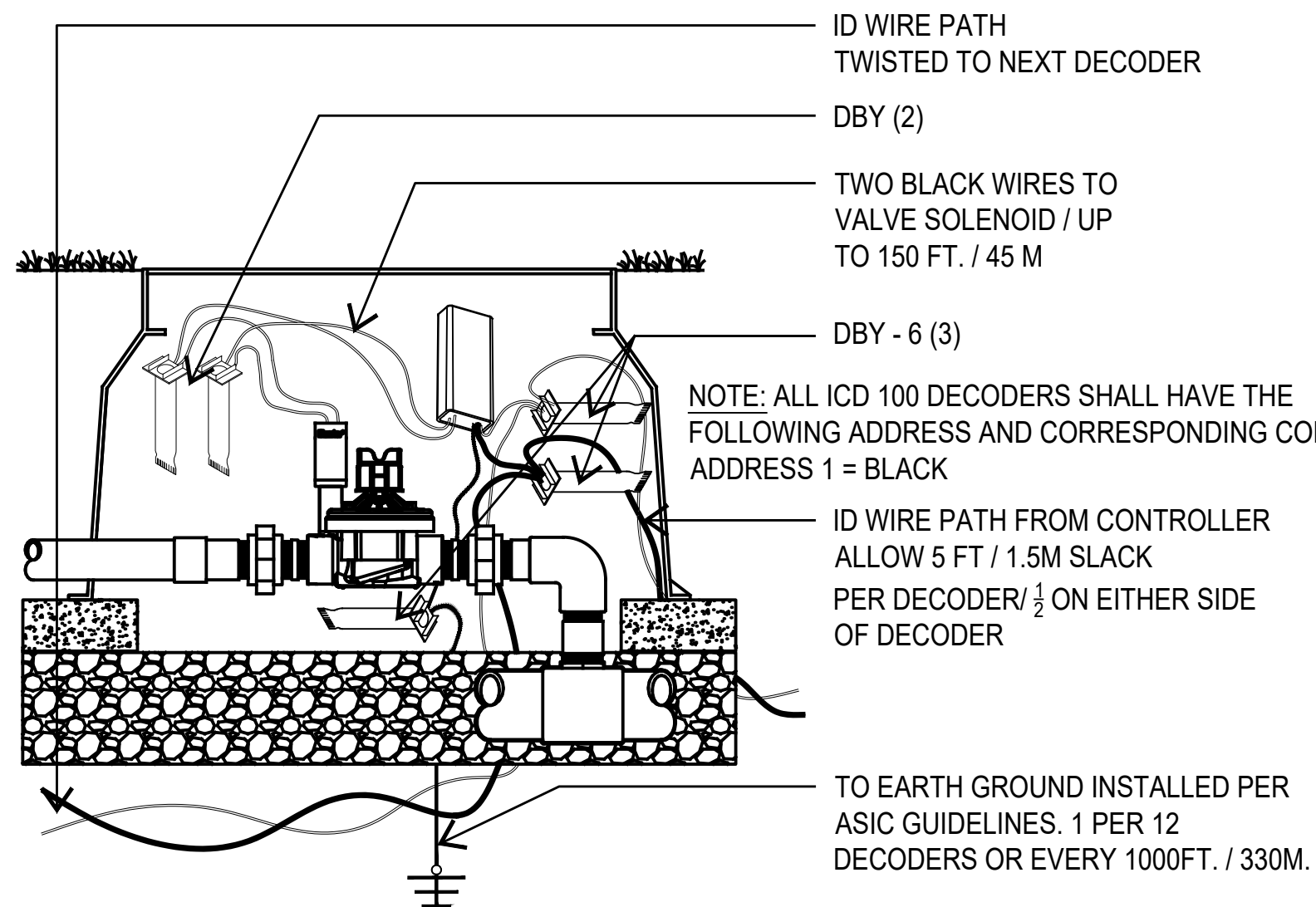


NOTE:  
 1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.  
 2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 1/2 PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

**1 DRIP OPERATION INDICATOR**  
 SECTION NOT TO SCALE

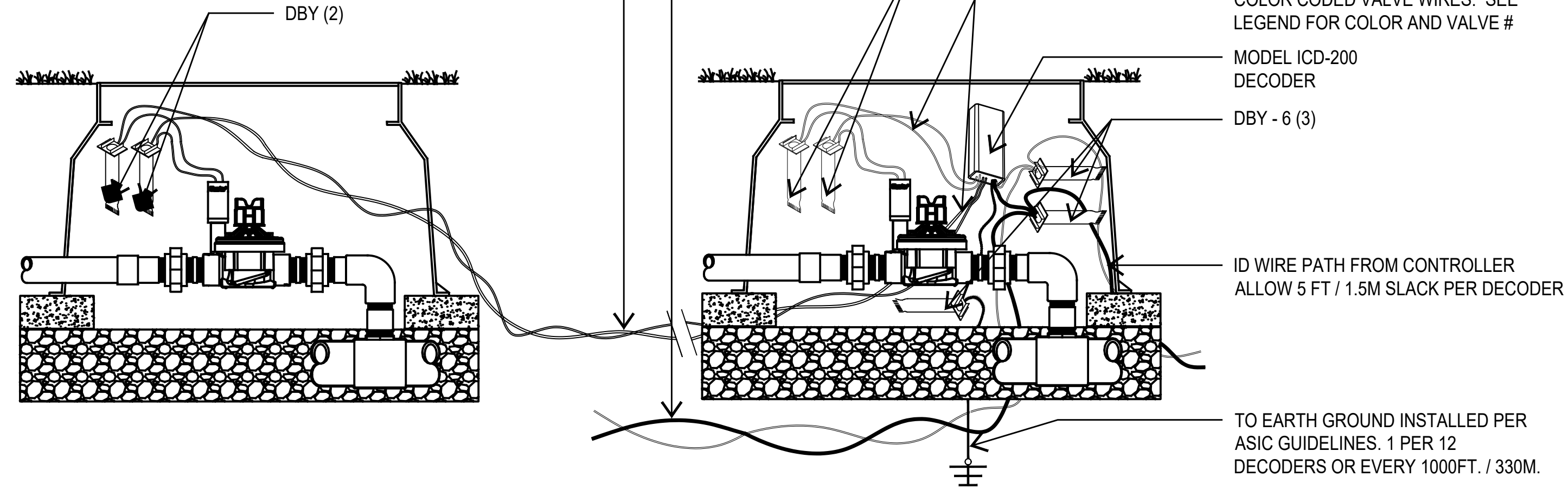


**2 DRIPLINE FITTINGS**  
 SECTION NOT TO SCALE



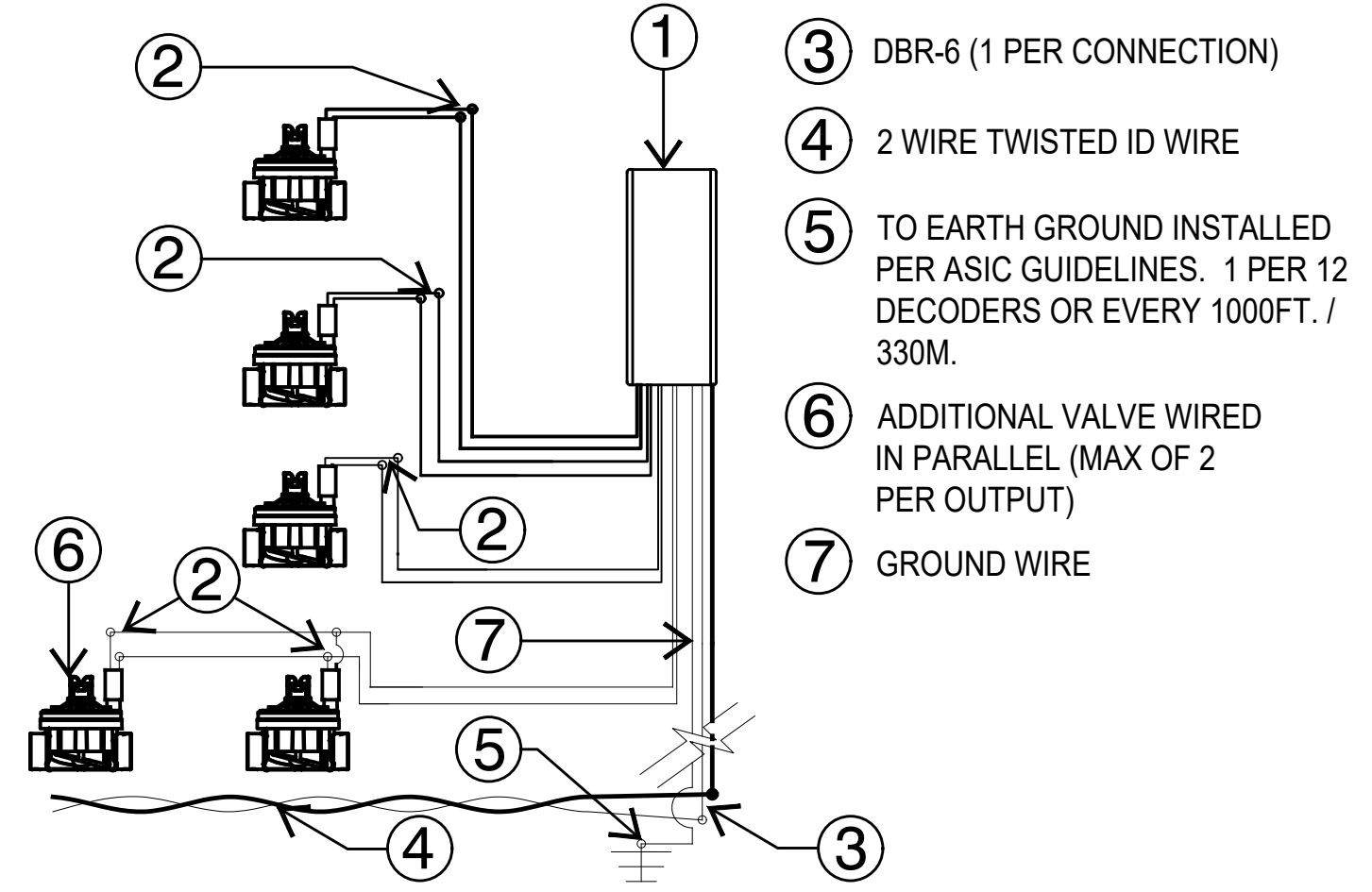
**3 HUNTER ICD 100 DECODER**  
 SECTION NOT TO SCALE

NOTE: ALL ICD-200 DECODERS SHALL HAVE THE FOLLOWING ADDRESS AND CORRESPONDING COLOR  
 ADDRESS 1 = BLACK  
 ADDRESS 2 = YELLOW

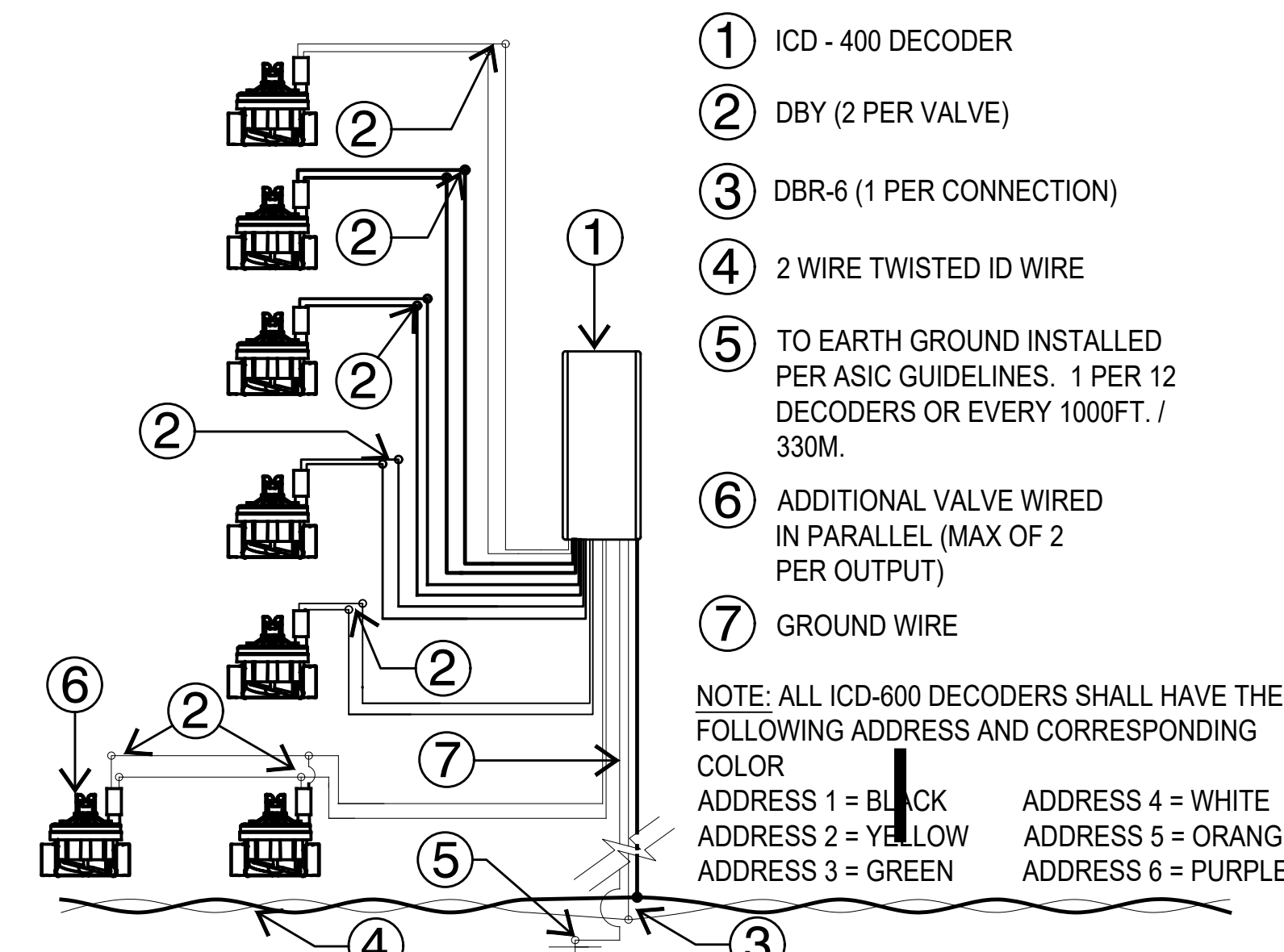


**4 HUNTER ICD 200 DECODER**  
 SECTION NOT TO SCALE

NOTE: ALL ICD 400 DECODERS SHALL HAVE THE FOLLOWING ADDRESS AND CORRESPONDING COLOR  
 ADDRESS 1 = BLACK ADDRESS 3 = GREEN  
 ADDRESS 2 = YELLOW ADDRESS 4 = WHITE



**5 HUNTER ICD 400 DECODER**  
 SECTION NOT TO SCALE



**6 HUNTER ICD 600 DECODER**  
 SECTION NOT TO SCALE

NO.	DATE	REVISIONS	BY

**CDS muary**  
 ENGINEERS | SURVEYORS  
 2709 S. MICHIGAN | FORT WORTH, TEXAS 76104  
 (817) 335-1111 | WWW.CDSMURY.COM

DESIGN BY: RA DATE: SEPT 2025 APPROVED BY: JMC  
 DRAWN BY: RA CHECKED BY: MVP CDS JOB NO.:  
 REVIEWED BY: MVP 122338

IRRIGATION DETAILS  
**HOLLEMAN SUBSTATION**  
 SITE DEVELOPMENT PLANS  
 COLLEGE STATION, TEXAS

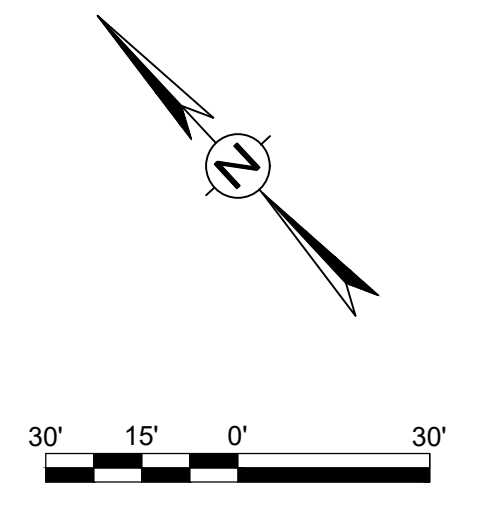
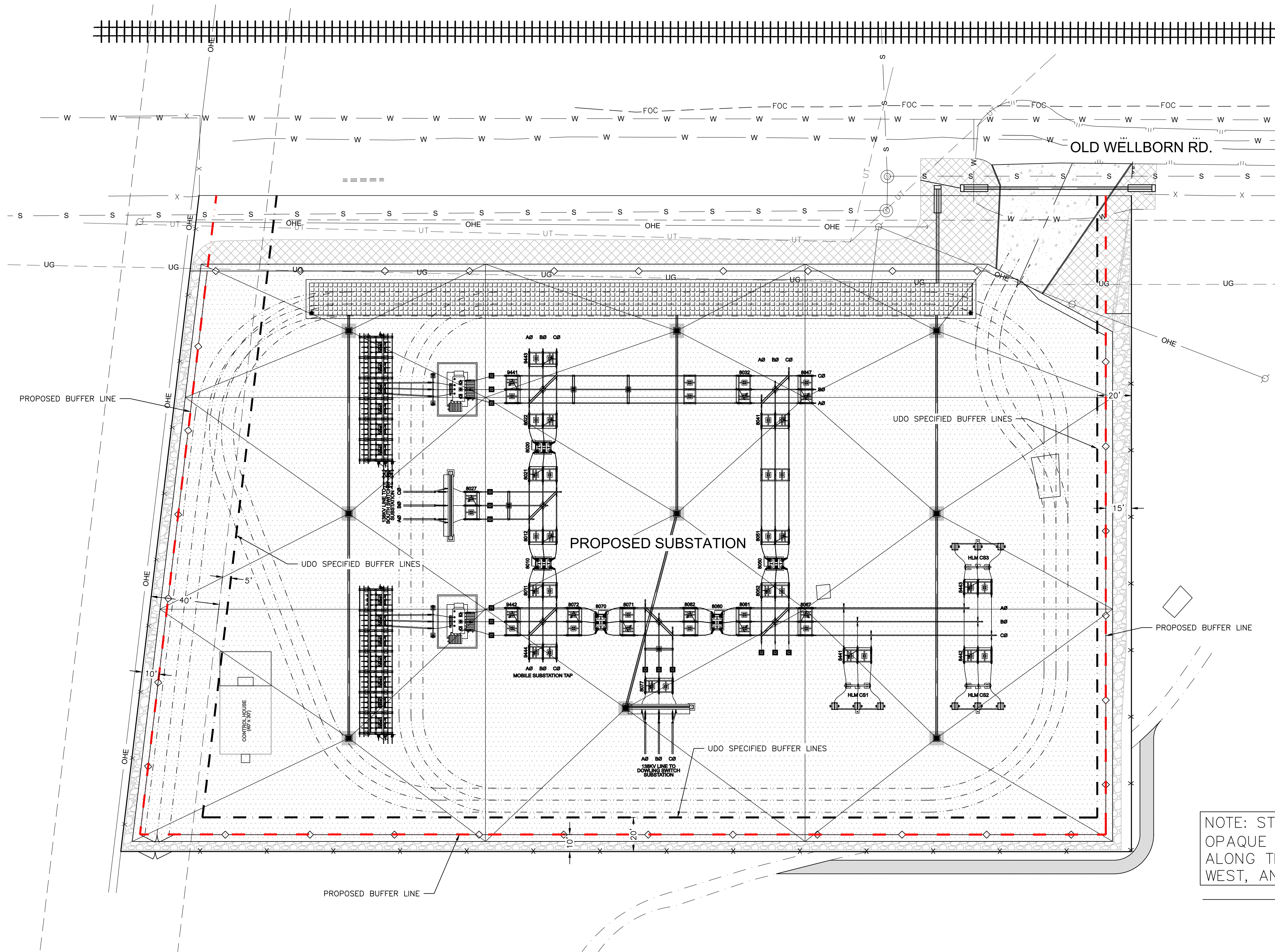
ISSUED FOR PERMIT 11/27/2024

10-24-2025

**M&S ENGINEERING**  
 ELECTRICAL (L1) (L2)

LICENSED IRRIGATION CONSULTANT  
 STATE OF TEXAS  
 10-24-2025

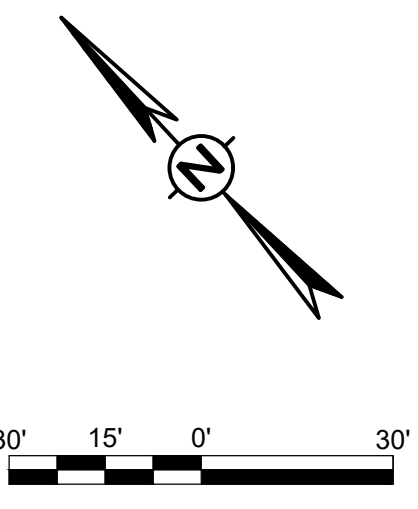
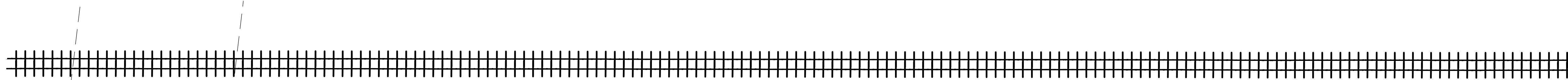
SHEET  
**LI 2.2**  
 CSTX PERMIT #:



NOTE: STATION TO BE ENCLOSED BY AN OPAQUE 8' MASONRY WALL, BUILT ALONG THE BUFFER LINE ON THE EAST, WEST, AND SOUTH SIDES OF THE PAD.

—◇— PROPOSED 8' MASONRY WALL

		DATE: JUL 2025 APPROVED BY: JMC DESIGNED BY: JMC DRAWN BY: MWL CHECKED BY: JMC REVIEWED BY: JMC	NO. DATE REVISIONS BY
BUFFER YARD APPEAL EXHIBIT HOLLEMAN SUBSTATION COLLEGE STATION, TEXAS			
SHEET <b>1</b>		Page 20 of 21	



OLD WELLBORN RD.

ACCESS DRIVE

±14' P.U.E.

±14' P.U.E.

**LEGEND**

- P — EXISTING PROPERTY LINE
- - - - - EXISTING R.O.W. LINE
- - - - - EXISTING EASEMENT LINE
- X - X - EXISTING WIRE FENCE
- - - - - EXISTING GRAVEL ROAD
- - - - - EXISTING EDGE OF ASPHALT
- X - X - EXISTING SIGN
- X - X - PROPOSED PROPERTY FENCE (5 STRAND)
- ◊ - PROPOSED 8' MASONRY WALL
- - - - - PROPOSED DRIVE CENTERLINE
- - - - - PROPOSED SUBSTATION DRIVE PATHS
- - - - - PROPOSED CHANNEL CENTERLINE
- [Patterned Box] 7" CONCRETE PAVEMENT
- [Patterned Box] SUBSTATION PAD W/ 6" FLEXIBLE BASE

SUBSTATION PAD

CONTROL HOUSE HEIGHT: 17'-9"

MOBILE SUBSTATION TAP

15KV LINE TO DOWNING SWITCH SUBSTATION

CONTROL HOUSE (PLAN)

F:\JOBS\2022\122338 MS ENGR - HOLLEMAN SUBSTATION\CIVIL\_3D\DWG\ENGINEER\_122338-SITE.DWG

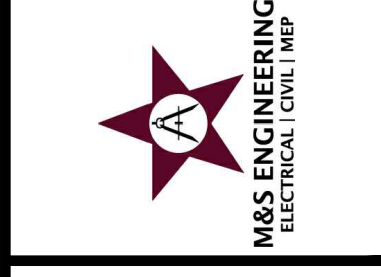
NO.	DATE	REVISIONS	BY
5	11/05/25	REVISED FOR PERMIT SUBMITTAL	MWL
4	10/30/25	REVISED FOR PERMIT SUBMITTAL	MWL
3	07/24/25	REVISED FOR PERMIT SUBMITTAL	MWL
2	06/11/25	REVISED FOR PERMIT SUBMITTAL	MWL
1	04/15/25	REVISED FOR PERMIT SUBMITTAL	JW

**CDS muary**  
ENGINEERS | SURVEYORS  
10000 Highway 100, Suite 1000, Houston, TX 77036  
713.861.1111

DESIGN BY: JMC DATE: NOV 2024  
DRAWN BY: MWL APPROVED BY: JMC  
CHECKED BY: JMC CDS JOB NO.:  
REVIEWED BY: JMC 122338

**SITE PLAN**  
**HOLLEMAN SUBSTATION**  
SITE DEVELOPMENT PLANS  
COLLEGE STATION, TEXAS

ISSUED FOR PERMIT 11/27/2024



SHEET  
**C2.1**  
CSTX PERMIT #:  
SP2025-000006