

ADDENDUM NO. 001

PROJECT INFORMATION:

Bakersfield College Welcome Center Landscape Improvements (Landscape & Irrigation)
1801 Panorama Drive, Bakersfield, CA 93301

Kern Community College District
Bakersfield, CA 93301

Addendum Dated: 09/25/2023

NOTICE TO PROPOSERS OR THEIR AGENTS FIGURING THIS WORK

You are hereby notified of the following changes to the scope of the work.

TIME AND PLACE OF BID: September 28th, 2023, at 2 pm. 2100 Chester Avenue,
Room 201

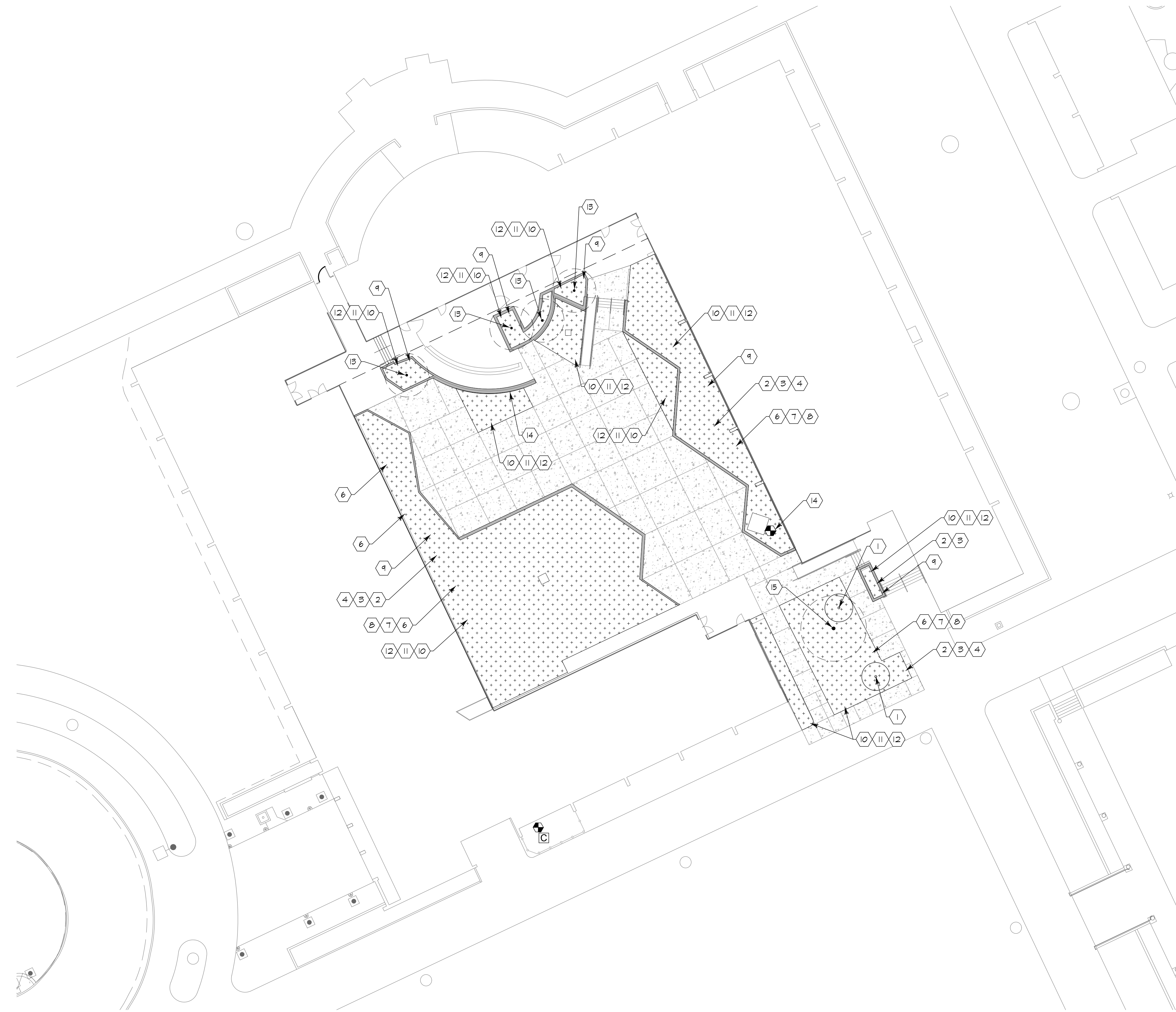
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- Item No. 1:** Refer to attached sheets for McCuen Courtyard CD – Add Alternate 1 and incorporate the following sheets into the project:
L0.1 – Demolition Plan.
L1.1 - Irrigation Plan.
L2.1 – Planting Plan.
L3.1 – Irrigation Details.
L3.2 – Irrigation and Planting Details.
- Item No. 2:** Refer to attached sheets McCuen Hall – Bid Set – Add Alternate 1 and incorporate the following sheets into the project:
L1.1 – Tree & Shrub Irrigation Plan.
L1.2 – Turf Irrigation Plan.
L1.3 - Irrigation Plan Parking.
L2.1 – Planting Plan.
L2.2 – Planting Plan Parking.
L3.1 – Irrigation Details.
L3.2 – Irrigation & Planting Details.
- Item No. 3:** Refer to the attached as-built for sleeving locations.
- Item No. 4:** Insert the attached sheets AS1.1A and AS1.2A to be incorporated into this project.

- Item No. 5:** Remove and Replace Specification section 31 22 00 Grading with the one attached herein and are to be incorporated into this project.
- Item No. 6:** Remove and Replace Specification section 32 84 24 Irrigation Sprinkler Systems with the one attached herein and are to be incorporated into this project.
- Item No. 7:** Remove and Replace Specification section 32 91 00 Soil Preparation with the one attached herein and are to be incorporated into this project.
- Item No. 8:** RFI Responses – Refer to the attached RFI Log with all of the corresponding responses and they shall be incorporated into the project.
- Item No. 9:** Pre-Bid Job Walk: Attached please find a copy of the sign-in sheet to include with your bid documents.

END OF ADDENDUM NO. 1

Jamal Powell
Kern Community College District
Bakersfield, CA 93301

Proposer's Acknowledgment

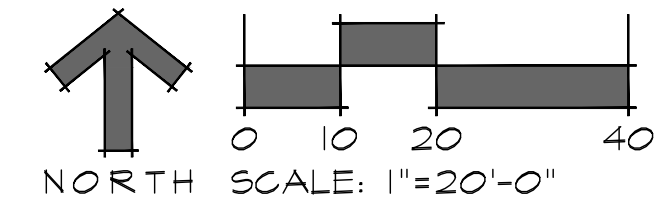


DEMOLITION LEGEND/ NOTES:

1. Remove Crepe Myrtle Trees - 2 total
2. All Planter Areas - Clear and Grub
 - a. Remove exposed cobble and construction debris that exceed 1" in diameter.
 - b. Spray weeds with KCCD M&O approved contact herbicide
 - c. Remove any roots or stumps that are encountered to a minimum depth of 2'.
 - d. Remove existing weeds, grass, shrubs, seedlings and their roots
 - e. Protect existing trees to remain and improvements.
 - f. Remove existing irrigation heads - clean and provide to KCCD M&O
 - g. Remove irrigation risers and any exposed pvc lines and other debris.
 - h. Water heavily
 - i. Apply Soil Buster
3. Smooth grade
 - a. Slope at 2% for a minimum of 5' from buildings
4. Existing Electrical Box or Irrigation shut off boxes
 - a. Raise to finished grade - provide extensions if needed.
5. Existing monument to be relocated.
 - a. Reinstalled at a location within courtyard at direction of KCCD.
6. Ex Electrical to remain - protect in place.
7. Existing Irrigation Control Valves - multiple
 - a. Irrigation Shut off valves
 - i. To remain - protect in place.
 - ii. Raise valve box to be flush with finished grade.
 - b. Irrigation Control Valves
 - i. Remove valve and any threaded fittings.
 - ii. Glue Sch. 80 cap to stubbed connection to mainline at depth of the mainline, minimum 12" below grade. Locate on As Built - Record Documents
 - iii. Wrap stub and any exposed mainline with 3" wide detectible warning tape.
 - iv. Disconnect wires -
 1. Wires not needed for new valves - encase exposed ends with DBY 6 connectors - wrap wires around stubbed mainline connection.
 2. Wires needed for new valves - protect and test conductivity - utilize under paving if not in sleeves and extending new wire is not feasible.
 3. Connect new irrigation control wire to old with DBY connectors in pull box.
 4. Only utilize old wire when no other option exists.
 - v. Remove Valve box - fill void with amended topsoil.
8. Existing Utilities & Irrigation wire
 - a. Irrigation wire under paving if not in sleeves to be protected for reuse as needed.
 - b. Protect all existing utilities and improvements - pothole to locate.
 - c. Hand excavate as needed to protect existing utilities and improvements
9. Raised Planters
 - a. Remove wood mulch.
 - i. Can be reused and blended into top soil.
 - b. Remove excess soil to 6" below the brick cap (after tilling/over excavation and settlement)
10. Over Excavation - Deep Tilling in planters
 - a. Over excavate soil to a minimum depth of 18"
 - i. Protect existing improvements - pothole as necessary to locate.
 - ii. Water settle - flood as needed to settle soil prior to planting and installation of rock mulch.
11. Locate Sleeves, irrigation wire, conduits and pipes under existing paving and planter walls.
12. Shop Drawing for Sleeves and Pipes under Existing Paving
 - a. Locate sleeves and/or pipes that cross under existing paving and into planters.
 - i. Contractor is responsible for exploring the entire length of the planter until pipes have been located.
 - b. Pothole as necessary to locate.
 - c. Clearly mark location, material and size on an irrigation print.
 - d. Writing shall be legible.
 - e. Provide 3 final copies to the KCCD.
 - f. Provide 1 final copy to the Landscape Architect
13. Existing Crepe Myrtle trees to remain.
14. Abandon existing backflow.
 - a. Pot in place
15. Existing oak trees to remain
 - a. Pot in place

- EXISTING CONDITIONS:
- 1) CONTRACTOR SHALL EXAMINE THE SITE PRIOR TO BIDDING TO CONFIRM EXISTING CONDITIONS.
 - 2) NO RECORD DOCUMENTS FOR THE SITE ARE AVAILABLE.
 - A. ARCHITECT, LANDSCAPE ARCHITECT, & KCCD MAKE NO REPRESENTATIONS REGARDING EXISTING CONDITIONS BEYOND WHAT IS VISIBLE ON THE SURFACE.
 - 3) PRIOR TO COMMENCING DEMOLITION, TRENCHING, OR SOIL TILLING CONTRACTOR SHALL
 - A. POT HOLE VISIBLE UTILITIES & IRRIGATION ADJACENT TO ANY SURFACE
 - I. TYPE OF UTILITY
 - II. MATERIAL OF PIPE, SLEEVE, CONDUIT, DRAINAGE, ETC.
 - III. DEPTH & DIRECTION
 - IV. IDENTIFY & NOTE IF UTILITY IS ACTIVE (LIVE) & LOCATION OF SHUTOFF/ CONTROL.
 - 4) CONTRACTOR SHALL DOCUMENT ALL EXISTING CONDITION INFORMATION FOUND
 - A. IN AN EXISTING CONDITIONS PLAN
 - B. IN PLAIN & LEGIBLE TEXT & MARKING
 - C. PROVIDE THIS EXISTING CONDITIONS PLAN TO
 - I. KCCD
 - II. ARCHITECT
 - III. LANDSCAPE ARCHITECT
 - 5) ANY EXISTING CONDITIONS THAT POSE A DANGER SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF KCCD M&O VERBALLY AND IN WRITING.

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 KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE BAKERSFIELD, CA
 93305

NO.	DATE	DESCRIPTION
01/11/2023	BID SET	
01/20/2023	APPENDIX I	

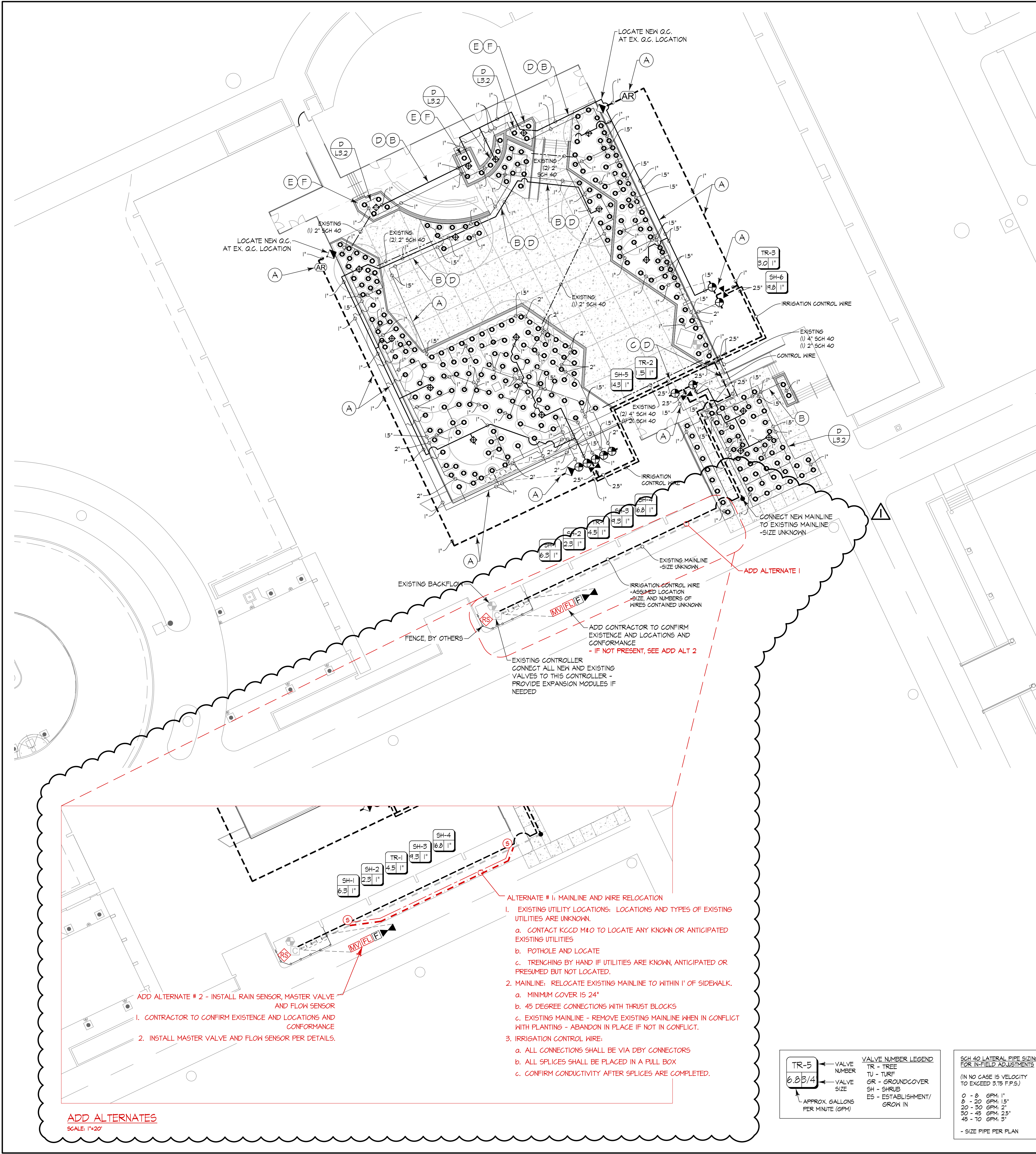
DEMOLITION
 PLAN

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IRRIGATION LEGEND

SYM.	MFR.	DESCRIPTION	PRODUCT INFORMATION	DETAIL
EX		EXISTING	2" ENCKELOW	
C		EXISTING	RAINBIRD CONTROLLER	CONNECT NEW VALVES TO EXISTING CONTROLLER. USE 12 3/4" EXPANSION MODULE NO. EPLXMM12 AND 10 CONNECTION CARTRIDGE MODEL NO. 10SCMLM. 10 PRO SMART MODEL NO. 10PSCMLM.
RS	ADD ALT 2: RAINBIRD	WEATHER SENSOR	WR2-RFC. CONNECT TO EX. CONTROLLER	(G) (L31)
MV	ADD ALT 2: RAINBIRD	MASTER VALVE	200-FESBVM-FRS-D	(C) (L31)
FL	ADD ALT 2: RAINBIRD	FLOW SENSOR	2", UF5200	(C) (L31)
NIBCO		GATE VALVE VALVE BOX HANDLES	1"-3", T-1/8-BHN NON-RISING STEM 10" ROUND BOX (2) 1/2" HANDLE (1/2" MIN.)	(H) (L31)
LEEMCO		GATE VALVE VALVE BOX HANDLES	LMV-BB FOR 2" & GREATER 10" ROUND BOX (2) 1/2" HANDLE (1/2" MIN.)	(H) (L31)
RAINBIRD		QUICK COUPLER G.C. KEY HOSE SWIVEL SWING JOINT	44-NP PURPLE LOCKING COVER (3) QUICK COUPLER KEYS (#44-K) (2) HOSE SWIVELS (#5H-I) #E12	(K) (L31)
AR	CRISPIN	AIR & VACUUM RELEASE VALVE	1" 1/4-10 COMBINATION VALVE AT HIGH POINTS & DEAD ENDS MAINLINE	(J) (L31)
AM	AMIAID	FILTER	2", M102-C, T50	(L) (L31)
RAINBIRD		CONTROL ZONE KIT AT DRIP EMITTER	XGZ-100-FRS-COM (1" 0.3-20 GPM) (200 MESH STAINLESS STEEL FILTER) (40 PSI FRS. REG.)	(F) (H) (L31) (L31)
RAINBIRD		ROOT WATERING SYSTEM SHRUB	RWS-B-C-1401 10" 0.25 GPM 1 PER TREE. BUBBLER & CHECK VALVE, RWS-SOCK SAND BOCK	(F) (L31) (L31)
RAINBIRD		ROOT WATERING SYSTEM TREE	RWS-B-C-1401 10" 0.25 GPM 1 PER TREE. BUBBLER & CHECK VALVE, SWING ARM, RWS-SOCK SAND BOCK	(E) (L31) (L31)
S		SPLICE BOX	3/8" MIN. OF WIRE. COIL NEATLY IN BOX.	(E) (L31)
---		NEW MAINLINE	1"-3" MAINLINE, SCH 40 P.V.C. SOLVENT WELD 4' CL 200 P.V.C. SELF RESTRAINED FITTINGS	(N) (A) (C) (L31) (L31) (L31)
---		EXISTING MAINLINE	CONTRACTOR TO VERIFY PIPE MATERIAL & SIZE.	
---		LATERAL LINES	SCH 40 P.V.C. SIZE AS SHOWN (1" MIN. MAX. LENGTH 50 FT.)	(N) (A) (C) (L31) (L31) (L31)
---		IRRIGATION CONTROL WIRE	1) MULTISTRAND 14 AWG MIN. IN CONDUIT, SIZE AS NEEDED 2) PLUS ADDITIONAL SPARE 2-WIRE PATH IN CONDUIT TO EVERY VALVE. 2-WIRE PATH TO BE R12-WIRE CONTROLLER WIRE. 3) ALL SPLICES TO USE DBY-6 SPLICE KITS & COIL 3/8" MIN. ADDITIONAL WIRE IN VALVE BOXES. 4) PROVIDE FULL BOXES AT: A) 200' O.G. MAX. B) ALL SPLICE LOCATIONS	(A) (E) (L31) (L31)
---		EX. SLEEVES		(E) (L31)
---		SLEEVING	SCH 40 P.V.C. 2 TIMES LARGER THAN IRRIGATION LINE. BURY 24" UNDER DRIVING SURFACE. SEE SPECS/DETAILS	

LEGEND NOTES:
 DETAIL CALL OUTS ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL REVIEW ALL DETAILS & APPLY ALL REQUIREMENTS, AS WELL AS REQUIREMENTS CONTAINED IN NOTES, CALL OUTS, & SPECIFICATIONS.
IRRIGATION VALVE BOX NOTE:
 1) IRRIGATION EQUIPMENT VALVE BOXES TO BE (MANUFACTURER: APPLIED ENGINEERING PRODUCTS).
RAINBIRD EQUIPMENT PURCHASING NOTE:
 1) ALL RAIN BIRD PURCHASES MUST BE SUBMITTED TO MARCOS RODRIGUEZ. (REWARDS PROGRAM) EMAIL: MARCOS.RODRIGUEZ@BAKERSFIELDCOLLEGE.EDU
EXISTING IRRIGATION EQUIPMENT NOTE:
 1) CONTRACTOR TO INVESTIGATE EXISTING CONTROLLER, WEATHER SENSOR & BACKFLOW & PROVIDE A SHOP DRAWING TO COORDINATE EXISTING EQUIPMENT W/ NEW EQUIPMENT.

- #### IRRIGATION PLAN KEYNOTES
- (A) LOCATE IRRIGATION EQUIPMENT, MAINLINE & LATERALS IN PLANTER AREA, SHOWN HERE FOR CLARITY
 - (B) POT HOLE & LOCATE EXISTING SLEEVES, & LATERAL LINES UNDER PAVEMENT. USE EXISTING SLEEVES & LATERALS TO REACH BEDS. CONTRACTOR TO CREATE A SHOP DRAWING AFTER LOCATING & IDENTIFYING EXISTING MAINLINES, LATERALS, SLEEVES, & CONTROL WIRE.
 - (C) POT HOLE & LOCATE EXISTING MAINLINE UNDER PAVEMENT. USE EXISTING MAINLINE TO REACH BEDS. CONTRACTOR TO CREATE A SHOP DRAWING AFTER LOCATING & IDENTIFYING EXISTING MAINLINES, LATERALS, SLEEVES, & CONTROL WIRE.
 - (D) POT HOLE & LOCATE EXISTING CONTROL WIRE UNDER PAVEMENT. USE EXISTING CONTROL WIRE TO REACH BEDS. CONTRACTOR TO CREATE A SHOP DRAWING AFTER LOCATING & IDENTIFYING EXISTING MAINLINES, LATERALS, SLEEVES, & CONTROL WIRE.
 - (E) (4) EX. CREPE MYRTLE MAY NEED TO BE ON THE SHRUB. LATERAL IF NO TREE SLEEVING OR LATERALS ARE EXISTING
 - (F) IN RAISED BEDS ON NORTH & EAST SIDE OF COURTYARD LOCATE & USE EXISTING CONTROL WIRE. IF CONTROL WIRE IS NOT USEABLE OR CAN'T BE LOCATED, USE BATTERY OPERATED CONTROL VALVES.

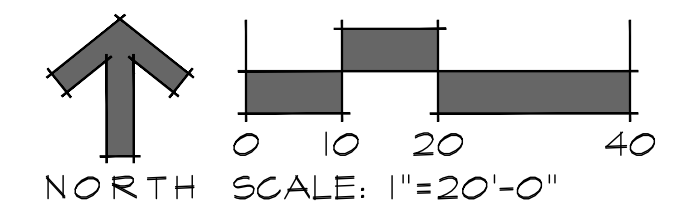
VALVE NUMBER	VALVE SIZE	APPROX. GALLONS PER MINUTE (GPM)
TR-5	6.83/4	

VALVE NUMBER LEGEND
TR - TREE
TU - TURF
GR - GROUND COVER
SH - SHRUB
ES - ESTABLISHMENT/ GROW IN

SCH 40 LATERAL PIPE SIZING FOR IN-FIELD ADJUSTMENTS (IN NO CASE IS VELOCITY TO EXCEED 3.15 F.P.S.)
0 - 8 GPM: 1"
9 - 20 GPM: 1.5"
20 - 30 GPM: 2"
30 - 45 GPM: 2.5"
45 - 10 GPM: 3"

SCH 80 P.V.C. MANIFOLD PIPE SIZING (IN NO CASE IS VELOCITY TO EXCEED 3.15 F.P.S.)
0 - 16 GPM: 1"
1 - 16 GPM: 1.5"
16 - 28 GPM: 2"
28 - 40 GPM: 2.5"
40 - 65 GPM: 3"
65 - 110 GPM: 4"
110 - 230 GPM: 6"

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REVISIONS

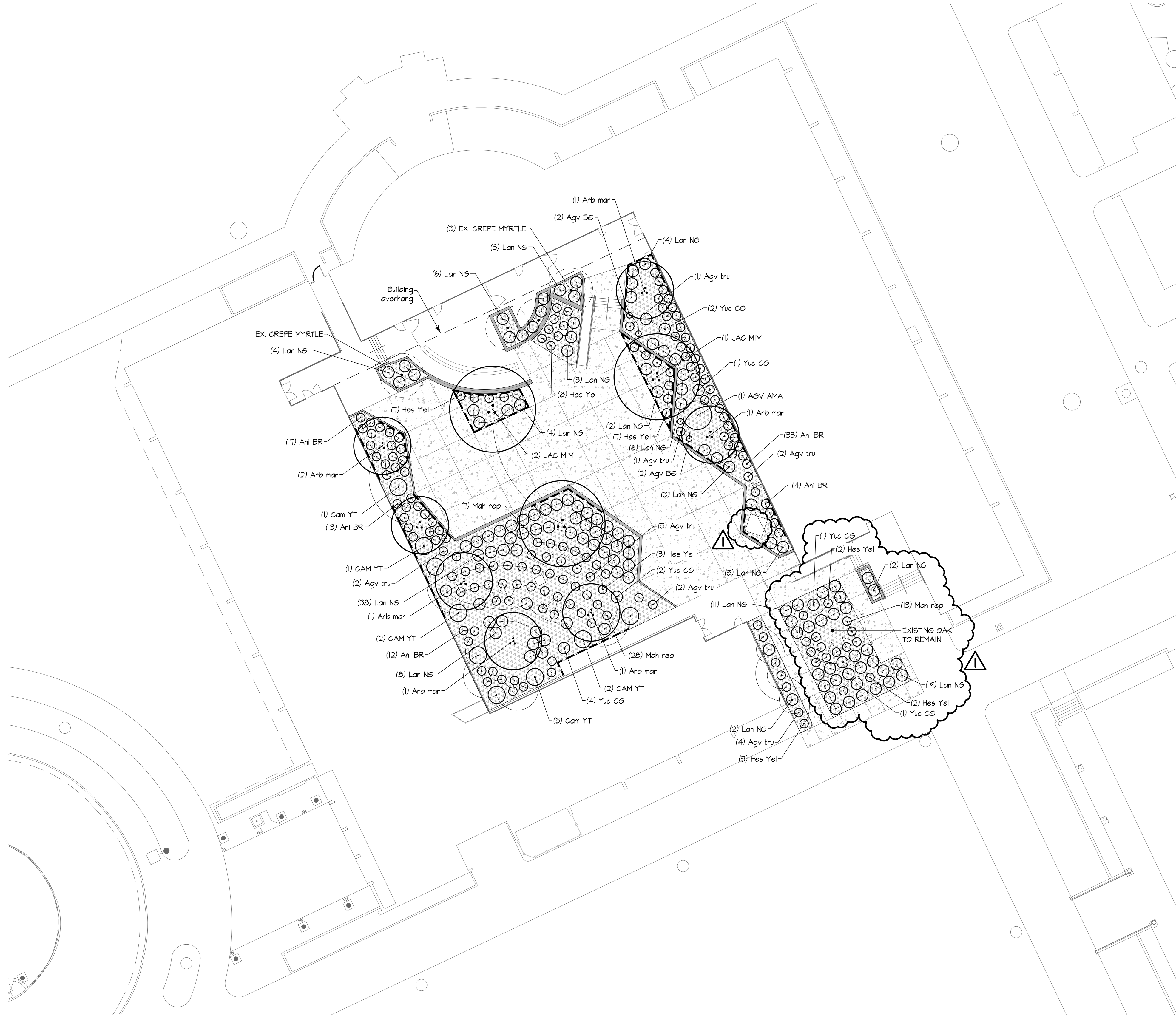
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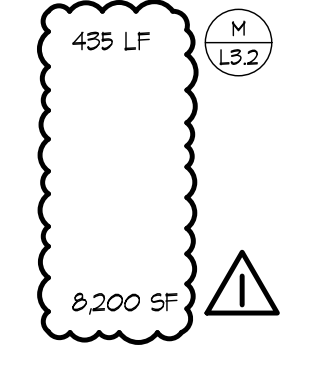
PLANT LIST

CODE	SCIENTIFIC NAME	COMMON NAME	SIZE	MTR.	QTY.	DETAIL
TREES						
Arb mar	Arbutus 'Marina' - multi	Marina Madrone - multi	48" box	L	7	(L32)
Jac mim	Jacaranda mimosifolia - multi	Jacaranda - multi	48" box	VL	3	(L32)
SHRUBS						
Agy ana	Agave americana	American Agave	15 gal.	VL	1	(L32)
Agy BG	Agave 'Blue Glow'	Blue Glow Agave	5 gal.	L	4	(L32)
Agy tru	Agave parryi v. truncata	Artichoke Agave	5 gal.	VL	15	(H)
Ani BR	Anigozanthos 'Big Red'	Big Red Kangaroo Paw	5 gal.	L	74	(L32)
Cam YT	Camellia sasanqua 'Violetta'	'Vile Tide' Camellia	15 gal.	M	4	(L32)
Hes Yel	Hesperaloe parviflora 'Yellow'	Yellow Yucca	5 gal.	L	30	(L32)
Lan NG	Lantana 'New Gold'	New Gold Lantana	5 gal.	L	18	(L32)
Mah rep	Mahonia repens	Creeping Oregon Grape	5 gal.	L	46	(L32)
Yuc CG	Yucca filamentosa 'Color Guard'	Color Guard Yucca	5 gal.	L	12	(L32)

ROOT BARRIER

--- VESPRO 24" ROOT GUIDE & BARRIER - EXTRUDED POLYETHYLENE PANELS - CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ROOT BARRIERS AT ALL LOCATIONS INDICATED ON PLAN AS WELL AS THOSE REQUIRED BY DETAILS & SPECS.

ROCK MULCH:
3/4" CRUSHED ROCK
9" MIN. DEPTH
MFR: EARTHSTONEROCK.COM
COLOR: CALIFORNIA GOLD



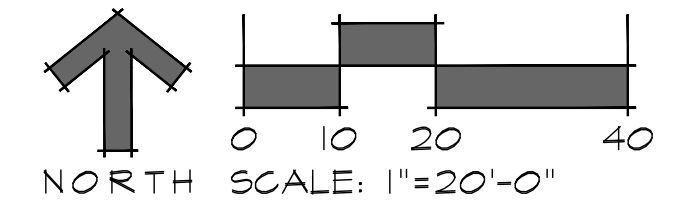
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FILE: 15-C1
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APN:

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PLANTING PLAN

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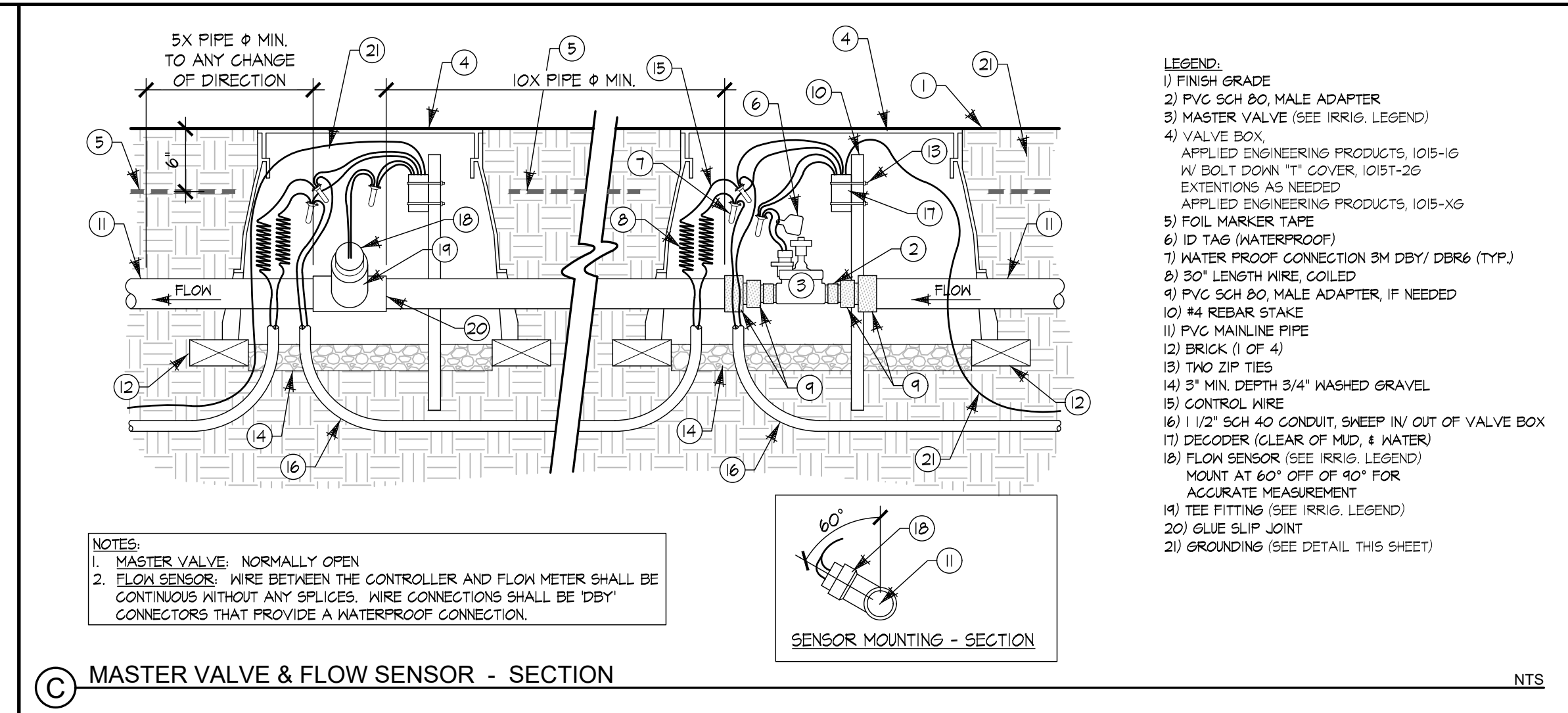
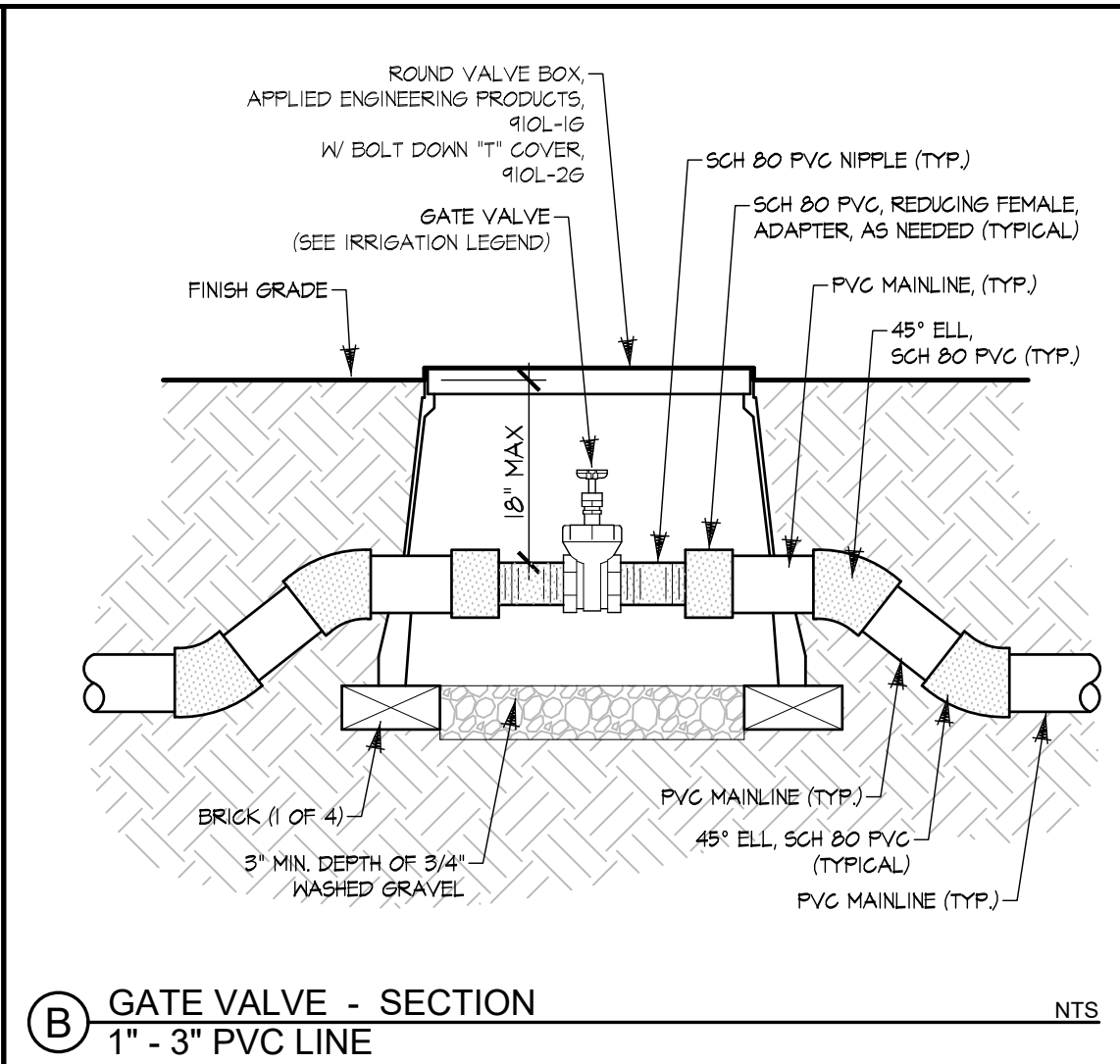
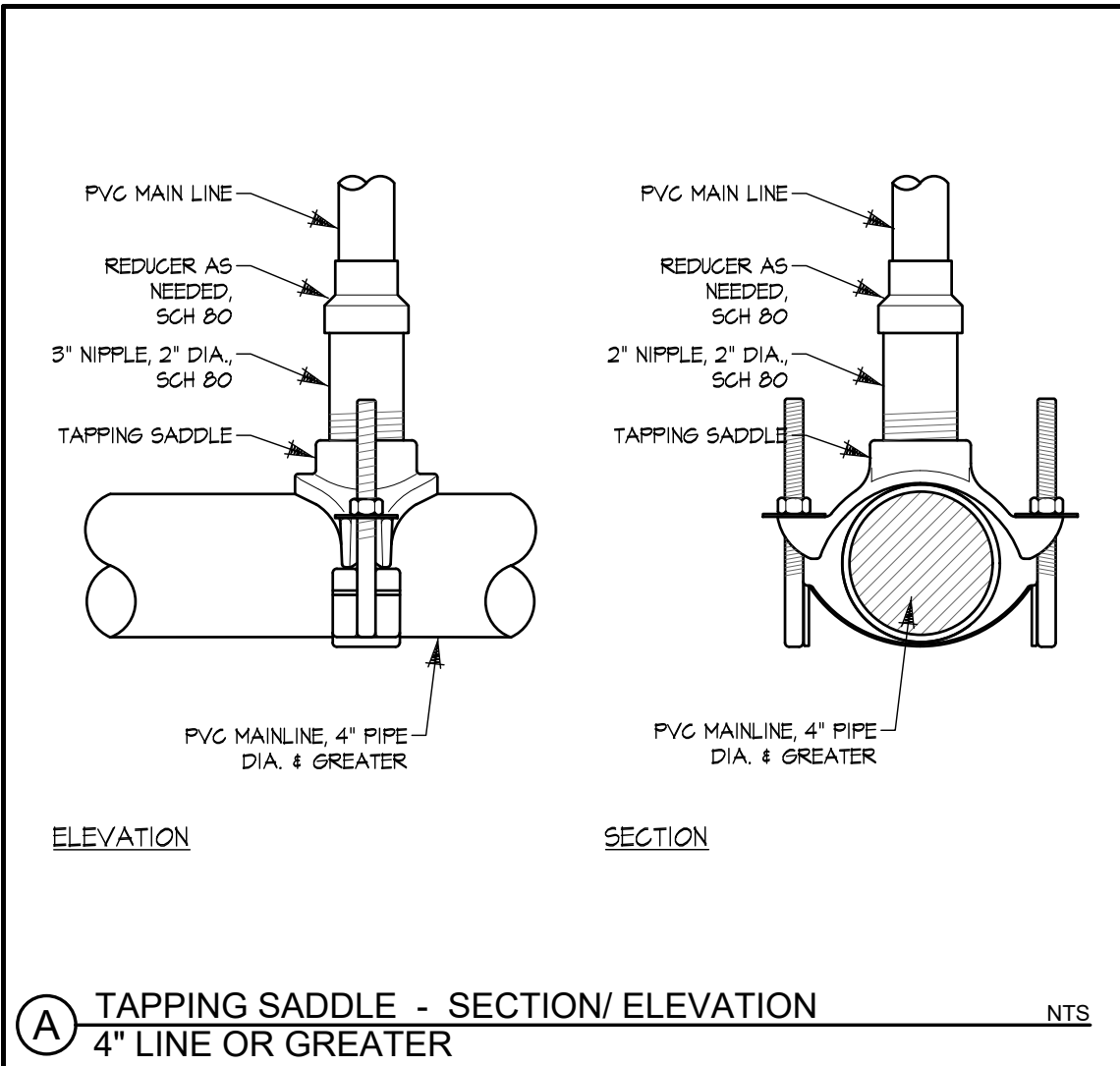


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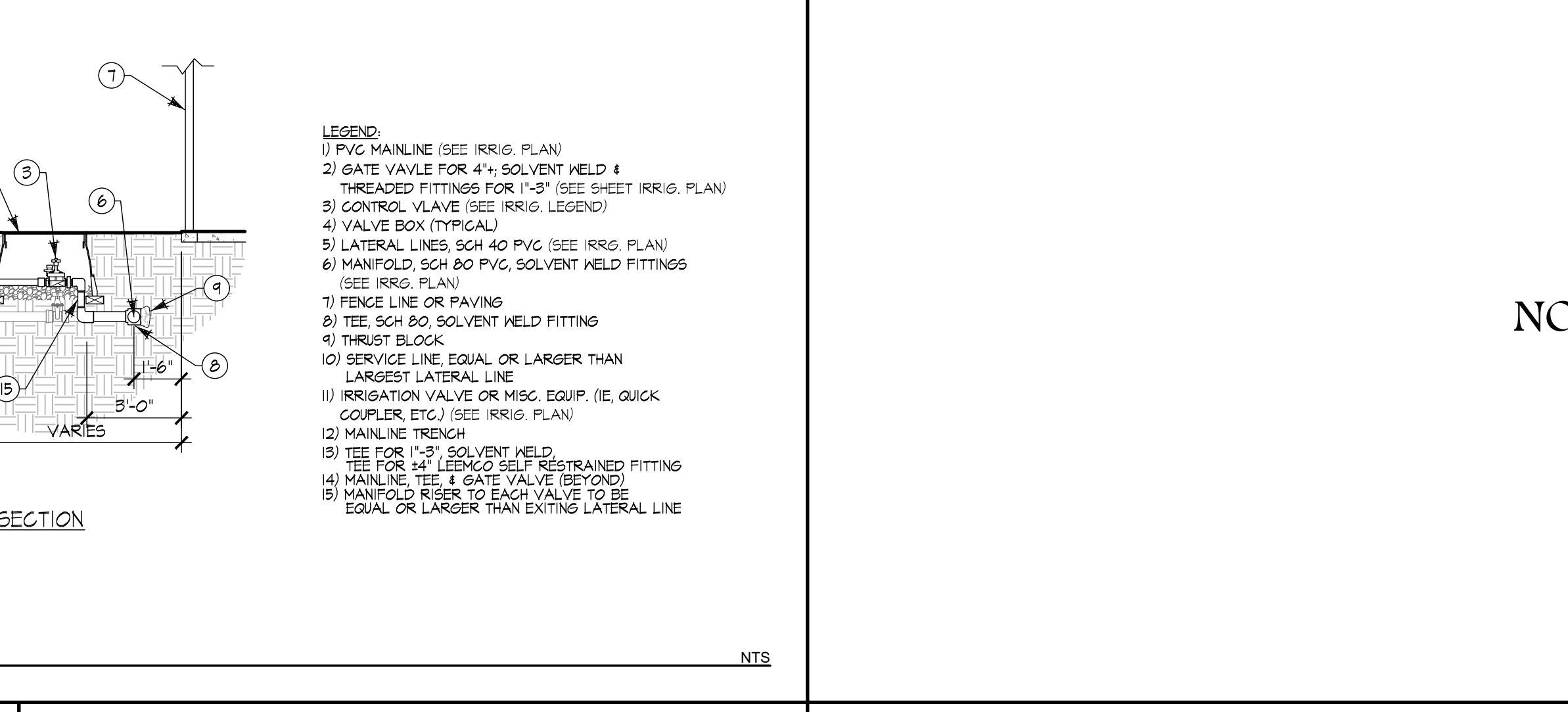
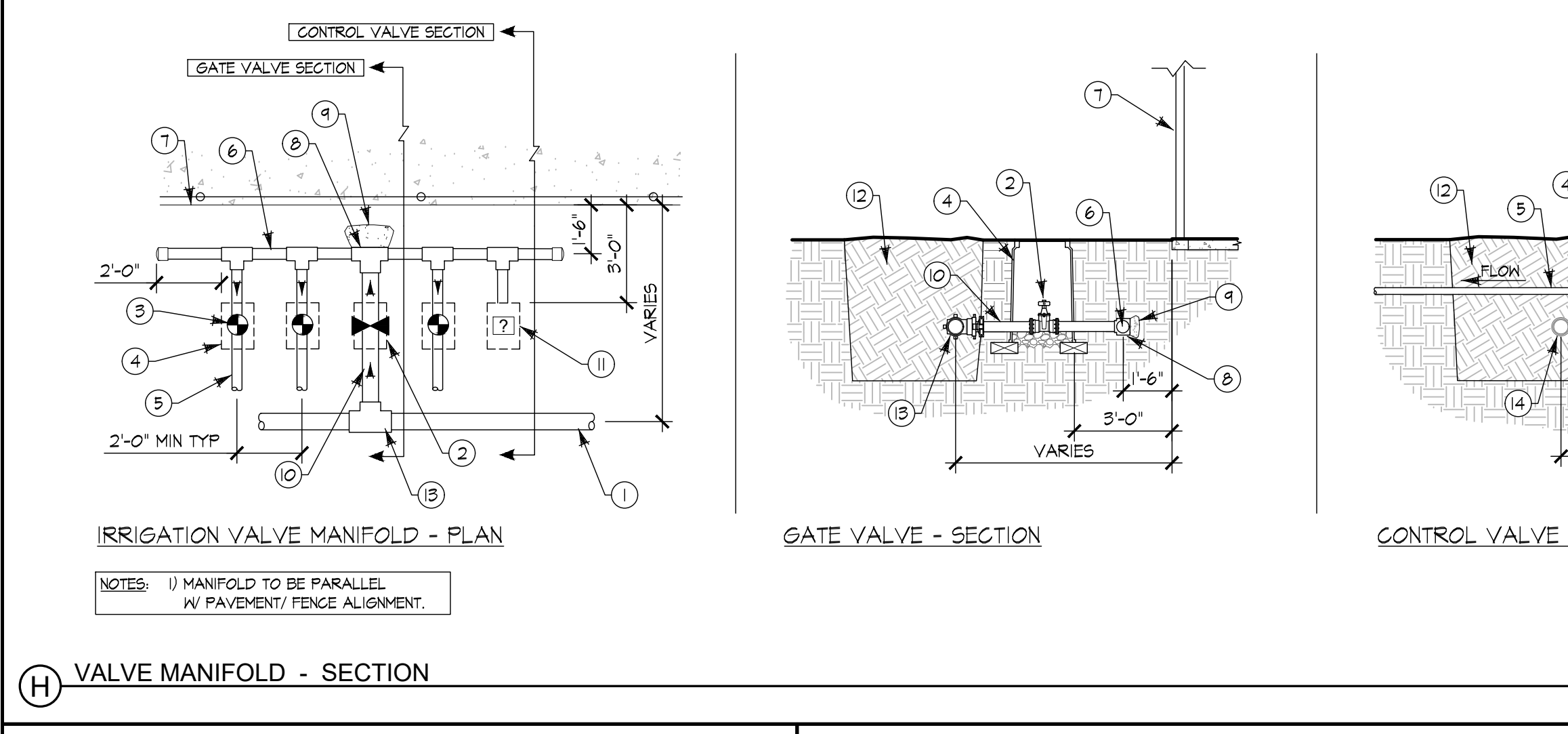
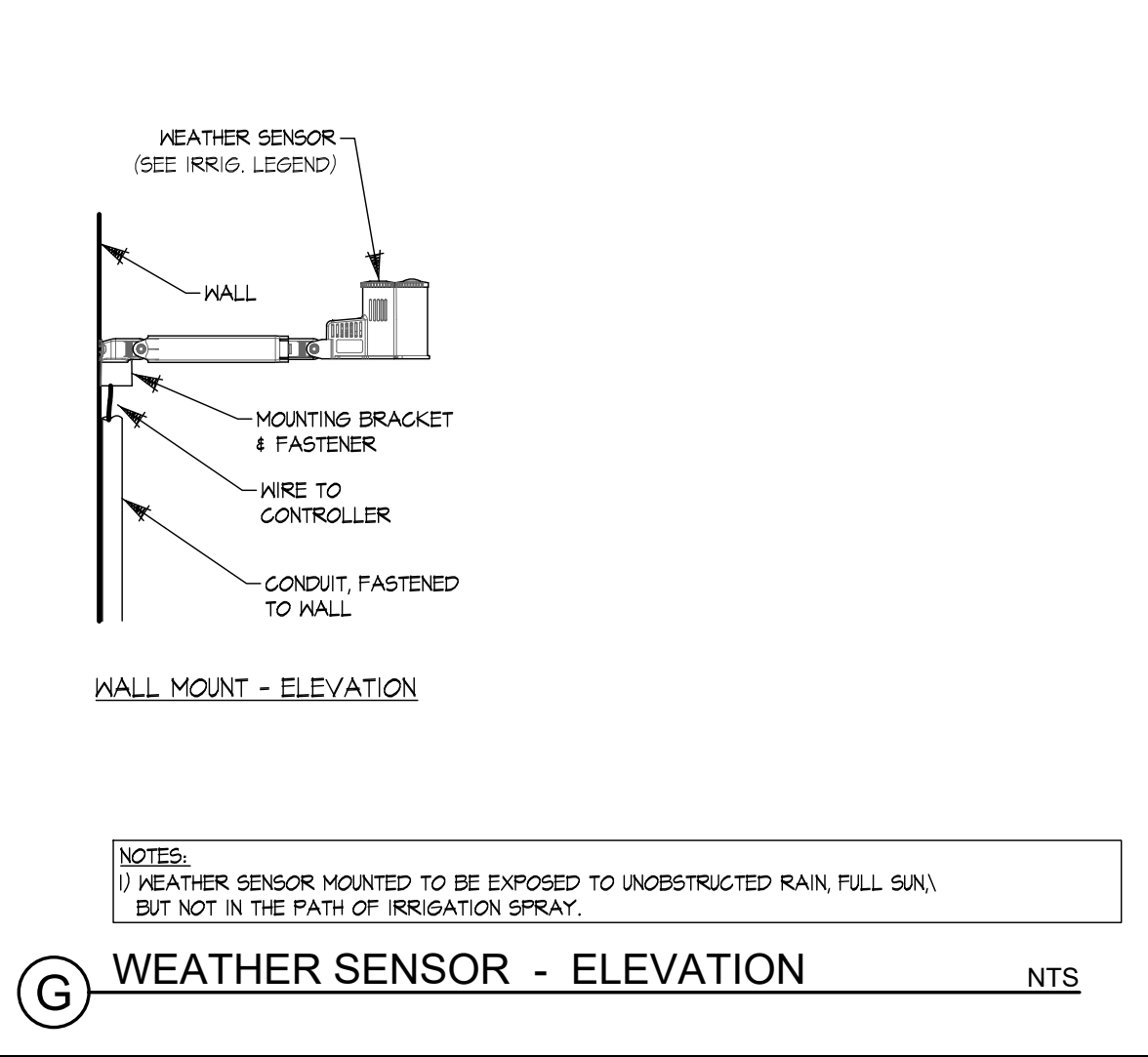
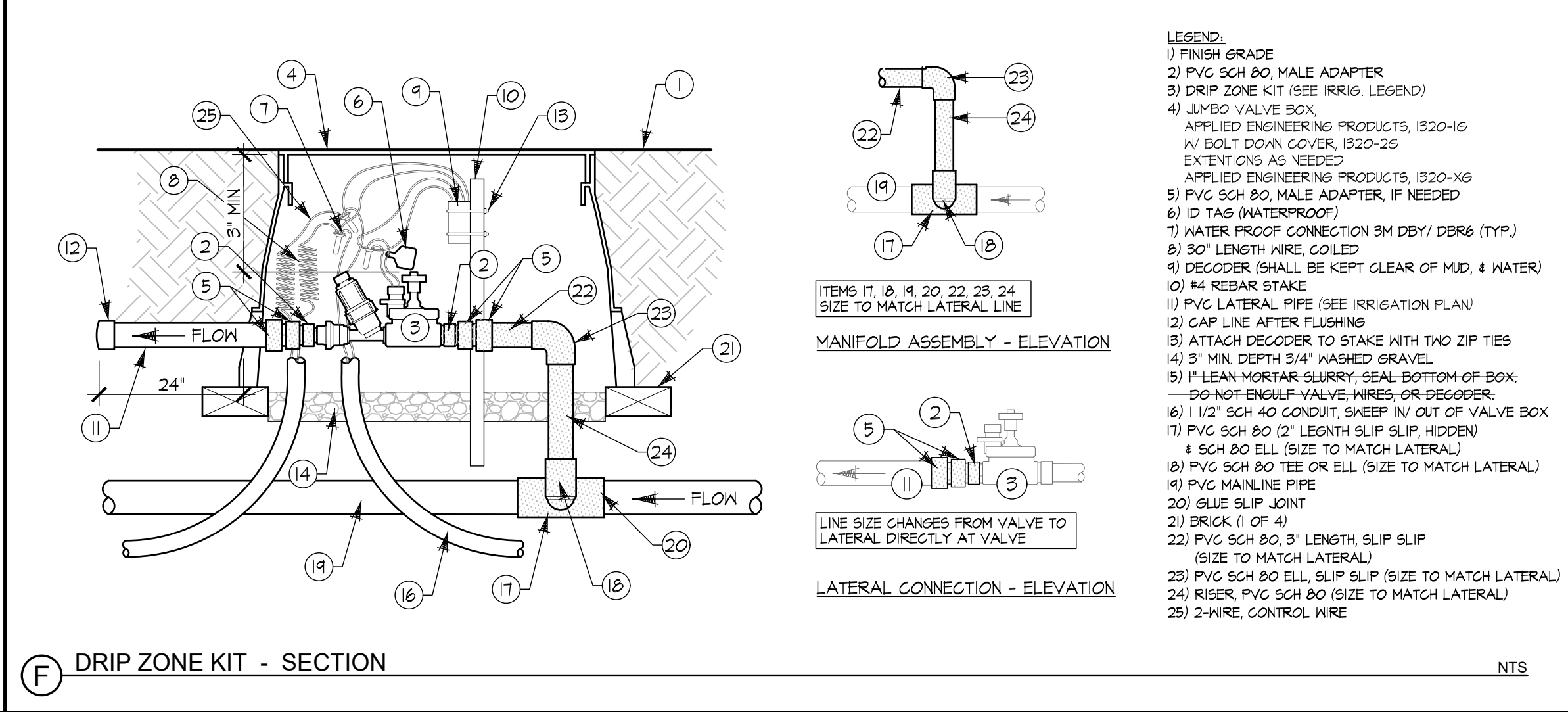
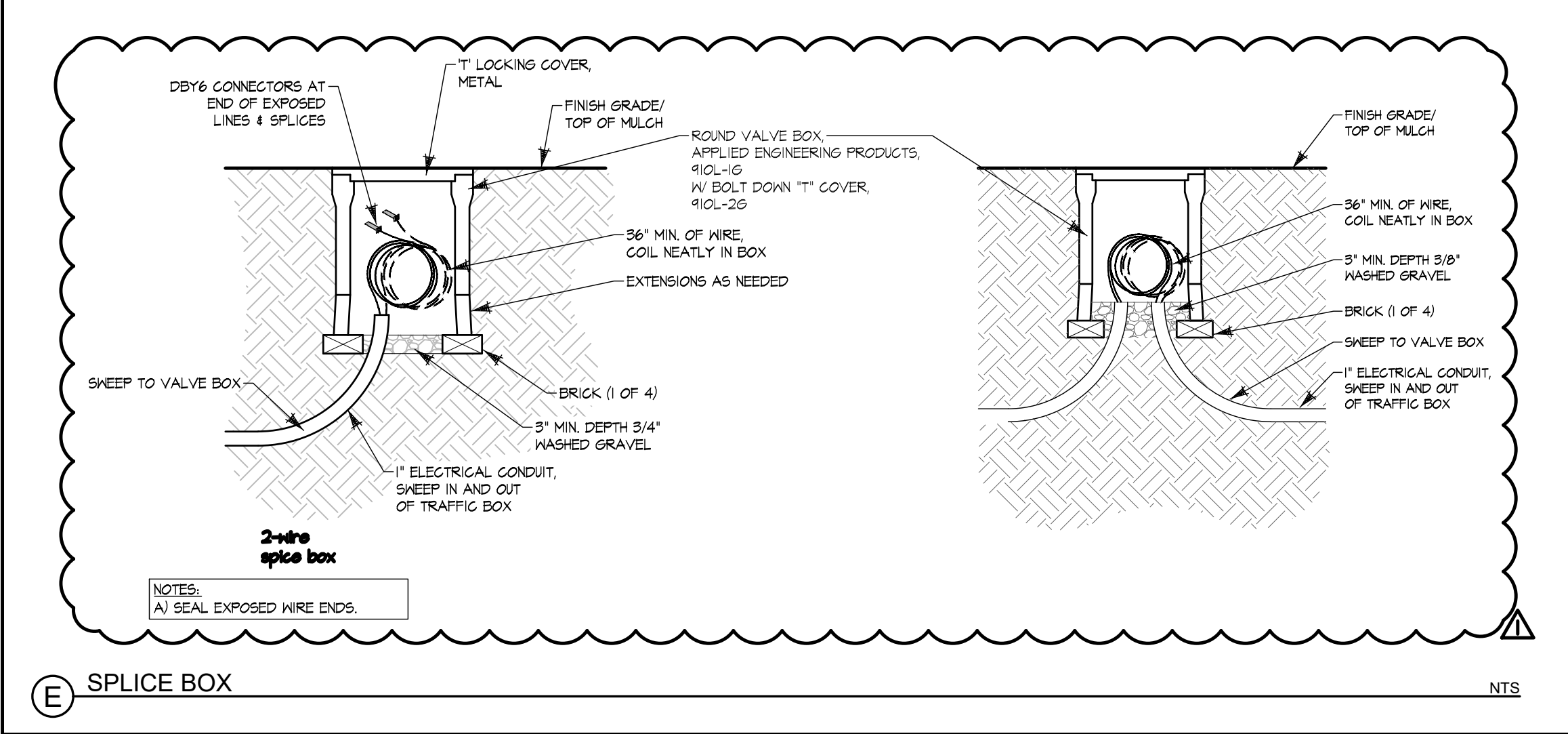
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APPROVED ARCHITECT
DORRIS MILTON SMITH
C 15885
9-30-23
REISSUED

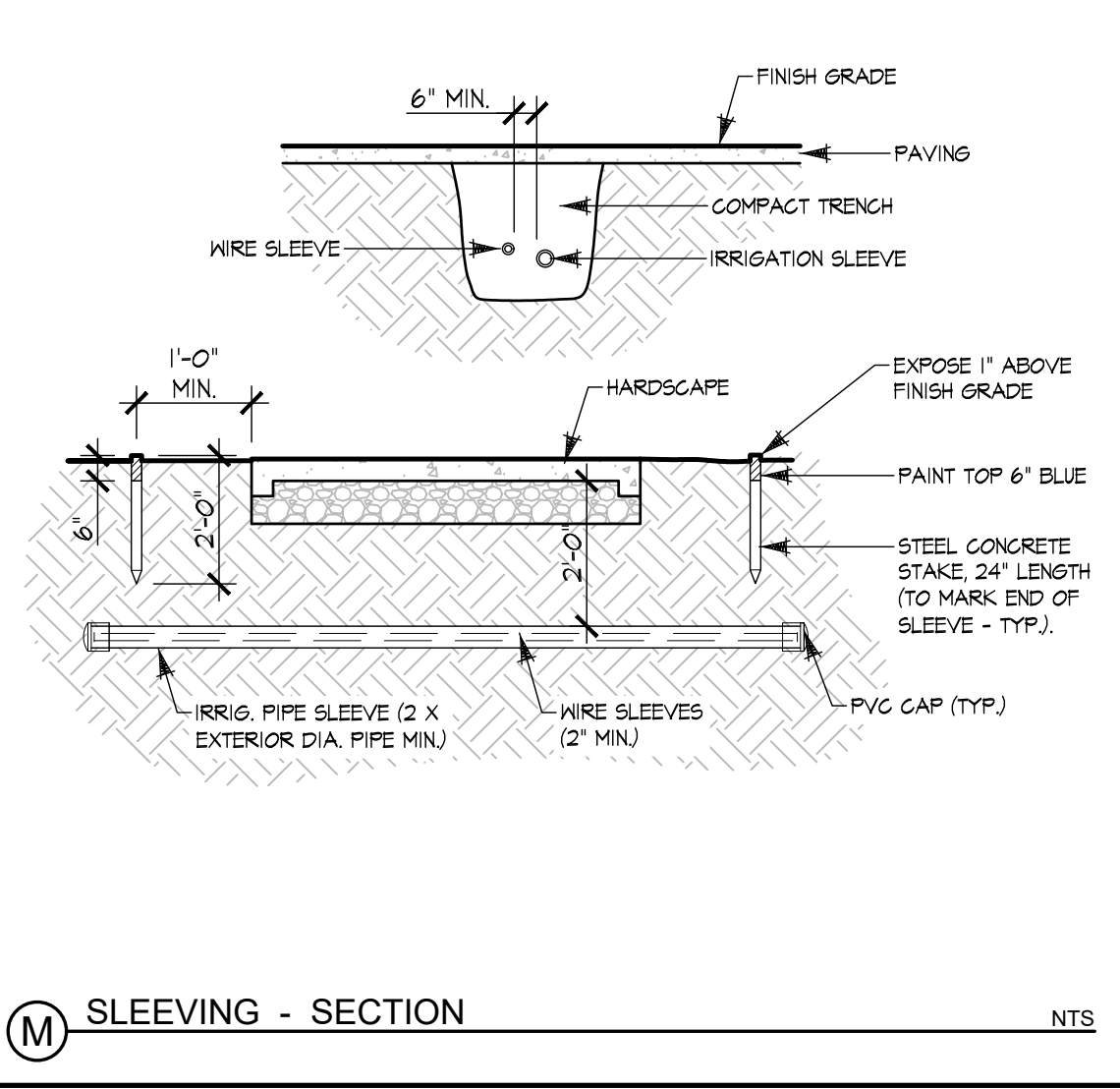
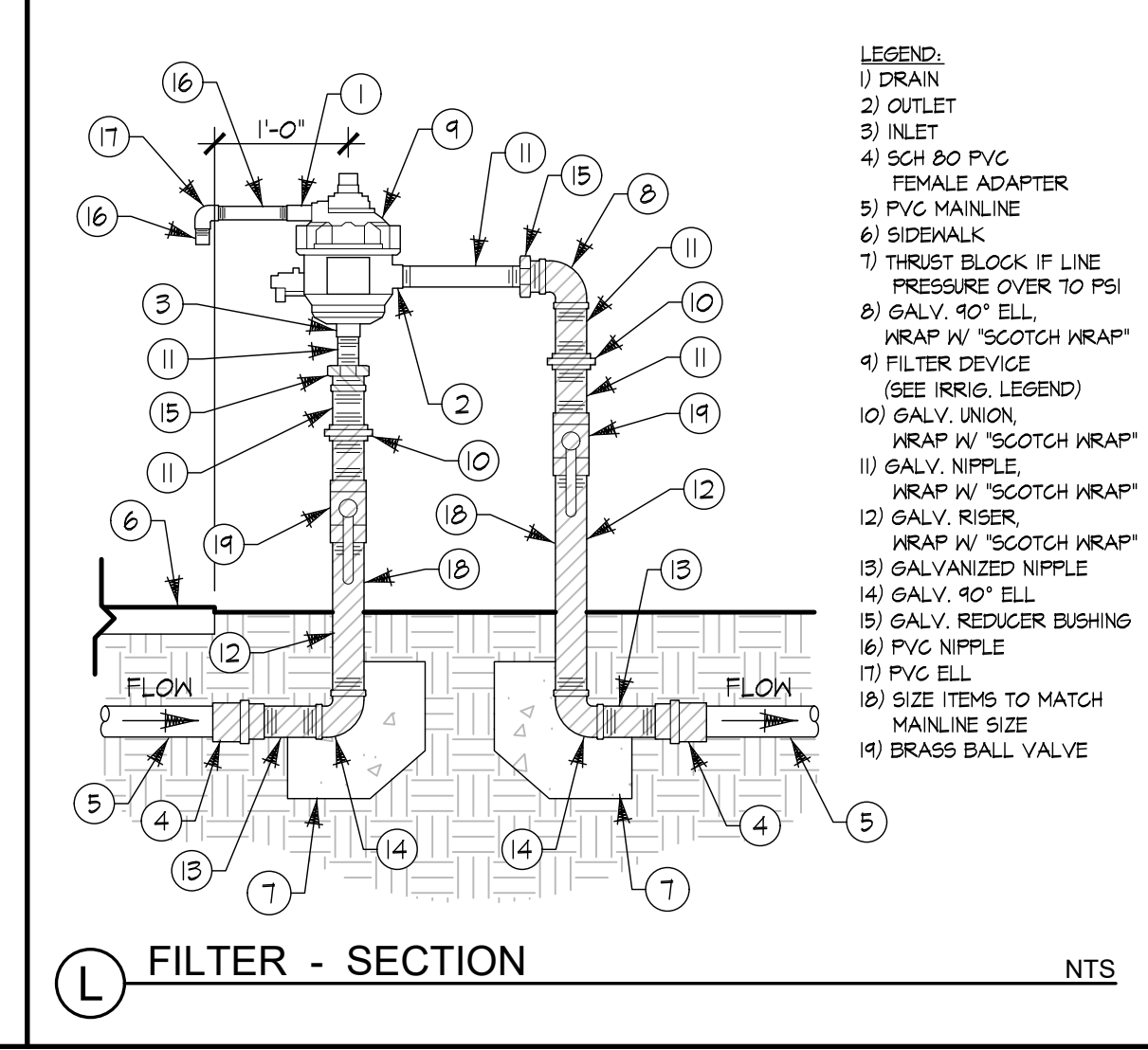
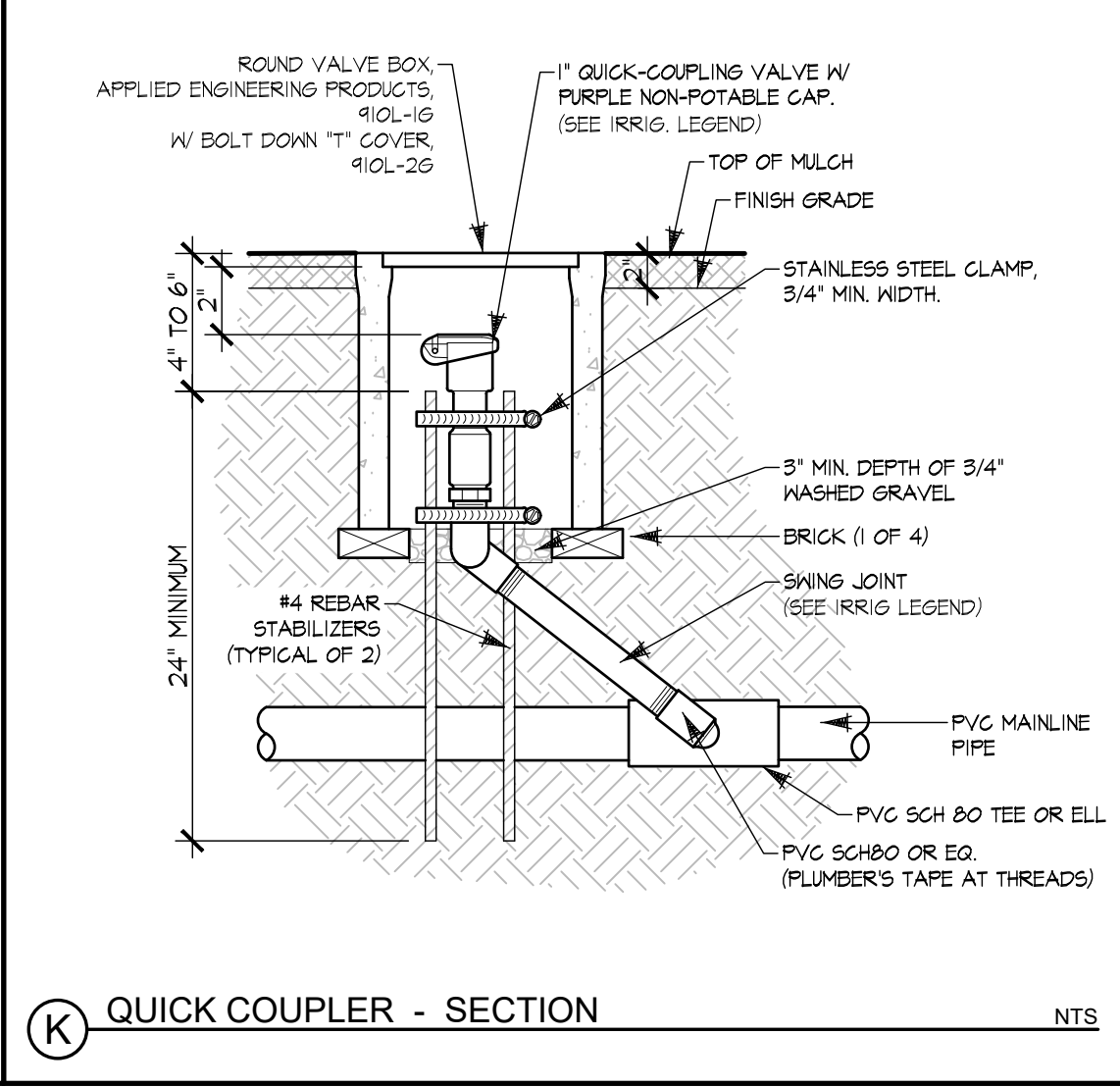
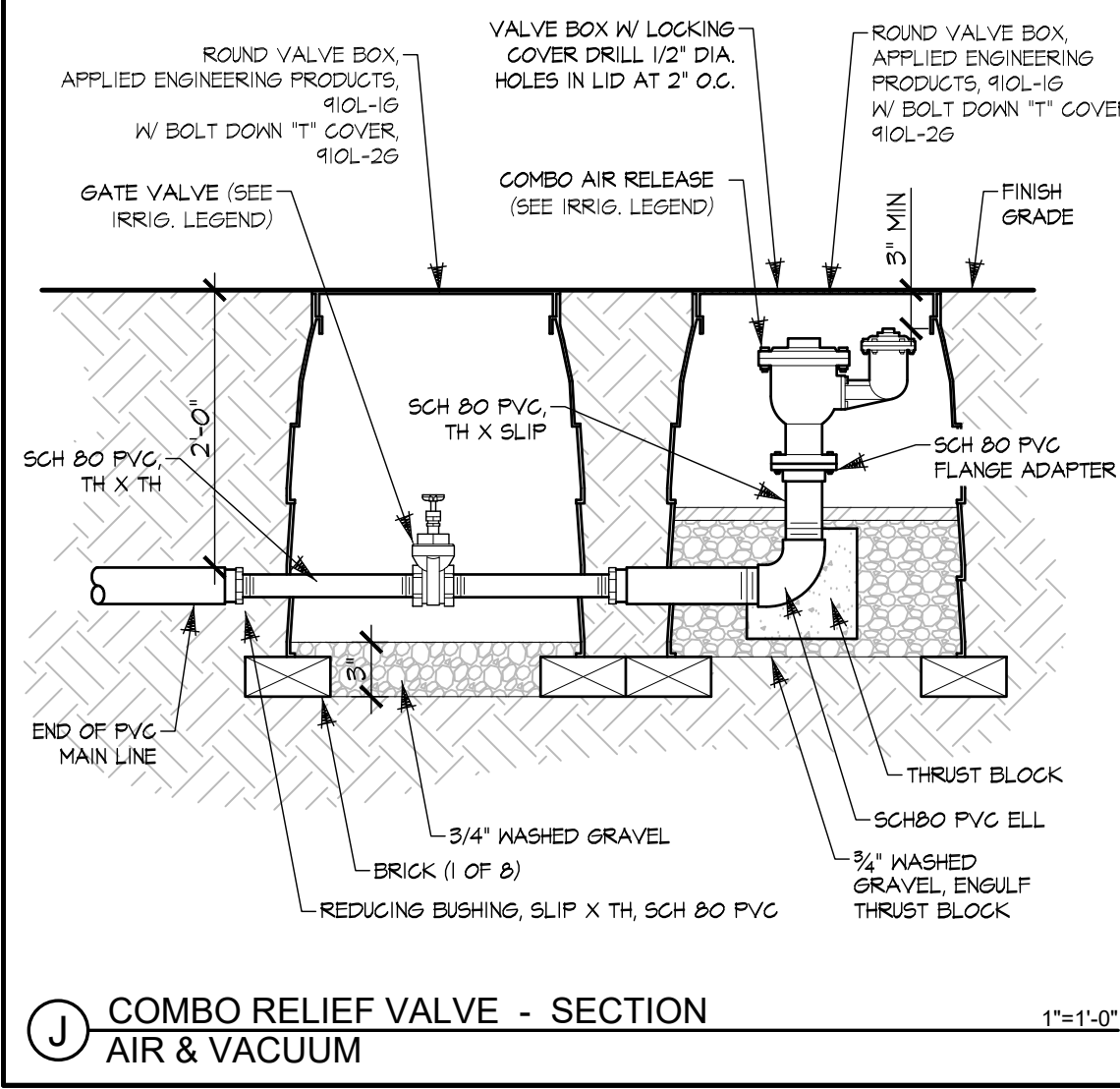
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IRRIGATION
DETAILS

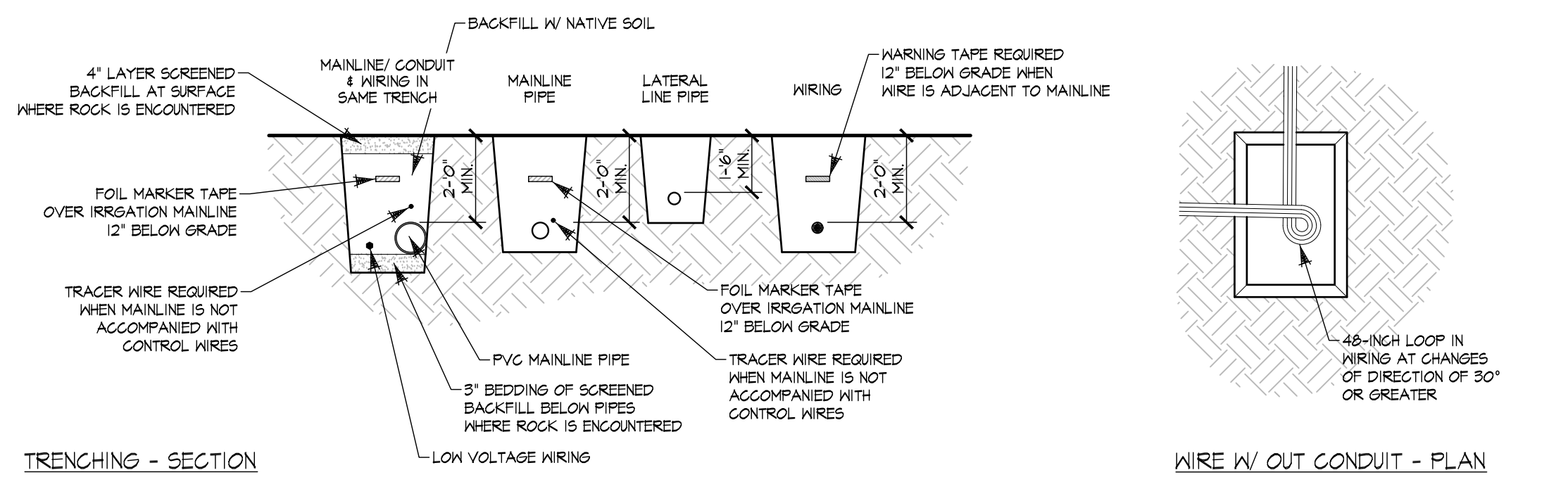
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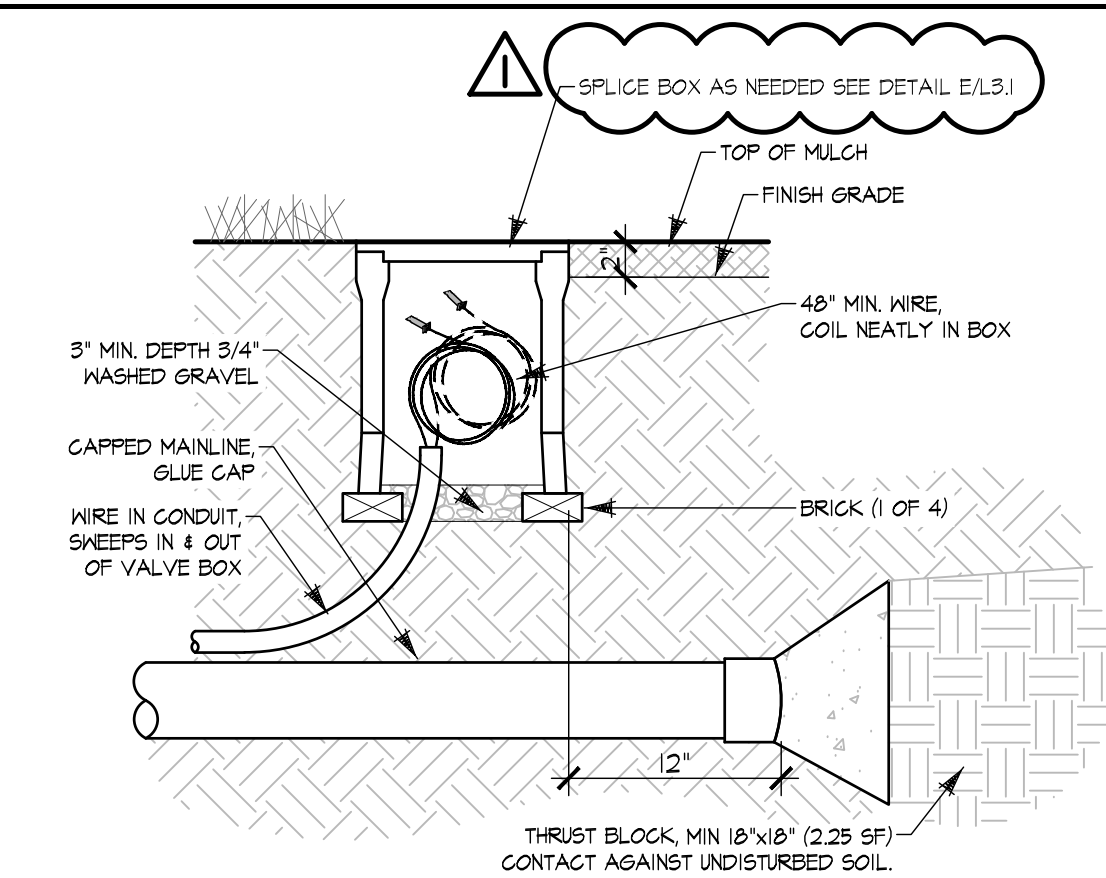
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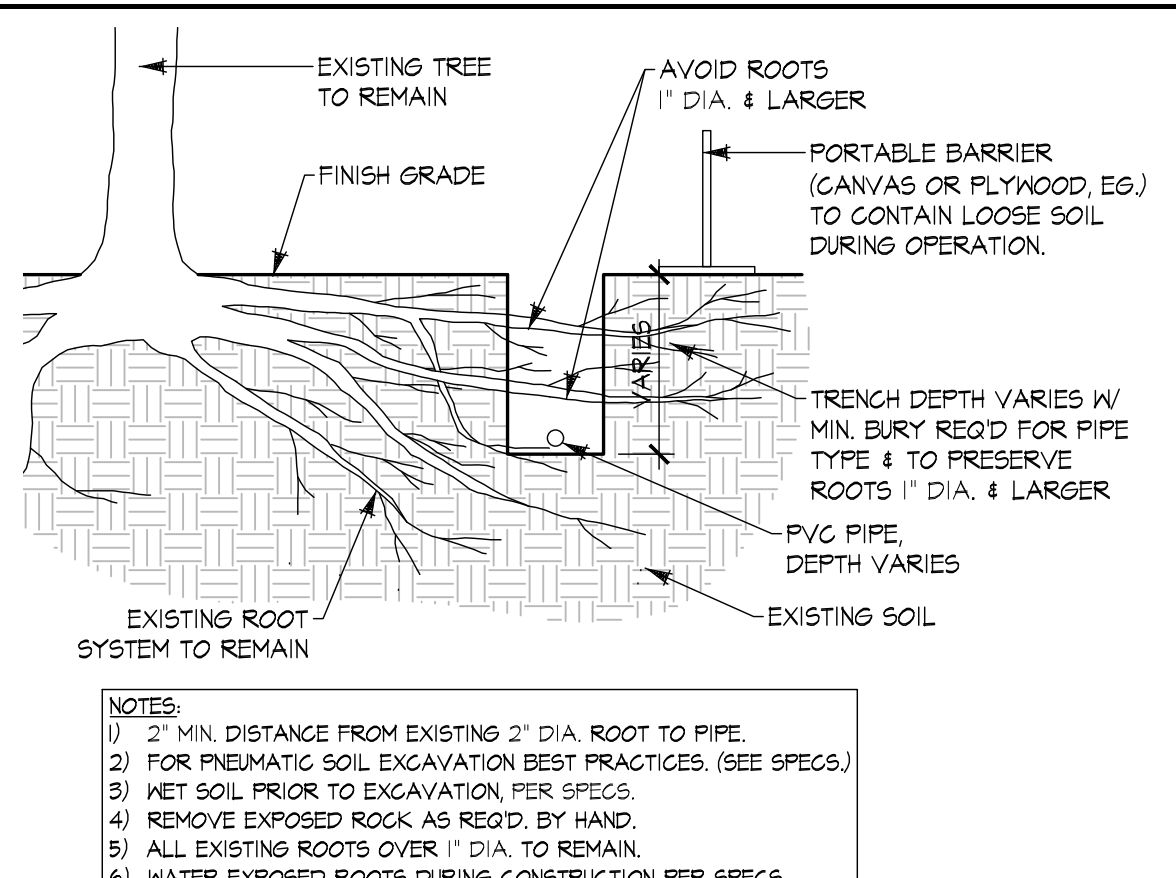


A TRENCHING NTS

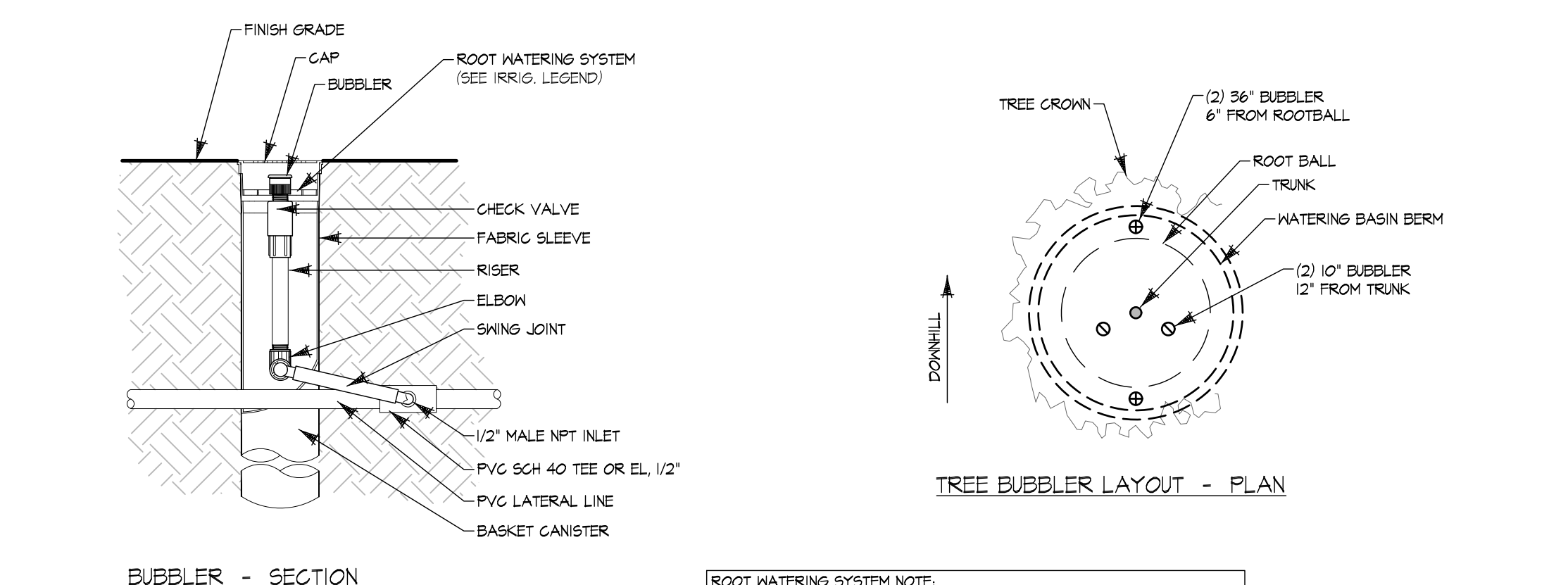
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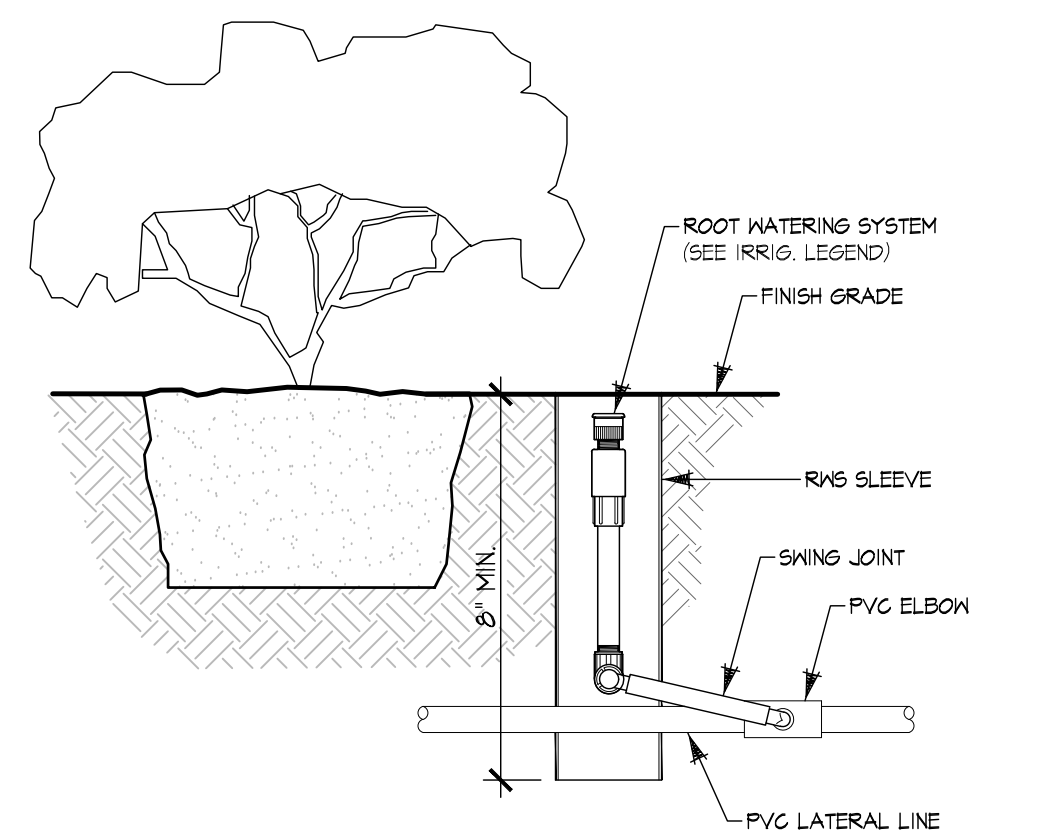
C MAINLINE CAP W/ OUT VALVE - SECTION NTS



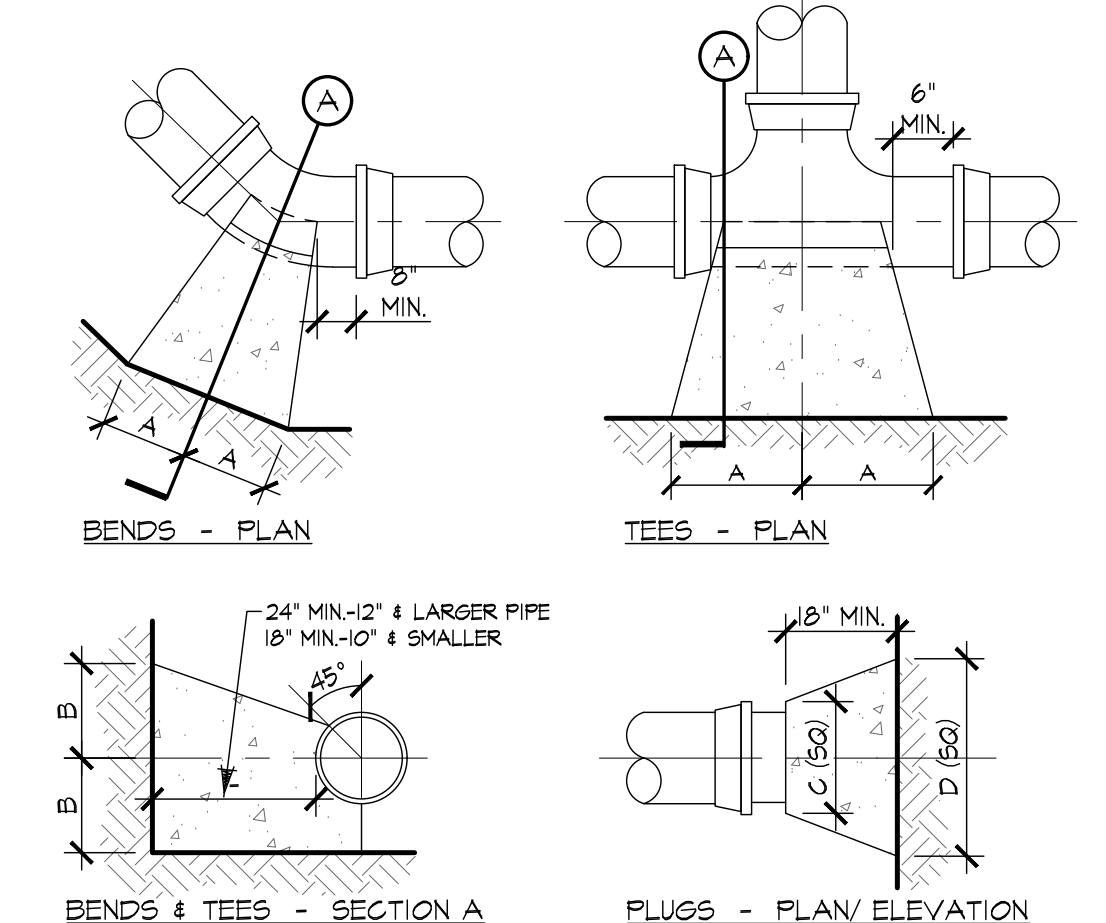
D AIR OR HAND TRENCHING @ EXISTING TREES SECTION NTS



E TREE ROOT WATERING - SECTION/ PLAN NTS



F SHRUB ROOT WATERING - SECTION NTS



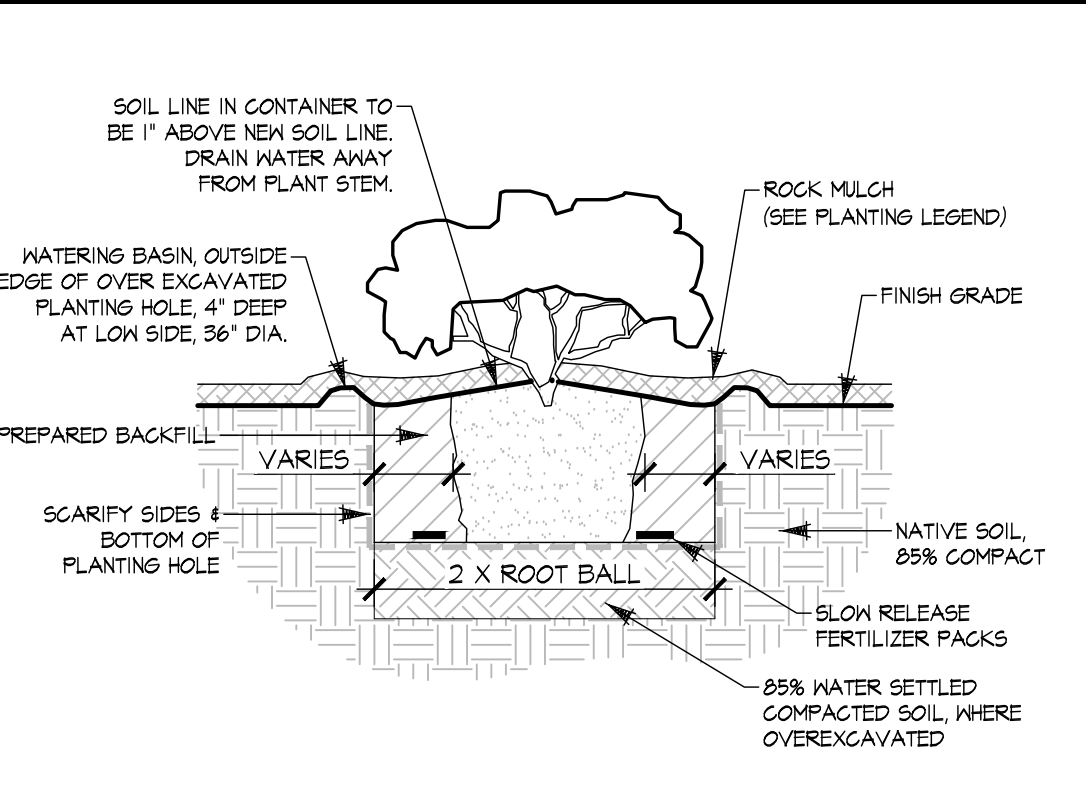
G THRUST BLOCKING NTS

STANDARD THRUST BLOCKS FOR WATER MAINS

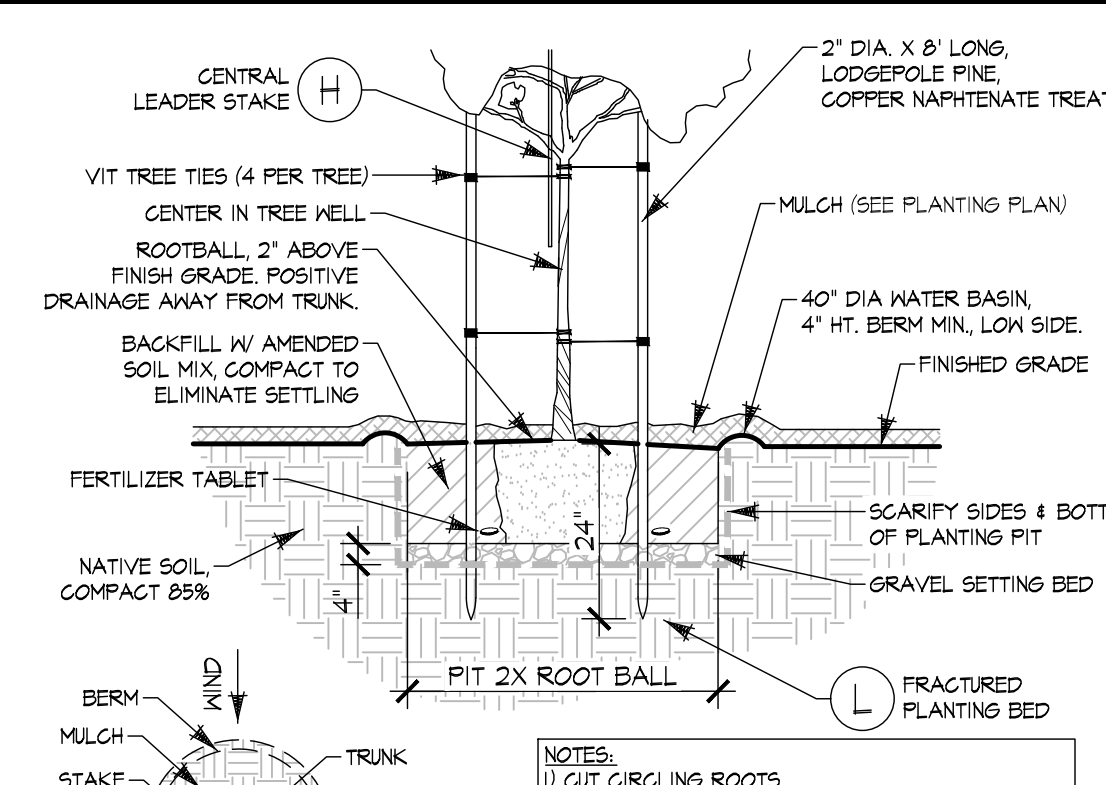
TYPE	1/4 BEND		1/2 BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B
6"	8"	10"	8"	8"	8"	8"	8"	15"
8"	12"	12"	8"	10"	8"	8"	12"	20"
10"	16"	14"	10"	12"	8"	10"	14"	14"
12"	18"	16"	12"	14"	8"	11"	14"	30"
14"	23"	18"	14"	16"	10"	12"	16"	34"
16"	28"	20"	16"	18"	11"	13"	20"	38"
6"	16"	10"	4"	10"	6"	8"	10"	21"
8"	22"	15"	12"	15"	8"	10"	19"	24"
10"	26"	17"	14"	17"	10"	13"	20"	36"
12"	24"	21"	16"	21"	11"	16"	24"	41"
14"	35"	24"	18"	24"	12"	20"	22"	18"
16"	38"	27"	21"	27"	12"	24"	30"	54"

NOTE: BASE IN 100 PSI STATIC PRESSURE PLUS A.M.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.

NOTES:
 1. SUPPLY LINES 3-INCHES IN DIAMETER & LARGER SHALL RECEIVE CONCRETE THRUST BLOCKS.
 2. FORM THRUST BLOCKS PER PLUMBING SPECIFICATIONS.
 3. INSTALL ALL PIPE IN STRICT ACCORDANCE W/ PIPE MANUFACTURERS INSTRUCTIONS & RECS.
 4. FOR OTHER IRRIGATION EQUIPMENT SEE DETAILS.
 5. STRAIGHT RUNS OF GASKETED PIPE TO BE THRUST BLOCKED AT 40' O.C. MIN. & 100' O.C. MAX.



H SHRUB PLANTING - SECTION NTS



I TREE PLANTING - SECTION IN DG NTS

NOT USED

WATER EFFICIENT LANDSCAPE WORKSHEET

McCuen Courtyard Site Landscape Plan Date: 17/1/2023

Reference Evapotranspiration: 52.4 Kern
 MAWA Allowance: 0.65

Hydrozone # and Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency *	ETAF (PF/IE)	Landscape Area (sf)	ETAF x Area	Estimated Total Water Use (ETWU)
Medium / Very Low - Shrub/Tree	0.32	drip	0.81	0.40	7,340	2,900	94,207
0	0.40	drip	0.81	0.49	-	-	-
0	0.00	drip	0.81	0.00	-	-	-
0	0.00	drip	0.81	0.00	-	-	-
0	0.00	0	0.75	0.00	-	-	-
0	0.00	0	1	0.00	-	-	-
Totals						7,340	2,900

SPECIAL LANDSCAPE AREAS

Method	Efficiency	ETAF	Area	ETAF x Area	ETWU
spray	0.75	1	-	-	-
drip	0.81	1	0	-	-
Totals		1	0	-	-

ETWU Total: 94,207
 Maximum Allowed Water Allowance (MAWA): 155,000

REGULAR LANDSCAPE AREA

Total ETAF x Area	2,900
Total Area	7,340
Average ETAF	0.40

ETAF Calculations

ALL LANDSCAPE AREAS		*IE
Total ETAF x Area	2,900	drip = .81
Total Area	7,340	spray = .75
Sitewide ETAF	0.40	

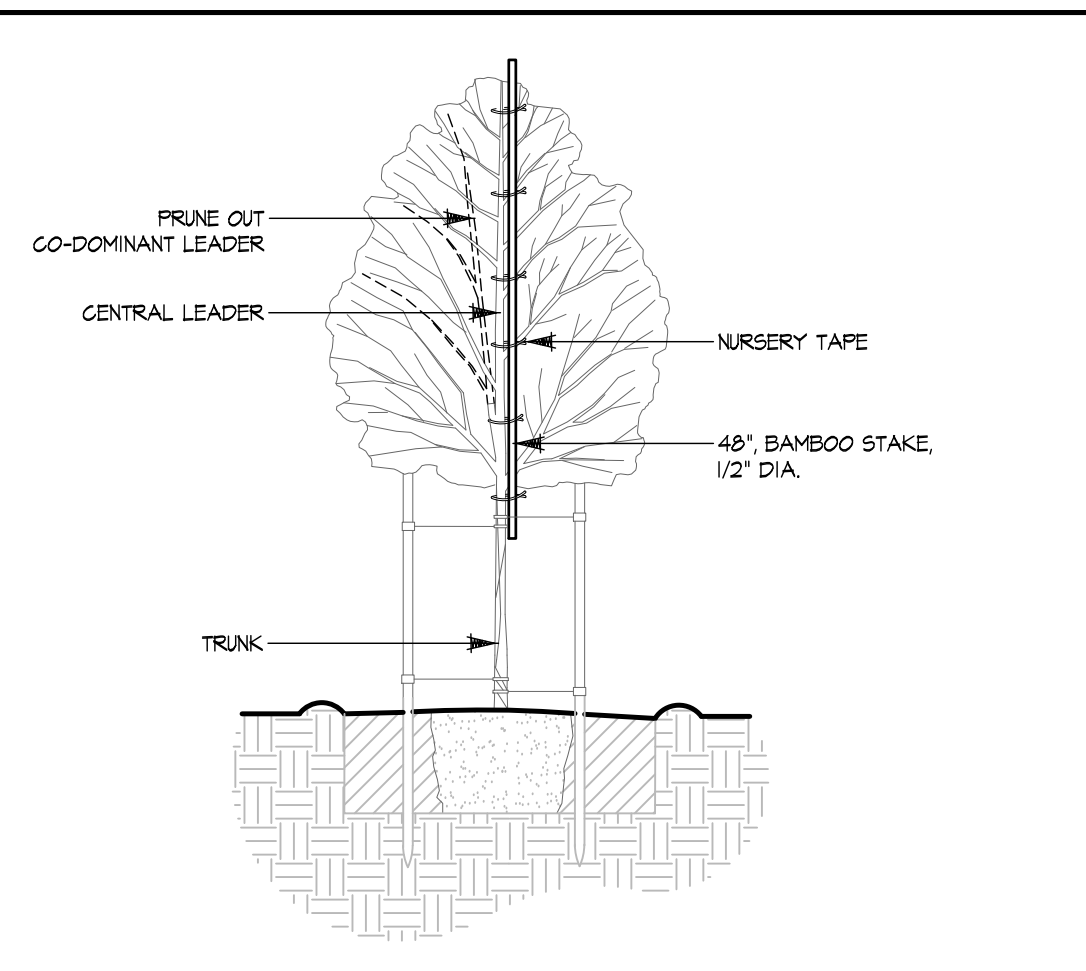
Project Information

Project:	McCuen Courtyard	Total Landscape Area:	7,340
Location:	Bakersfield, CA	Project Type:	DSA
Applicant:	Kern Community College District	Water Source:	City

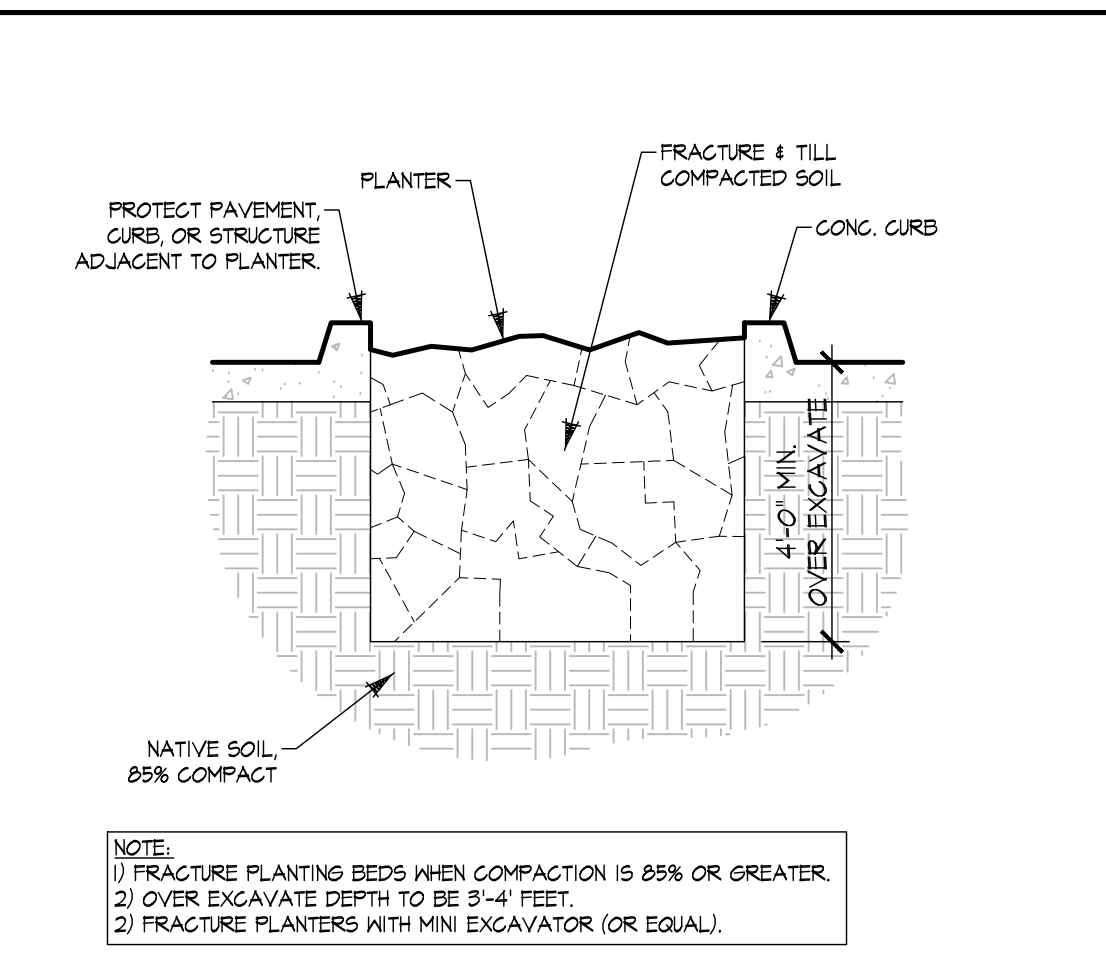
Checklist of Provided Documents:

x	Water Efficient Worksheet & Budget
	Soil Analysis - to be provided prior to Certificate of Completion
x	Planting and Irrigation Plans
	Grading Plans - by Civil

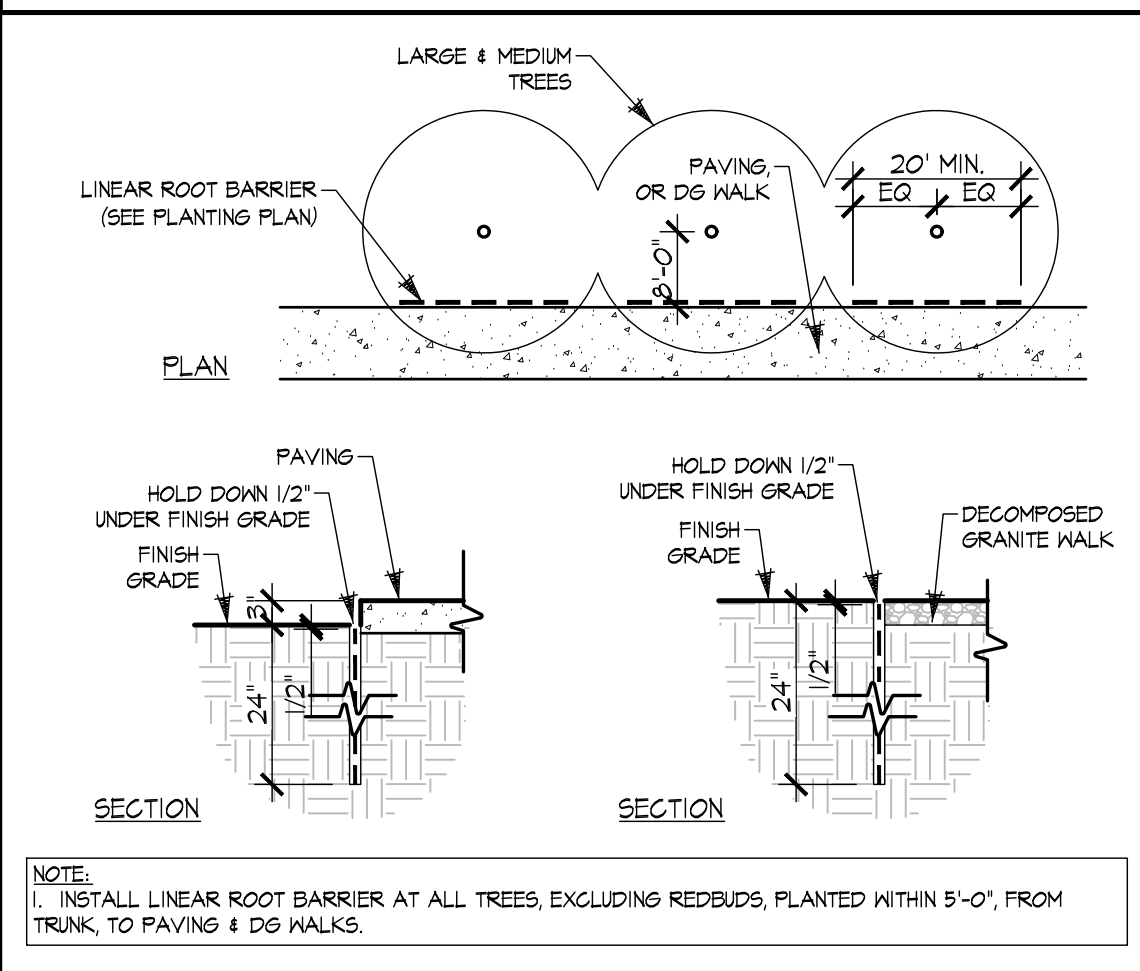
N WATER BUDGET - WEL0 NTS



K CENTRAL LEADER STAKE - SECTION/ ELEVATION NTS



L PLANTING OVER EXCAVATION - SECTION NTS



M LINEAR ROOT BARRIER - SECTION/ PLAN NTS

LANDSCAPING & OUTDOOR LEARNING SPACES
 KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE BAKERSFIELD, CA 93305

DATE: 03-12-16
 FILE: 15-C1
 APN:

REV	DATE	DESCRIPTION
01/1/2023	BID SET	
01/01/2023	APPENDIX I	

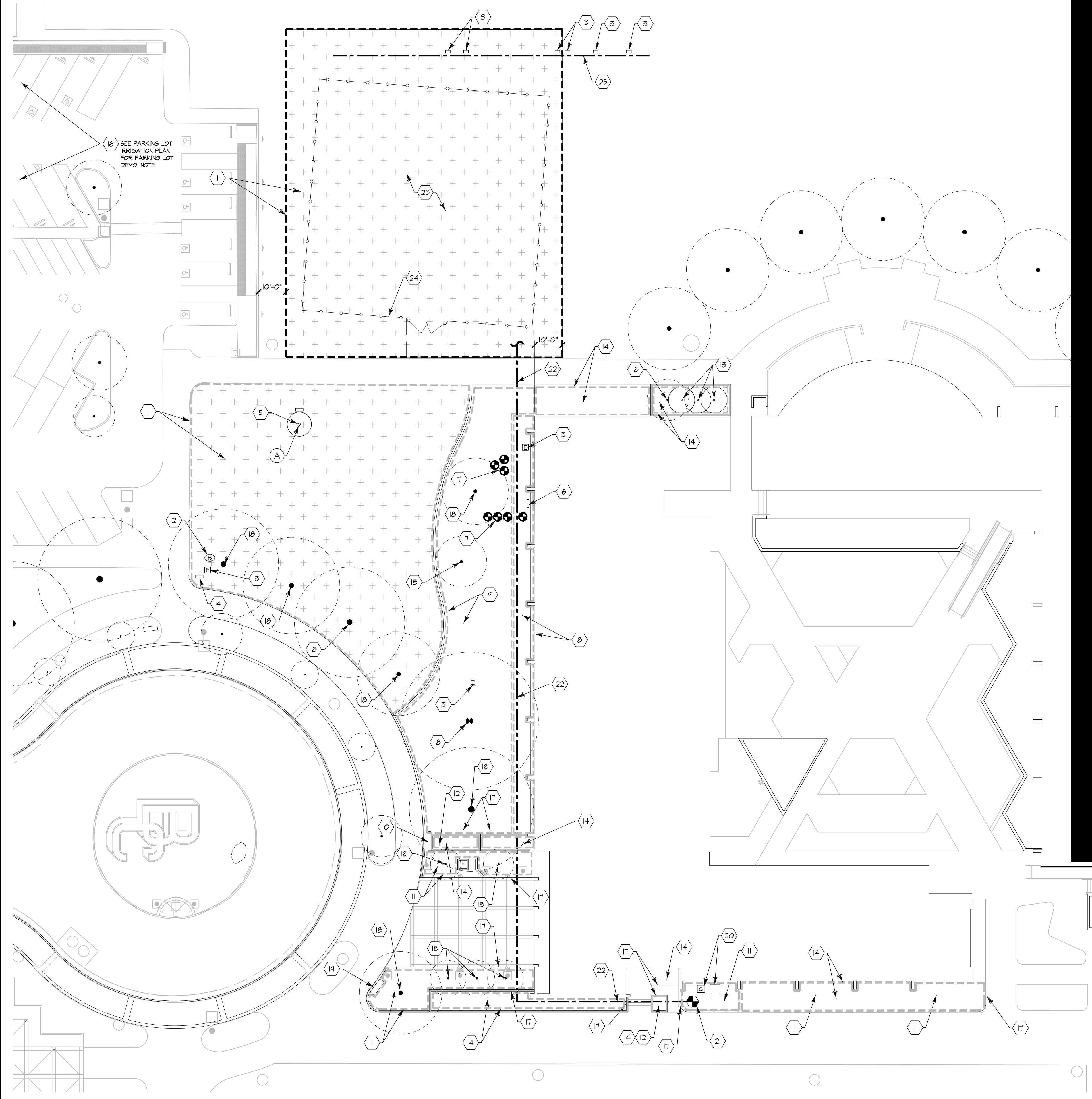
IRRIGATION & PLANTING DETAILS

PRK LICENSED ARCHITECT JOHN HAMILTON SMITH C 15885 9-30-23

Sierra Designs, Inc. Landscape Architecture • Planning
 Visalia, CA
 P.O. Box 6370
 Los Ochos, CA 93412-6370
 ph: 559.733.3690
 cell: 559.730.1917
 dan@sierradesigns.com

DATE OF CALIFORNIA: 1-2023

L3.2

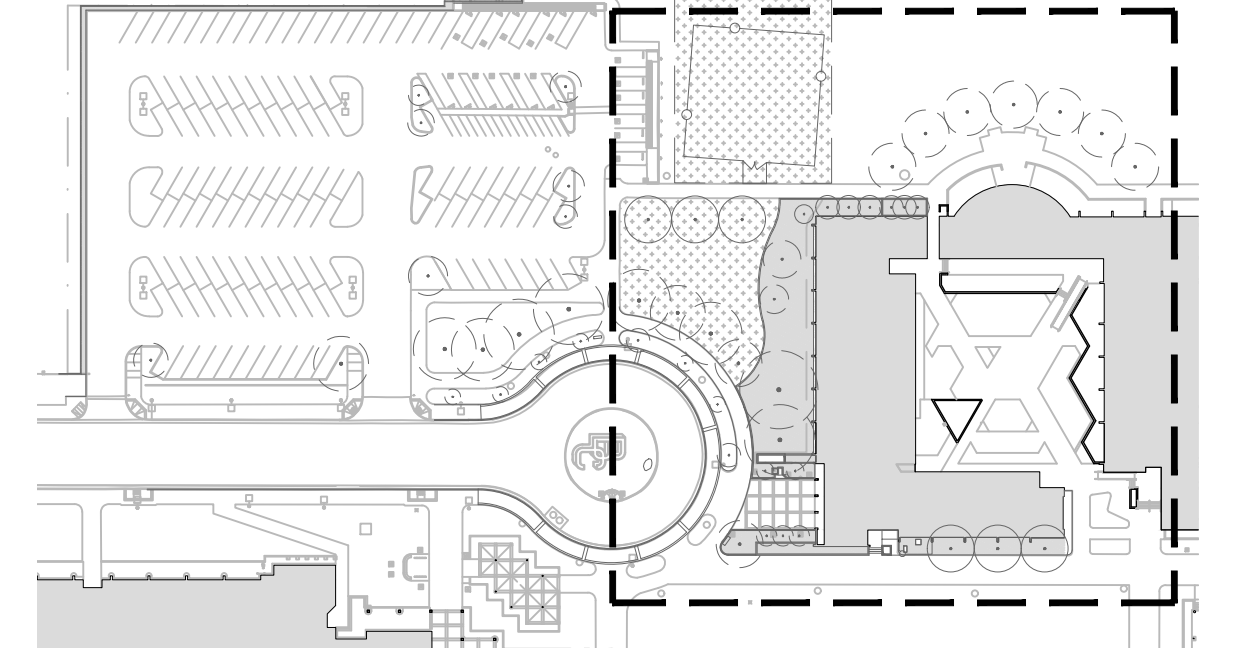


DEMOLITION LEGEND/ NOTES:

1. Turf Areas
 - a. Remove exposed cobble and construction debris (concrete chunks) that exceed 1" in diameter.
 - i. Cobble and solid concrete pieces may be used as backfill in the lower area of the Drainage Zone - see note below.
 - b. Water heavily
 - c. Spray weeds with contact herbicide
 - d. Verticut
 - e. Mow tight and remove thatch.
 - f. Aerate 3"
 - g. Apply Soil Buster
 - h. Apply soil/sand - fill voids.
 - i. smooth grade
 - j. Overseed
 - i. M&O preferred seed mix
 - ii. Top with Turf Max (1/4" layer)
 - l. Top with humus (1/4" layer)
 - m. Water in - set irrigation system for turf start up /germination program
 - n. Rope off with lath 3' stakes 15' oc. and red flagging tape
2. Existing Boulder
3. Existing Electrical Box or Irrigation boxes
 - a. Raise to finished grade - provide extension if needed.
4. Existing signage or monuments to remain.
5. Existing Buttonwillow & monument to be relocated.
 - a. See Add Alternate 'A'
6. Ex Electrical Chase to remain - protect in place.
7. Existing Irrigation Control Valves - multiple
 - a. Irrigation Shut off valve(s)
 - i. To remain - protect in place.
 - ii. Raise valve box to be flush with finished grade.
 - b. Irrigation Control Valves
 - i. Remove valve and any threaded fittings.
 - ii. Glue Sch. 80 cap to stubbed connection to mainline at depth of the mainline, minimum 12" below grade. Locate on As Built - Record Documents
 - iii. Wrap stub and any exposed mainline with 3" wide detectible warning tape.
 - iv. Disconnect wires - encase exposed ends with DBY 6 connectors - wrap wires around stubbed mainline connection.
 - v. Remove Valve box - fill void with amended topsoil.
8. Excavation for Raised Curb and Building Drainage Zone
 - a. Protect all existing utilities and improvements - pothole to locate.
 - b. Hand excavate as needed to protect existing utilities and improvements
 - i. Remove soil, roots and debris.
 - c. See Raised Curb at Building detail L3.2/N
 - d. Remove existing irrigation heads - clean and provide to KCCCD M&O
 - e. Remove irrigation risers and any exposed pvc lines and other debris.
 - f. Cobble maybe used in the lower 6" of the Building Drainage Zone
9. Turf Removal Zone
 - a. Remove exposed cobble that exceeds 1" in diameter.
 - b. Spray grass with KCCCD M&O approved herbicide
 - c. Hand clear and grub existing turf and grass - remove from site
 - d. Do NOT damage or remove existing tree roots
 - e. Cobble maybe used in the lower 6" of the Building Drainage Zone
 - f. Remove existing irrigation heads - clean and provide to KCCCD M&O
 - g. Remove irrigation risers and any exposed pvc lines and other debris.
10. Remove existing concrete curb at front of brick planter. Protect brick planter from damage.
11. Remove - clear and grub
 - a. existing grass, shrubs, seedlings and their roots
 - b. existing debris and wood mulch
 - c. Protect existing trees and improvements.
 - d. Remove existing irrigation heads - clean and provide to KCCCD M&O
 - e. Remove irrigation risers and any exposed pvc lines and other debris.
12. Raised Planters
 - a. Remove wood mulch.
 - i. Can be reused and blended into top soil.
 - b. Remove excess soil to 6" below the brick cap (after tilling/over excavation and settlement)
13. Remove dead Japanese Maples
 - a. 3 total
14. Over Excavation - Deep Tilling in planters
 - a. Over excavate soil to a minimum depth of 18"
 - i. Protect existing improvements - pothole as necessary to locate.
 - ii. Water settle - flood as needed to settle soil prior to planting and installation of rock mulch.
15. Locate Sleeves and pipes under existing paving.
16. Remove - clear and grub planter at parking lot
 - a. Spray existing grass and weeds with KCCCD approved herbicide
 - b. Remove dead and live shrubs, seedlings, weeds and their roots.
 - c. Remove existing debris and wood mulch
 - d. Remove existing irrigation dripline - clean and provide to KCCCD M&O
 - e. Remove irrigation risers and any exposed pvc lines and other debris.
 - f. Remove soil as needed to 4" below top of curb, allow room for 3" of rock mulch
17. Shop Drawing for Sleeves and Pipes under Existing Paving
 - a. Locate sleeves and/or pipes that cross under existing paving and into planters.
 - i. Contractor is responsible for exploring the entire length of the planter until pipes have been located.
 - b. Pothole as necessary to locate.
 - c. Clearly mark location, material and size on an irrigation print.
 - d. Writing shall be legible.
 - e. Provide 3 final copies to the KCCCD.
 - f. Provide 1 final copy to the Landscape Architect
18. Existing tree to remain
 - a. Protect in place
19. Existing bench & concrete pad to remain
 - a. Protect in place
20. Existing controller, electrical & other improvements to remain
 - a. Protect in place
21. Existing backflow to remain
 - a. Protect in place
22. Existing mainline & irrigation wires - assumed approximate location
 - a. Pothole & locate
 - b. Verify size and material
 - c. Mainline shut off valves, verify size and material
 - d. Verify if connected to existing backflow device on south side of building
23. Existing construction staging area
24. Existing construction staging area fence
25. Existing mainline

ADD ALT. I - LEGEND/ NOTES:

- A. Existing Buttonwillow Bush
 - a. Prune and removed deadwood.
 - b. Contact KCCCD M&O to determine if there are any known utilities.
 - i. at existing plant location
 - ii. and the proposed relocation site
 - c. Hand excavated hole at proposed site of relocation.
 - i. Fill any over excavation deeper than needed to place tree spaded
 - d. Harvest buttonwillow
 - e. Plant such that the soil level of the harvested plan is flush with or up to 3" above finished grade.
 - f. Water deeply multiple times in the first two week after planting



KEY PLAN

EXISTING CONDITIONS:

- 1) CONTRACTOR SHALL EXAMINE THE SITE PRIOR TO BIDDING TO CONFIRM EXISTING CONDITIONS.
- 2) NO RECORD DOCUMENTS FOR THE SITE ARE AVAILABLE.
 - A. ARCHITECT, LANDSCAPE ARCHITECT, & KCCCD MAKE NO REPRESENTATIONS REGARDING EXISTING CONDITIONS BEYOND WHAT IS VISIBLE ON THE SURFACE.
- 3) PRIOR TO COMMENCING DEMOLITION, TRENCHING, OR SOIL TILLING CONTRACTOR SHALL
 - A. POT HOLE VISIBLE UTILITIES & IRRIGATION ADJACENT TO ANY SURFACE
 - I. TYPE OF UTILITY
 - II. MATERIAL OF PIPE, SLEEVE, CONDUIT, DRAINAGE, ETC.
 - III. DEPTH & DIRECTION
 - IV. IDENTIFY & NOTE IF UTILITY IS ACTIVE (LIVE) & LOCATION OF SHUTOFF CONTROL.
- 4) CONTRACTOR SHALL DOCUMENT ALL EXISTING CONDITION INFORMATION FOUND
 - A. IN AN EXISTING CONDITIONS PLAN
 - B. IN PLAIN & LEGIBLE TEXT & MARKING
 - C. PROVIDE THIS EXISTING CONDITIONS PLAN TO I. KCCCD II. ARCHITECT III. LANDSCAPE ARCHITECT
- 5) ANY EXISTING CONDITIONS THAT POSE A DANGER SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF KCCCD M&O VERBALLY AND IN WRITING.

Sierra Designs, Inc.
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dan@sierradesigns.com

LANDSCAPING & OUTDOOR LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
1801 PANORAMA DRIVE
BAKERFIELD, CA 93305

DSA: AF 03-12168-15-C1
FILE: P1N
APP:

NO.	DATE	DESCRIPTION
	08/11/2023	BID SET
	01/25/2023	ADDENDUM I

DEMOLITION & TURF AREA PREPARATION PLAN

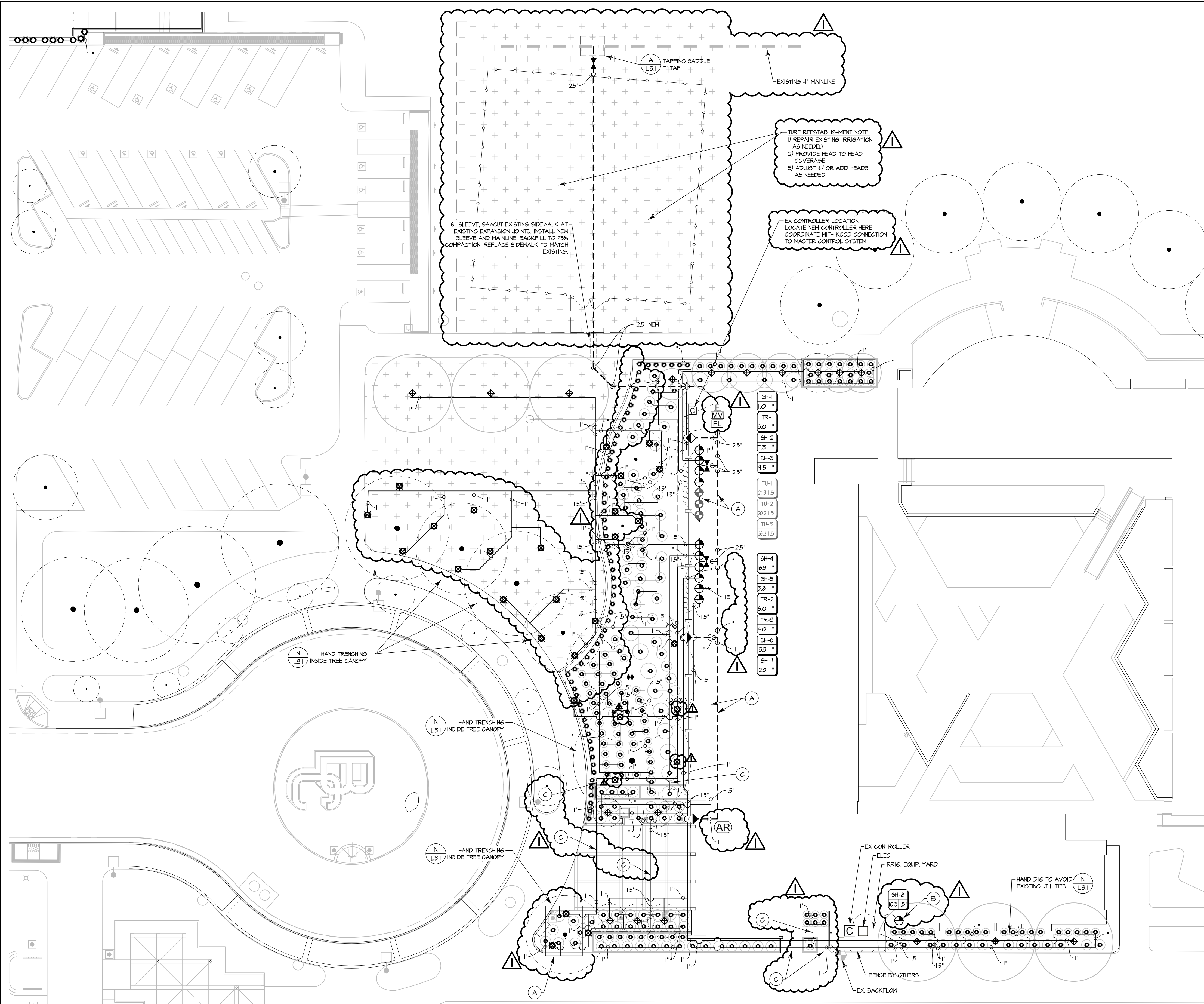
PRK

7780 NORTH PALM AVE | FRESNO, CALIFORNIA 93711
P: 559-446-6460 | F: 559-446-2467 | www.prk.com

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DRAWN BY: _____ CHECKED BY: _____ PROJECT ARCHITECT: _____

LO.1

(FOR PLAN CHECK ONLY)



SYM.	REF.	DESCRIPTION	PRODUCT INFORMATION	DETAIL
(C)	RAINBIRD	CONTROLLER EXPANSION MODULE CONNECTION MODULE ENCLOSED	LXME2/PRO 104G-USA CARTRIDGE EXPANX-M2 EXPANSION MODULE 6PSCH-W/12 P50 SHARK 3/8-16SS STAINLESS ST. TOP ENTRY	(D) (L3.1)
(RS)	RAINBIRD	WEATHER SENSOR	RS2-REG. CONNECT TO EX. CONTROLLER	(G) (L3.1)
(MV)	RAINBIRD	MASTER VALVE	200-PESBIVM-PRS-D	(C) (L3.1)
(FL)	RAINBIRD	FLOW SENSOR	2" UFS200 DECODER LXIVM5EN	(C) (L3.1)
(FR)	EZ FLO	FERTIGATION SYSTEM	EZKIT-5, 5 GAL. TANK	(D) (L3.1)
(NICO)	RAINBIRD	GATE VALVE VALVE BOX HANDLES	1"-3" T-1/8-BHN NON-RISING STEM (2) V. HANDLE (3'-0" MIN)	(B) (L3.1)
(LEEMCO)	RAINBIRD	GATE VALVE VALVE BOX HANDLES	LMV-BB FOR 4" & GREATER (2) SQ. NUT HANDLE (4'-0" MIN)	(B) (L3.1)
(C)	RAINBIRD	QUICK COUPLER O.C. KEY HOSE SWIVEL SWING JOINT	44-HP PURPLE LOCKING COVER (3) QUICK COUPLER (R44-K) (3) HOSE SWIVELS (R5H-I) TSJ2	(K) (L3.1)
(AR)	CRISPIN	AIR & VACUUM RELEASE VALVE	1" IC-10 COMBINATION VALVE AT HIGH POINTS & DEAD ENDS ON MAINLINE	(J) (L3.1)
(F)	AMIAD	FILTER	2", MIC2-C, 750	(L) (L3.1)
(C)	RAINBIRD	CONTROL VALVE	100-PESBIVM-PRS-D (1" 0-12 GPM) 150-PESBIVM-PRS-D (1 1/2" 12-30 GPM) 200-PESBIVM-PRS-D (2" 30-75 GPM)	(E) (H) (I) (L3.1) (L3.1) (L3.1)
(C)	RAINBIRD	CONTROL ZONE KIT AT DRIP EMITTER	XGZ-100-PRB-COM (1" 0.3-20 GPM) (200 MESH STAINLESS STEEL FILTER) (40 PSI PRS. REG.)	(F) (H) (I) (L3.1) (L3.1) (L3.1)
(C)	RAINBIRD	SURGE PROTECTION	LXIVMSD (ONE EVERY 500FT OR 15 DEVICES)	(D) (L3.2)
(C)	RAINBIRD	POP-UP BODY NOZZLE SHING JOINT	RD06-S-P45 R-VAN14 (8R) (0.63 GPM, 8'-14R, 180°, 45 PSI) TSJ2	(D) (L3.2)
(C)	RAINBIRD	POP-UP BODY NOZZLE SHING JOINT	RD06-S-P45 R-VAN14 (11R) (0.63 GPM, 8'-14R, 180°, 45 PSI) TSJ2	(D) (L3.2)
(C)	RAINBIRD	POP-UP BODY NOZZLE SHING JOINT	RD06-S-P45 R-VAN18 (10R) (1.1 GPM, 9'-10R, 180°, 45 PSI) TSJ2	(D) (L3.2)
(C)	RAINBIRD	POP-UP BODY NOZZLE SHING JOINT	RD06-S-P45 R-VAN24 (24R) (1.7 GPM, 11'-24R, 180°, 45 PSI) TSJ2	(D) (L3.2)
(C)	RAINBIRD	ROOT WATERING SYSTEM SHURLE	RWS-S-B-C-1401, 10', 0.25 GPM / PER TREE, BUBBLER, CHECK VALVE, SHING ARM, RWS-SOCK SAND SOCK	(E) (L3.2)
(C)	RAINBIRD	ROOT WATERING SYSTEM SHURLE	RWS-S-B-C-1401, 10', 0.25 GPM / PER TREE, BUBBLER, CHECK VALVE, SHING ARM, RWS-SOCK SAND SOCK (1) FERTILIZER PACK AT EACH LOCATION	(E) (L3.2)
(C)	RAINBIRD	ROOT WATERING SYSTEM SHURLE	RWS-S-B-C-1401, 36', 0.25 GPM / PER TREE, BUBBLER, CHECK VALVE, SHING ARM, RWS-SOCK SAND SOCK (USE PLAN AREA TOTAL PER TREE) (1) FERTILIZER PACK AT EACH LOCATION	(E) (L3.2)
(C)	RAINBIRD	ROOT WATERING SYSTEM SHURLE	RWS-S-B-C-1401, 36', 0.25 GPM / PER TREE, BUBBLER, CHECK VALVE, SHING ARM, RWS-SOCK SAND SOCK (USE PLAN AREA TOTAL PER TREE) (1) FERTILIZER PACK AT EACH LOCATION	(E) (L3.2)

SYMBOL	DESCRIPTION	DETAIL
---	NEW MAINLINE	1"-3" MAINLINE, SCH 40 P.V.C. SOLVENT WELD 4" CL. 200 P.V.C. SELF RESTRAINED FITTINGS
---	EXISTING MAINLINE	CONTRACTOR TO VERIFY PIPE MATERIAL & SIZE.
---	LATERAL LINES	SCH 40 P.V.C. SIZE AS SHOWN (1" MIN.) MAX. VELOCITY 3.75 F.P.S.
---	IRRIGATION CONTROL WIRE MULTISTRAND & 2-WIRE	1) MULTISTRAND 14 AWG MIN. IN CONDUIT, SIZE AS NEEDED. 2) PLUS ADDITIONAL SPARE 2-WIRE PATH IN CONDUIT TO EVERY VALVE. 2-WIRE PATH TO BE R2-WIRE CONTROLLER WIRE. 3) ALL SPLICES TO USE DEPT-5 SPLICE KITS & COIL 36" MIN. ADDITIONAL WIRE IN VALVE BOXES. 4) PROVIDE PULL BOXES AT: A) 200' OC. MAX. B) ALL SPLICE LOCATIONS
---	SLEEVING	SCH. 40 P.V.C. 2 TIMES LARGER THAN IRRIGATION LINE BURIED UNDER DRIVING SURFACE. SEE SPECS/DETAILS

LEGEND NOTES:
 DETAIL CALL OUTS ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL REVIEW ALL DETAILS & APPLY ALL REQUIREMENTS, AS WELL AS REQUIREMENTS CONTAINED IN NOTES, CALL OUTS, & SPECIFICATIONS.

IRRIGATION VALVE BOX NOTE:
 1) IRRIGATION EQUIPMENT VALVE BOXES TO BE (MANUFACTURER: APPLIED ENGINEERING PRODUCTS).

RAINBIRD EQUIPMENT PURCHASING NOTE:
 1) ALL RAIN BIRD PURCHASES MUST BE SUBMITTED TO MARCOS RODRIGUEZ (REWARDS PROGRAM) EMAIL: MARCOS.RODRIGUEZ@BAKERSFIELDCOLLEGE.EDU

EXISTING IRRIGATION EQUIPMENT NOTE:
 1) CONTRACTOR TO INVESTIGATE EXISTING EQUIPMENT & PROVIDE A SHOP DRAWING TO COORDINATE EXISTING EQUIPMENT W/ NEW EQUIPMENT.

TR-5	VALVE NUMBER	VALVE NUMBER LEGEND
6.8.8/4	TR-5	TR - TREE
	TR-5	TU - TURF
	TR-5	GR - GROUND COVER
	TR-5	SH - SHRUB
	TR-5	ES - ESTABLISHMENT/ GROW IN

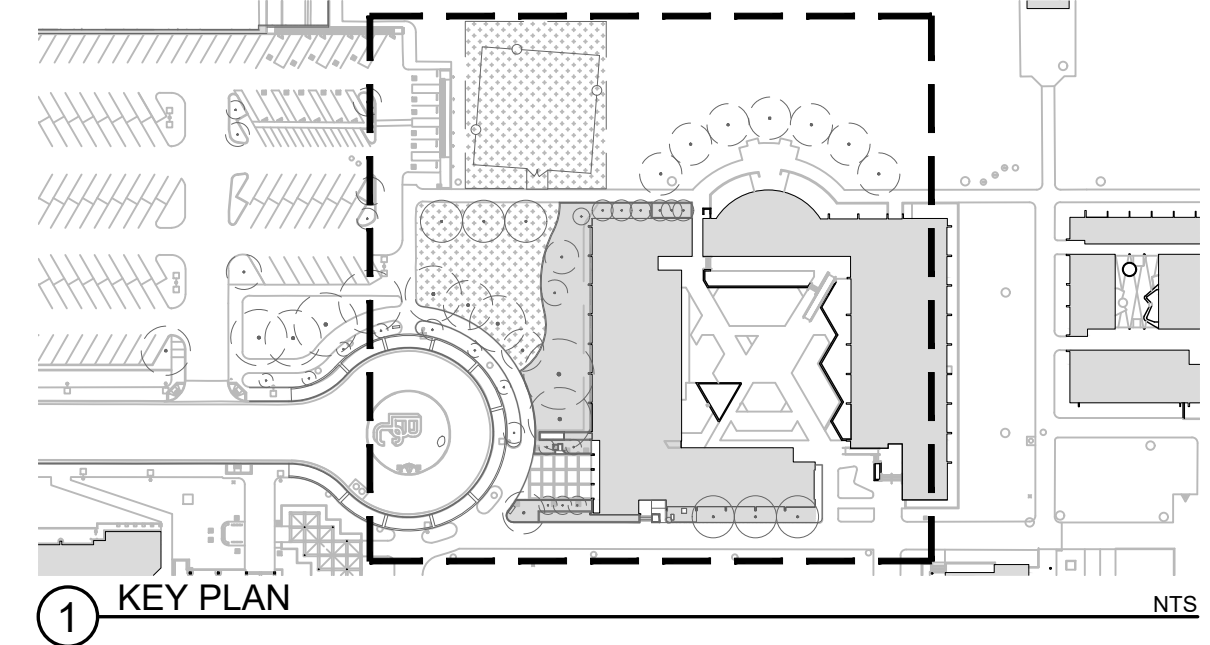
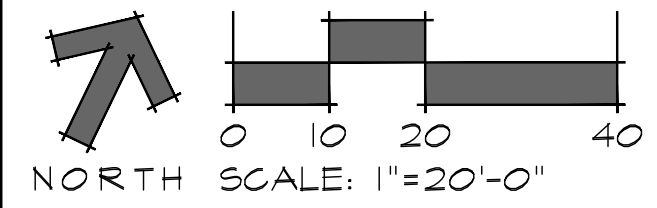
SCH 40 LATERAL PIPE SIZING FOR IN-FIELD ADJUSTMENTS	SCH 80 P.V.C. MANIFOLD PIPE SIZING
(IN NO CASE IS VELOCITY TO EXCEED 3.75 F.P.S.)	(IN NO CASE IS VELOCITY TO EXCEED 3.75 F.P.S.)
0 - 8 GPM: 1"	0 - 7 GPM: 1"
8 - 20 GPM: 1.5"	7 - 20 GPM: 1.5"
20 - 30 GPM: 2"	16 - 25 GPM: 2"
30 - 45 GPM: 2.5"	20 - 40 GPM: 2.5"
45 - 70 GPM: 3"	40 - 65 GPM: 3"
	65 - 110 GPM: 4"
	110 - 250 GPM: 6"
- SIZE PIPE PER PLAN	- SIZE PIPE PER PLAN

IRRIGATION PLAN KEYNOTES

(A) LOCATE IRRIGATION EQUIPMENT, MAINLINE, & LATERALS IN PLANTER AREA, SHOWN HERE FOR CLARITY

(B) CONNECT THIS VALVE TO EXISTING CONTROLLER ON SOUTH SIDE OF BUILDING. USE EXISTING CONTROLLER WIRE

(C) POT HOLE & LOCATE EXISTING SLEEVES, MAINLINE, LATERAL LINE, & CONTROL WIRE UNDER PAVEMENT. USE EXISTING SLEEVES, LATERALS, MAINLINE, & CONTROL WIRE TO REACH BEDS. CONTRACTOR TO CREATE A SHOP DRAWING AFTER LOCATING & IDENTIFYING EXISTING MAINLINES, LATERALS, SLEEVES, & CONTROL WIRE.



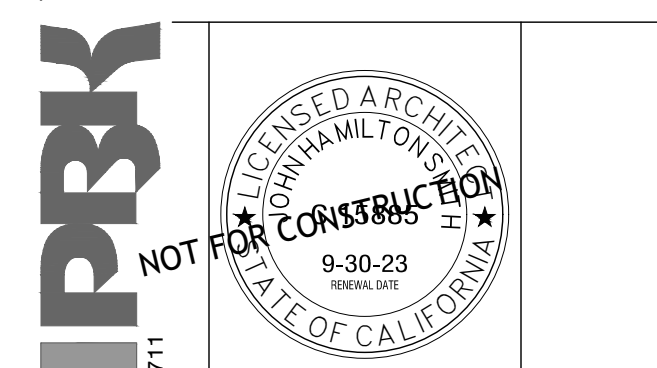
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LANDSCAPING & OUTDOOR LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE BAKERSFIELD, CA 93305

NO.	DATE	DESCRIPTION
	08/11/2023	BID SET
	08/25/2023	APPENDIX I

TREE & SHRUB IRRIGATION PLAN

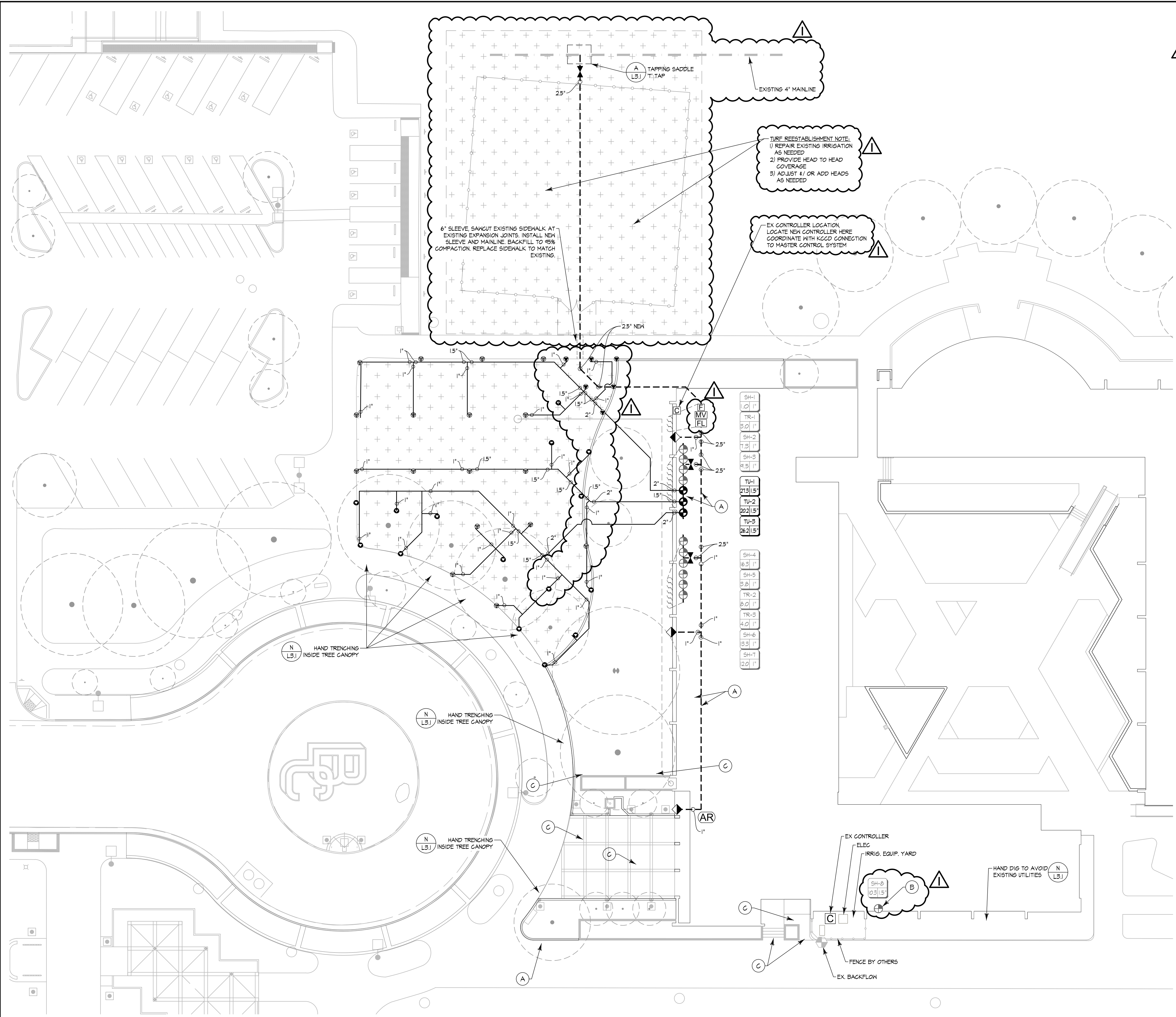


PROJECT NUMBER	DATE

DRAWN BY: _____
 CHECKED BY: _____
 PROJECT ARCHITECT: _____

L1.1

(FOR PLAN CHECK ONLY)



SYM	MFR	DESCRIPTION	PRODUCT INFORMATION	DETAIL
C	RAINBIRD	CONTROLLER EXPANSION MODULE CONNECTION MODULE	LXME2 PRO (24S-USA CARTRIDGE, ESPLXMM2 EXPANSION MODULE, 100-PSI MAX I.G. PRESS. RST, 24-1625 STAINLESS ST. TOP ENTRY)	D (L31)
STR	RAINBIRD	STRONGBOX	WEATHER SENSOR	A (L31)
RS	RAINBIRD	WEATHER SENSOR	WEATHER SENSOR TO EX. CONTROLLER	L (L31)
MV	RAINBIRD	MASTER VALVE	200-PESBVM-PRS-D	C (L31)
FL	RAINBIRD	FLOW SENSOR	2" UFS200 DECODER LXIVM5EN	C (L31)
FR	EZ FLO	FERTIGATION SYSTEM	EZKIT-5, 5 GAL. TANK	D (L31)
NB	NIBCO	GATE VALVE VALVE BOX HANDLES	1"-3", T-113-BHM NON-RISING STEM (1) 1/2" HANDLE (3'-0" MIN.)	B (L31)
LE	LEEMCO	GATE VALVE VALVE BOX HANDLES	LMV-BB FOR 4" & GREATER (2) 5/8" NUT HANDLE (4'-0" MIN.)	B (L31)
Q	RAINBIRD	QUICK COUPLER O.C. KEY HOSE SWIVEL SWING JOINT	44-PP, PURPLE LOCKING COVER (3) QUICK COUPLER KEYS (#44-K) (3) HOSE SWIVELS (#5H-1) TSJ2	K (L31)
AR	CRISPIN	AIR & VACUUM RELEASE VALVE	1" IC-10 COMBINATION VALVE AT HIGH POINTS & DEAD ENDS ON MAINLINE	J (L31)
F	AMIAO	FILTER	2", M102-C, 150	L (L31)
CV	RAINBIRD	CONTROL VALVE	100-PESBVM-PRS-D (1", 0-12 GPM) 150-PESBVM-PRS-D (1 1/2", 12-30 GPM) 200-PESBVM-PRS-D (2", 30-75 GPM)	E (L31) H (L31) I (L31)
CZ	RAINBIRD	CONTROL ZONE KIT AT DRIP EMITTER	XZT-100-FRE-COM (1" 0.3-20 GPM) (200 MESH STAINLESS STEEL FILTER) (40 PSI PRS. REG.)	F (L31) H (L31) I (L31)
SP	RAINBIRD	SURGE PROTECTION	LXIVMSD (ONE EVERY 500FT OR 15 DEVICES)	E (L31) H (L31) I (L31)
RB	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45, R-VAN4 (8R) (0.63 GPM, 8-14R, 180", 45 PSI) TSJ2	D (L32)
RB	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45, R-VAN4 (11R) (0.63 GPM, 8-14R, 180", 45 PSI) TSJ2	D (L32)
RB	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45, R-VAN8 (8R) (1.1 GPM, 13-18R, 180", 45 PSI) TSJ2	D (L32)
RB	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45, R-VAN24 (24R) (1.1 GPM, 17-24R, 180", 45 PSI) TSJ2	D (L32)
RS	RAINBIRD	ROOT WATERING SYSTEM SHRUB	RWS-S-B-C-1401, 10", 0.25 GPM, 1 PER TREE. BUBBLER CHECK VALVE, SWING ARM, RWS-SOCK SAND SOCK (GREEN AS IT GETS)	E (L32)
RT	RAINBIRD	ROOT WATERING SYSTEM TREE	RWS-S-B-C-1401, 10", 0.25 GPM, 1 PER TREE. BUBBLER CHECK VALVE, SWING ARM, RWS-SOCK SAND SOCK (GREEN AS IT GETS)	E (L32)
RT	RAINBIRD	ROOT WATERING SYSTEM EXISTING LARGE TREES	RWS-S-B-C-1401, 36", 0.25 GPM, 1 PER TREE. BUBBLER CHECK VALVE, SWING ARM, RWS-SOCK SAND SOCK (SEE PLAN FOR TOTAL PER TREE) (1) FERTILIZER PACK AT EACH LOCATION	E (L32)

SYM	DESCRIPTION	DETAIL
---	NEW MAINLINE	1"-3" MAINLINE, SCH 40 P.V.C. SOLVENT WELD 4" CL 200 P.V.C. SELF RESTRAINED FITTINGS
---	EXISTING MAINLINE	CONTRACTOR TO VERIFY PIPE MATERIAL & SIZE.
---	LATERAL LINES	SCH 40 P.V.C. SIZE AS SHOWN (1" MIN), MAX VELOCITY 3.75 FPS.
---	IRRIGATION CONTROL WIRE MULTISTRAND 4 2-WIRE	1) MULTISTRAND 14 AWG MIN. IN CONDUIT, SIZE AS NEEDED. 2) PLUS ADDITIONAL SPARE 2-WIRE PATH IN CONDUIT TO EVERY VALVE. 2-WIRE PATH TO BE R12-WIRE CONTROLLER WIRE. 3) ALL SPLICES TO USE DBY-6 SPLICE KITS & COIL 36" MIN. ADDITIONAL WIRE IN VALVE BOXES. 4) PROVIDE PULL BOXES AT: A) 200' O.C. MAX B) ALL SPLICE LOCATIONS
---	SLEEVING	SCH. 40 P.V.C. 2 TIMES LARGER THAN IRRIGATION LINE. BURY 24" UNDER DRIVING SURFACE. SEE SPEC'S/DETAILS

LEGEND NOTES:
 DETAIL CALL OUTS ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL REVIEW ALL DETAILS & APPLY ALL REQUIREMENTS, AS WELL AS REQUIREMENTS CONTAINED IN NOTES, CALL OUTS, & SPECIFICATIONS.
IRRIGATION VALVE BOX NOTE:
 1) IRRIGATION EQUIPMENT VALVE BOXES TO BE (MANUFACTURER: APPLIED ENGINEERING PRODUCTS).
RAINBIRD EQUIPMENT PURCHASING NOTE:

IRRIGATION PLAN KEYNOTES

(A) LOCATE IRRIGATION EQUIPMENT, MAINLINE, & LATERALS IN PLANTER AREA, SHOWN HERE FOR CLARITY

VALVE NUMBER LEGEND

TR - TREE
 TU - TURF
 GR - GROUND COVER
 SH - SHRUB
 ES - ESTABLISHMENT/ GROW IN

APPROX. GALLONS PER MINUTE (GPM)

SCH 40 LATERAL PIPE SIZING FOR IN-FIELD ADJUSTMENTS

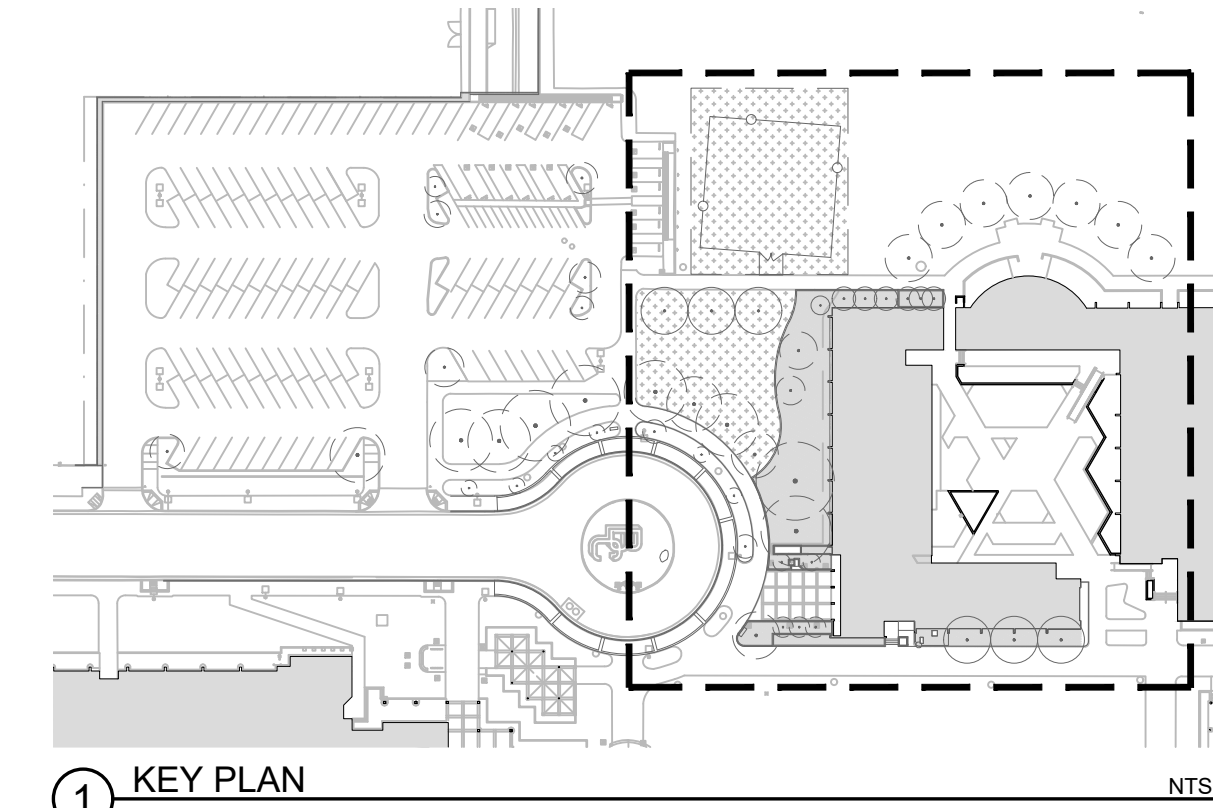
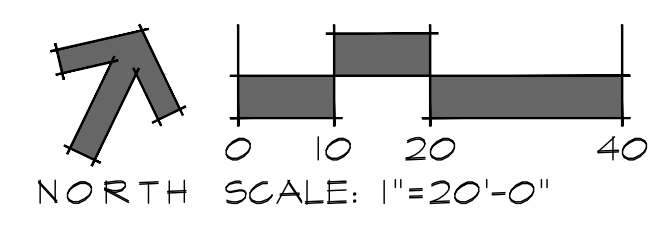
(IN NO CASE IS VELOCITY TO EXCEED 3.75 FPS.)

0 - 8 GPM: 1"
 8 - 20 GPM: 1.5"
 20 - 30 GPM: 2"
 30 - 45 GPM: 2.5"
 45 - 70 GPM: 3"
 - SIZE PIPE PER PLAN

SCH 80 P.V.C. MANIFOLD PIPE SIZING

(IN NO CASE IS VELOCITY TO EXCEED 3.75 FPS.)

0 - 7 GPM: 1"
 7 - 16 GPM: 1.5"
 16 - 28 GPM: 2"
 28 - 40 GPM: 2.5"
 40 - 65 GPM: 3"
 65 - 110 GPM: 4"
 110 - 250 GPM: 6"
 - SIZE PIPE PER PLAN



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LANDSCAPING & OUTDOOR LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE BAKERSFIELD, CA 93305

DSA: AF 03-12168 15-C1
 FILE: PPN
 PPN

KCCCD
 KERN COMMUNITY COLLEGE DISTRICT

REV	DATE	DESCRIPTION
01/11/2023	BID SET	
01/25/2023	ADDENDUM 1	

TURF IRRIGATION PLAN

PRK

NOT FOR CONSTRUCTION

LICENSURE ARCHITECTURE
 9-30-23
 STATE OF CALIFORNIA

PROJECT NUMBER: _____ DATE: _____
 DRAWN BY: _____ CHECKED BY: _____ PROJECT ARCHITECT: _____

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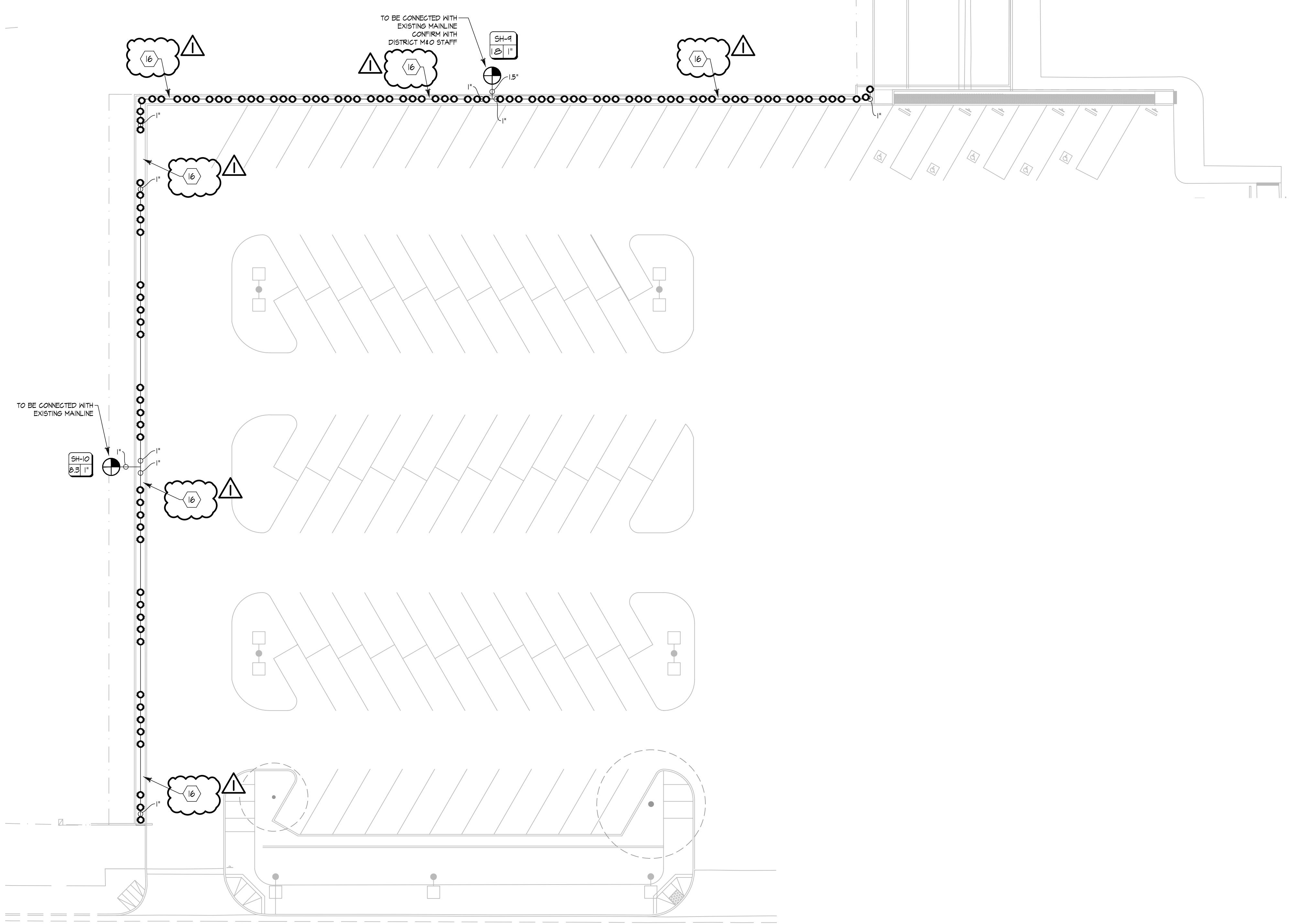
L1.2

(FOR PLAN CHECK ONLY)

DEMOLITION LEGEND/ NOTES:

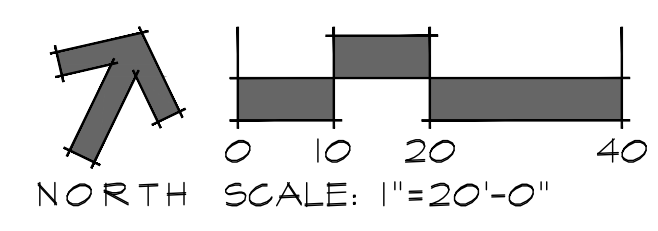
16. Remove - clear and grub planter at parking lot

- Spray existing grass and weeds with KCCD approved herbicide
- Remove dead and live shrubs, seedlings, weeds and their roots.
- Remove existing debris and wood mulch
- Remove existing irrigation dripline - clean and provide to KCCD M&O
- Remove irrigation risers and any exposed pvc lines and other debris.
- Remove soil as needed to 4" below top of curb, allow room for 3" of rock mulch



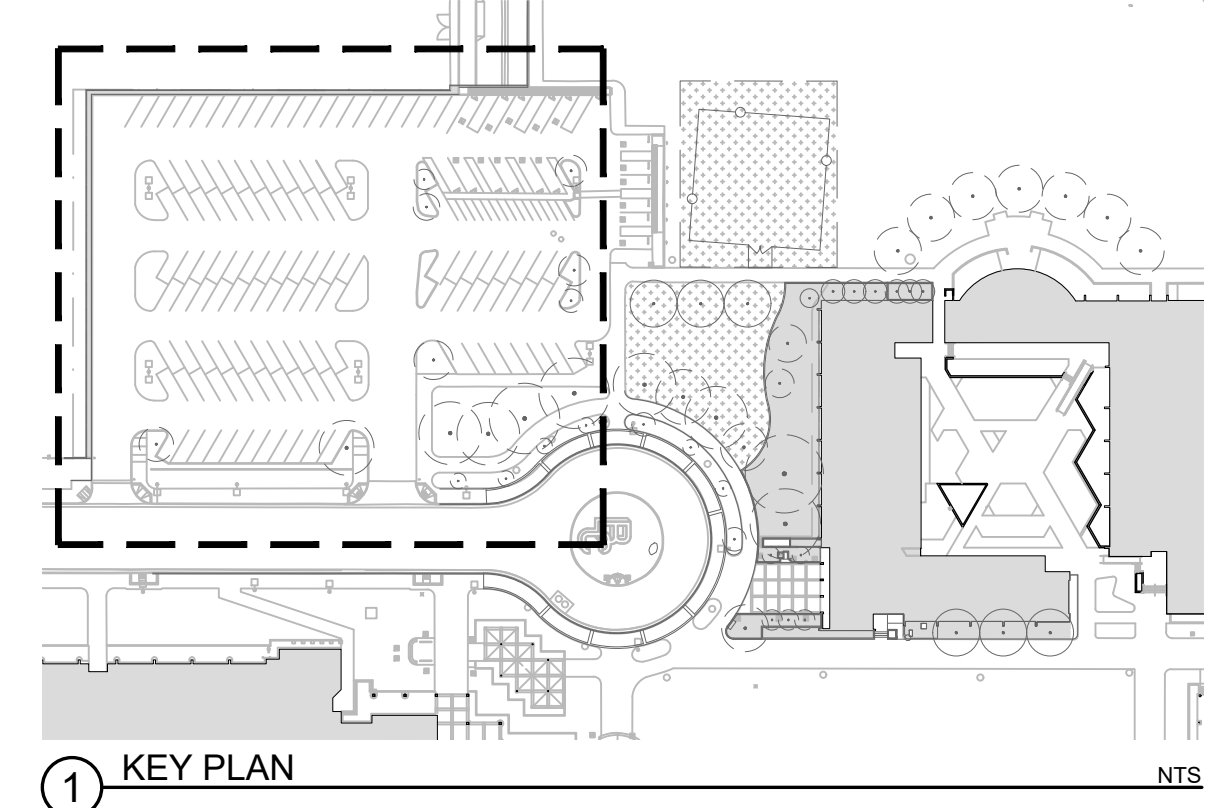
SYM	MFR	DESCRIPTION	PRODUCT INFORMATION	DETAIL
[C]	RAINBIRD	CONTROLLER EXPANSION MODULE CONNECTION MODULE ENCLOSURE	LXME2 PRO 1045-USA CARTRIDGE, EXPANSION MODULE, 65PSI, 1/2" PRO SPART, SB-1655, STAINLESS ST, TOP ENTRY	[D] [L3.1]
[RS]	RAINBIRD	WEATHER SENSOR	WS-2-RFC, CONNECT TO EX. CONTROLLER	[L3.1]
[MV]	RAINBIRD	MASTER VALVE	200-PESBIVM-PRS-D	[C] [L3.1]
[FL]	RAINBIRD	FLOW SENSOR	2" UFS200 DECODER LXIVMSEN	[C] [L3.1]
[FR]	EZ FLO	FERTIGATION SYSTEM	EZKIT-5, 5 GAL. TANK	[D] [L3.1]
[NIBCO]	NIBCO	GATE VALVE VALVE BOX HANDLES	1"-3", T-1/2-EMM, NON-RISING STEM (2) V HANDLE (3'-0" MIN)	[B] [L3.1]
[LEEMCO]	LEEMCO	GATE VALVE VALVE BOX HANDLES	LMV-BB FOR 4" & GREATER (2) V HANDLE (4'-0" MIN)	[B] [L3.1]
[RAINBIRD]	RAINBIRD	QUICK COUPLER O.G. KEY HOSE SWIVEL SWING JOINT	44-NP PURPLE LOCKING COVER (3) QUICK COUPLER KEYS (#44-K) (2) HOSE SWIVELS (#5H-1) TSJ2	[K] [L3.1]
[AR]	CRISPIN	AIR & VACUUM RELEASE VALVE	1" IG-10 COMBINATION VALVE AT HIGH POINTS & DEAD ENDS ON MAINLINE	[J] [L3.1]
[F]	AMIAD	FILTER	2", MIO2-C, T50	[L] [L3.1]
[RAINBIRD]	RAINBIRD	CONTROL VALVE	100-PESBIVM-PRS-D, (1", 0-12 GPM) 150-PESBIVM-PRS-D, (1 1/2", 12-30 GPM) 200-PESBIVM-PRS-D, (2", 30-75 GPM)	[E] [H] [I] [L3.1] [L3.1] [L3.1]
[RAINBIRD]	RAINBIRD	CONTROL ZONE KIT AT DRIP EMITTER	XG2-100-PRB-COM, (1", 0.3-20 GPM) (200 MESH STAINLESS STEEL FILTER) (40 PSI PRS. REG.)	[F] [H] [I] [L3.1] [L3.1] [L3.1]
[RAINBIRD]	RAINBIRD	SURGE PROTECTION	LXIVMSD (ONE EVERY 500FT OR 15 DEVICES)	[L3.1]
[RAINBIRD]	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45 R-VAN14 (BR) (0.63 GPM, 8"-14R, 180°, 45 PSI) TSJ2	[D] [L3.2]
[RAINBIRD]	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45 R-VAN14 (IR) (0.63 GPM, 8"-14R, 180°, 45 PSI) TSJ2	[D] [L3.2]
[RAINBIRD]	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45 R-VAN18 (BR) (1) GPM, 13"-18R, 180°, 45 PSI) TSJ2	[D] [L3.2]
[RAINBIRD]	RAINBIRD	POP-UP BODY NOZZLE SWING JOINT	RD06-S-P45 R-VAN24 (24R) (1.1 GPM, 17"-24R, 180°, 45 PSI) TSJ2	[D] [L3.2]
[RAINBIRD]	RAINBIRD	ROOT WATERING SYSTEM SHRUB	RWS-S-B-C-140, 10', 0.25 GPM, 1 PER TREE, BUBBLER & CHECK VALVE, RWS-SOCK SAND SOCK	[F] [L3.2]
[RAINBIRD]	RAINBIRD	ROOT WATERING SYSTEM TREE	RWS-S-B-C-140, 10', 0.25 GPM, 1 PER TREE, BUBBLER & CHECK VALVE, SWING ARM, RWS-SOCK SAND SOCK (1) FERTILIZER PACK AT EACH LOCATION	[E] [L3.2]
[RAINBIRD]	RAINBIRD	ROOT WATERING SYSTEM EXISTING LARGE TREES	RWS-B-C-140, 36', 0.25 GPM, 1 PER TREE, BUBBLER & CHECK VALVE, SWING ARM, RWS-SOCK SAND SOCK (SEE PLAN FOR TOTAL PER TREE) (1) FERTILIZER PACK AT EACH LOCATION	[E] [L3.2]
---	---	NEW MAINLINE	1"-3" MAINLINE SCH 40 P.V.C. SOLVENT WELD 4" CL. 200 P.V.C. SELF RESTRAINED FITTINGS	[N] [A] [C] [L3.1] [L3.2] [L3.2]
---	---	EXISTING MAINLINE	CONTRACTOR TO VERIFY PIPE MATERIAL & SIZE.	
---	---	LATERAL LINES	SCH 40 P.V.C. SIZE AS SHOWN (1" MIN), MAX VELOCITY 3.75 FPS.	[N] [A] [C] [L3.1] [L3.2] [L3.2]
---	---	IRRIGATION CONTROL WIRE MULTISTRAND & 2-WIRE	1) MULTISTRAND 14 AWG MIN. IN CONDUIT, SIZE AS NEEDED. 2) PLUS ADDITIONAL SPARE 2-WIRE PATH IN CONDUIT TO EVERY VALVE. 2-WIRE PATH TO BE R2-WIRE CONTROLLER WIRE. 3) ALL SPLICES TO USE DBY-6 SPLICE KITS & COIL 36" MIN. ADDITIONAL WIRE IN VALVE BOXES. 4) PROVIDE PULL BOXES AT: A) 200' O.C. MAX B) ALL SPLICE LOCATIONS	[A] [B] [L3.2] [L3.2]
---	---	SLEEVING	SCH 40 P.V.C. 3 TIMES LARGER THAN IRRIGATION LINE. BURY 24" UNDER DRIVING SURFACE. SEE SPECS/ DETAILS	[M] [L3.1]

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IRRIGATION VALVE BOX NOTE:
 1) IRRIGATION EQUIPMENT VALVE BOXES TO BE (MANUFACTURER, APPLIED ENGINEERING PRODUCTS).
 RAINBIRD EQUIPMENT PURCHASING NOTE:



TR-5	VALVE NUMBER	VALVE LEGEND
TR-5	6.25/4	TR - TREE
		TU - TURF
		GR - GROUND COVER
		SH - SHRUB
		ES - ESTABLISHMENT/ GROWN IN

SCH 40 P.V.C. LATERAL PIPE SIZING FOR IN-FIELD ADJUSTMENTS	
(IN NO CASE IS VELOCITY TO EXCEED 3.75 F.P.S.)	
0 - 8 GPM, 1"	
8 - 20 GPM, 1 1/2"	
20 - 30 GPM, 2"	
30 - 45 GPM, 2 1/2"	
45 - 70 GPM, 3"	
- SIZE PIPE PER PLAN	



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LANDSCAPING & OUTDOOR LEARNING SPACES
 KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE
 BAKERSFIELD, CA 93305

DSA: AF 03-12168-15-C1
 FILE: P1N
 APN:

KCCCD
 KERN COMMUNITY COLLEGE DISTRICT

NO.	DATE	DESCRIPTION
	03/11/2023	BID SET
	04/25/2023	ADDENDUM 1

IRRIGATION PLAN
 PARKING

PRK

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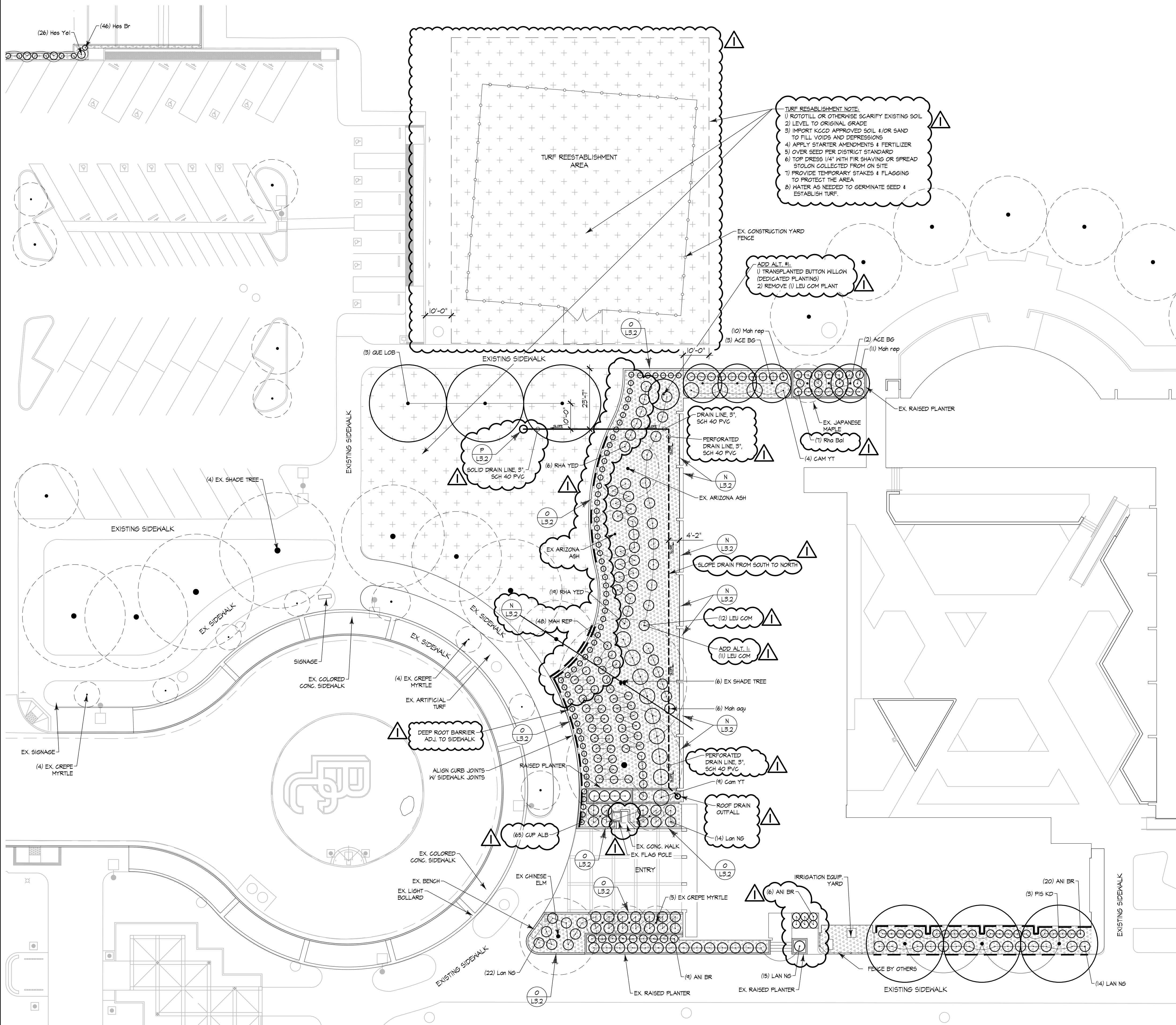
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 9-30-23
 STATE OF CALIFORNIA

PROJECT NUMBER: _____ DATE: _____
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L1.3

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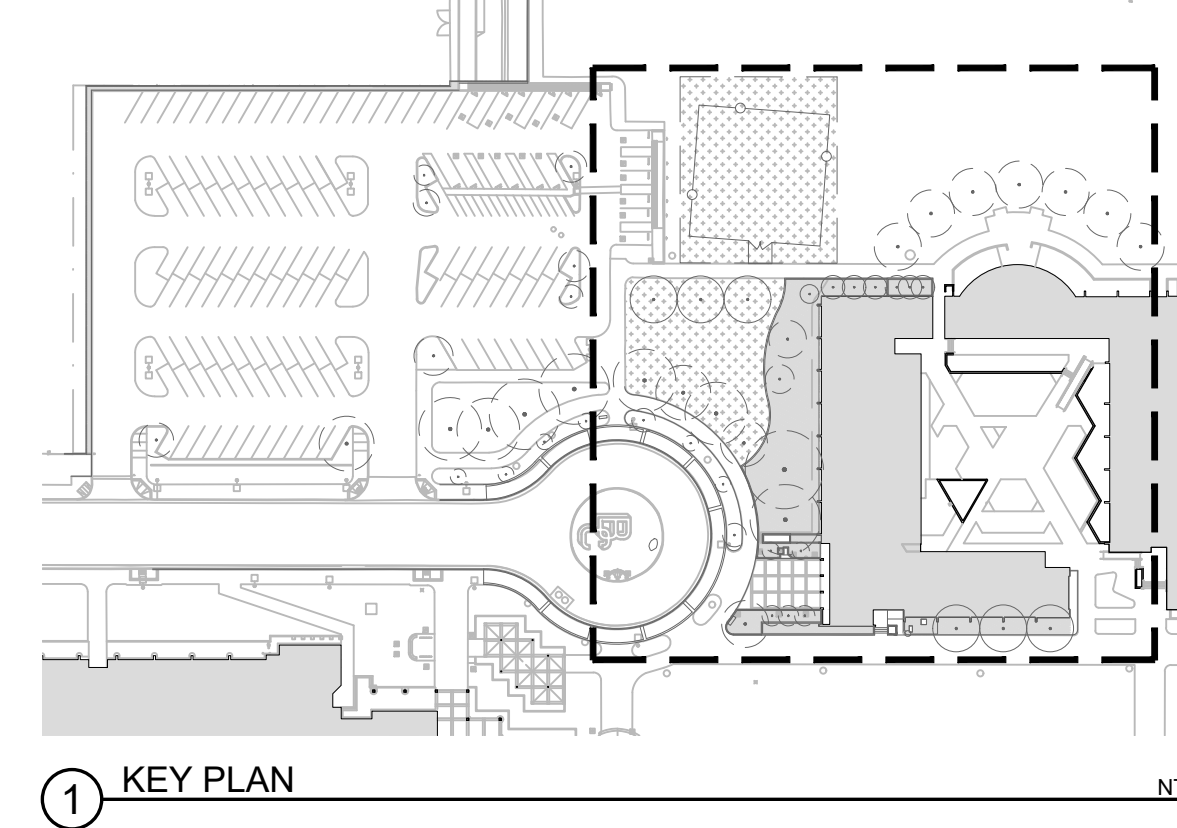
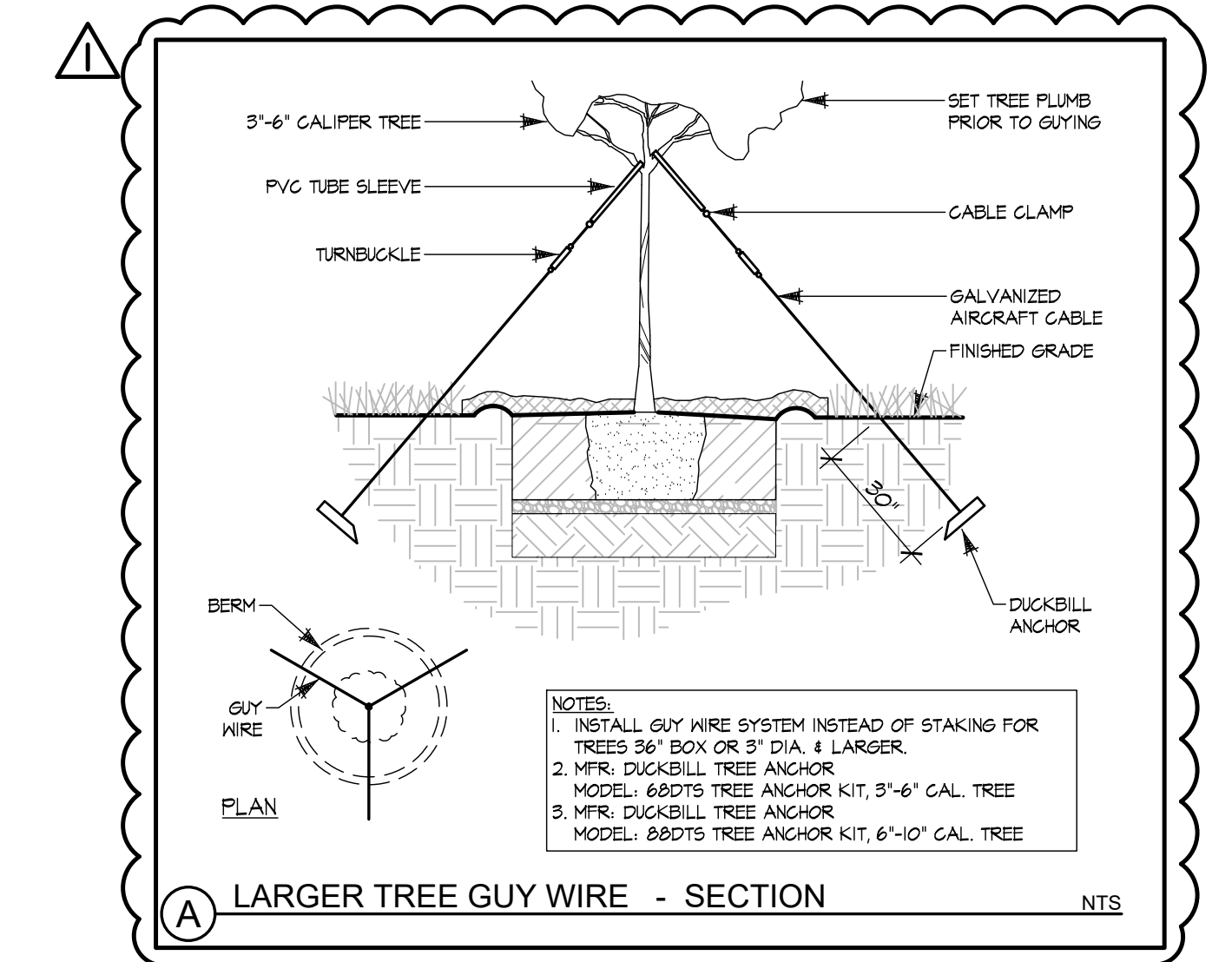


TREES						
PLANT ID	NAME-DESC	COMMON	W/COLS	QTY	SIZE	
Ace BG	Acer p. Blood Gold	Blood Gold Japanese Maple	M	24	24" box	A
Pis KD	Pistacia c. Keith Davey	Keith Davey Chinese Pistache	L	3	36" box	
Que lob	Quercus lobata	Valley Oak	L	3	36" box	L2.1

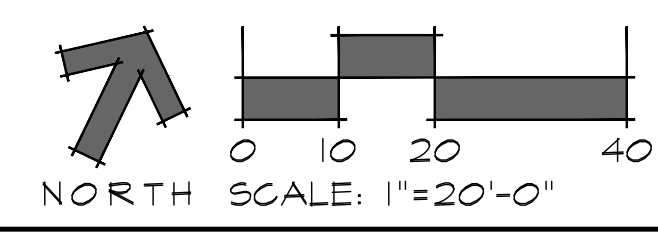
SHRUBS						
ID	BOTANICAL NAME	COMMON	W/COLS	QTY	SIZE	
Ani BR	Argemone sp. Big Red	Big Red Kangaroo Paw	L	24	5" gal	
Cam YT	Camellia sasanqua 'Yuletide'	'Yule Tide' Camellia	M	15	15" gal	
Cup Alb	Cupressus nuxifolia 'Alba'	White False Heather	M	65	1" gal	
Leu Com	Leucopodium f. Compacta	New Gold Lycopodium	L	65	5" gal	
Man rep	Manisuris repens	Creeping Oregon Grape	M	6	5" gal	
Rha Yed	Rhapidois umbellata 'MINOR'	'Dwarf Yucca' Hawthorn	L	25	3" gal	
Rha Bai	Rhapidois indica 'Ballerina'	'Ballerina' Indian Hawthorn	M	7	5" gal	

LEGEND

- TURF REPAIR AREA RESEEDED PER KCCD STD. 20,555 SF
- ROCK MULCH: 3/4" CRUSHED ROCK NO FINES, 3" MIN. DEPTH, MFR: EARTHSTONE/ROCK.CO, COLOR: CALIFORNIA GOLD. 8,450 SF
- ROOT BARRIER 340 LF



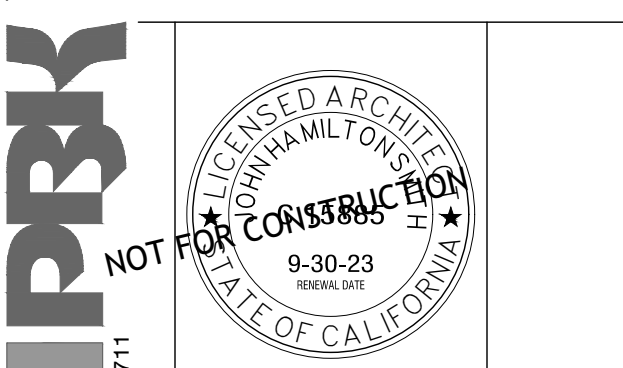
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LANDSCAPING & OUTDOOR LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE
 BAKERSFIELD, CA 93305

NO.	DATE	DESCRIPTION
01	08/11/2023	BID SET
02	08/25/2023	ADDENDUM I

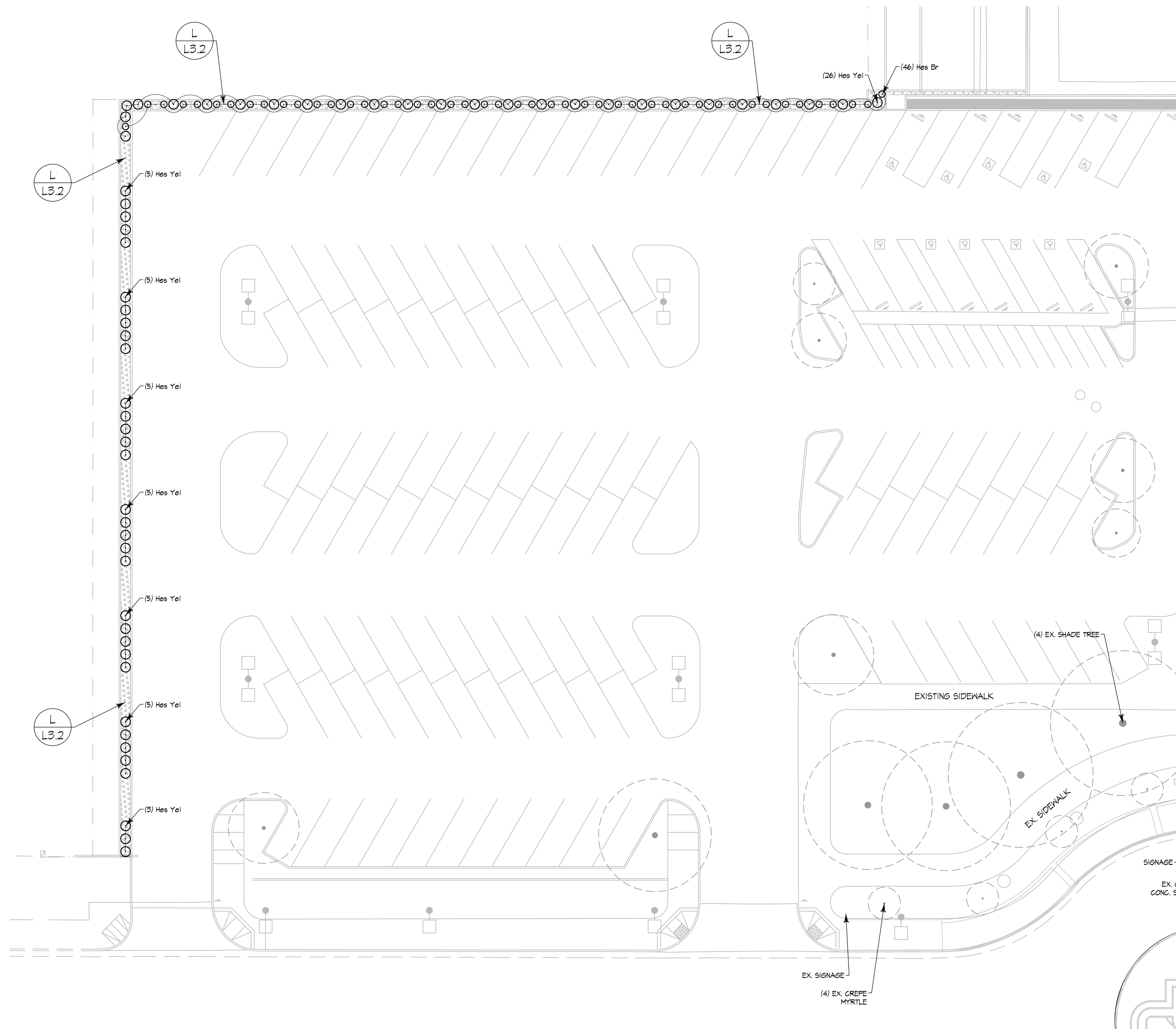
PLANTING PLAN



DRAWN BY	PROJECT NUMBER	DATE
CHECKED BY		
PROJECT ARCHITECT		

L2.1

(FOR PLAN CHECK ONLY)

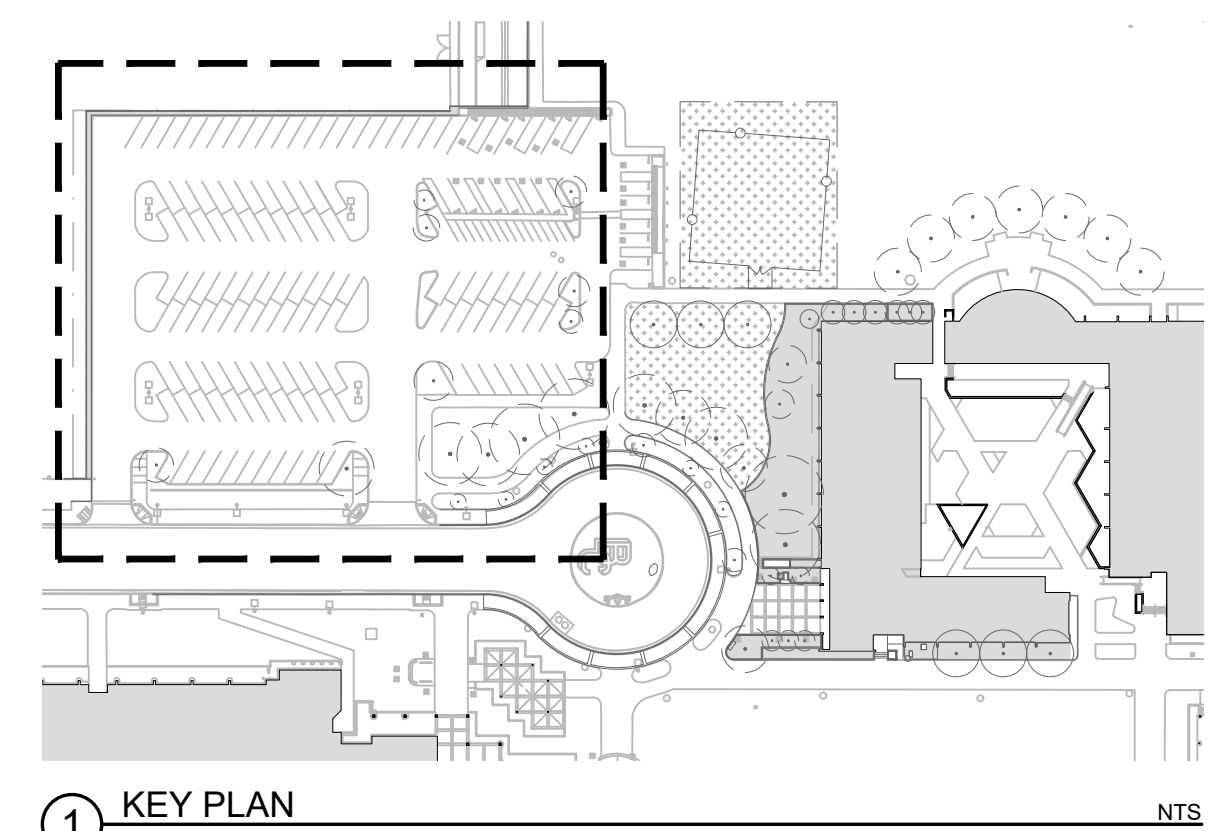


PARKING PLANT LIST						
ID	Botanical Name	Common Name	WTR	QTY	SIZE	
Hes Br	Hesperaloe p. Brakelights	Brakelights Red Yucca	L	46	1 gal	
Hes Yel	Hesperaloe p. Yellow	Yellow Yucca	L	54	5 gal	

LEGEND

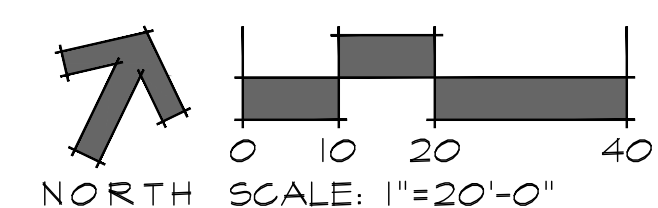
ROCK MULCH: 3/4" CRUSHED ROCK NO FINES, 3" MIN. DEPTH, MFR: EARTHSTONEROCK.COM COLOR: CALIFORNIA GOLD

350 SF



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LANDSCAPING & OUTDOOR
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 1801 PANORAMA DRIVE BAKERSFIELD, CA 93305

DSA: AF 03-122168
 FILE: 15-C1
 P/N:
 AP/N:

NO.	DATE	DESCRIPTION
01/11/2023		BID SET
01/25/2023		ADDENDUM I

**PLANTING
 PLAN
 PARKING**

PRK

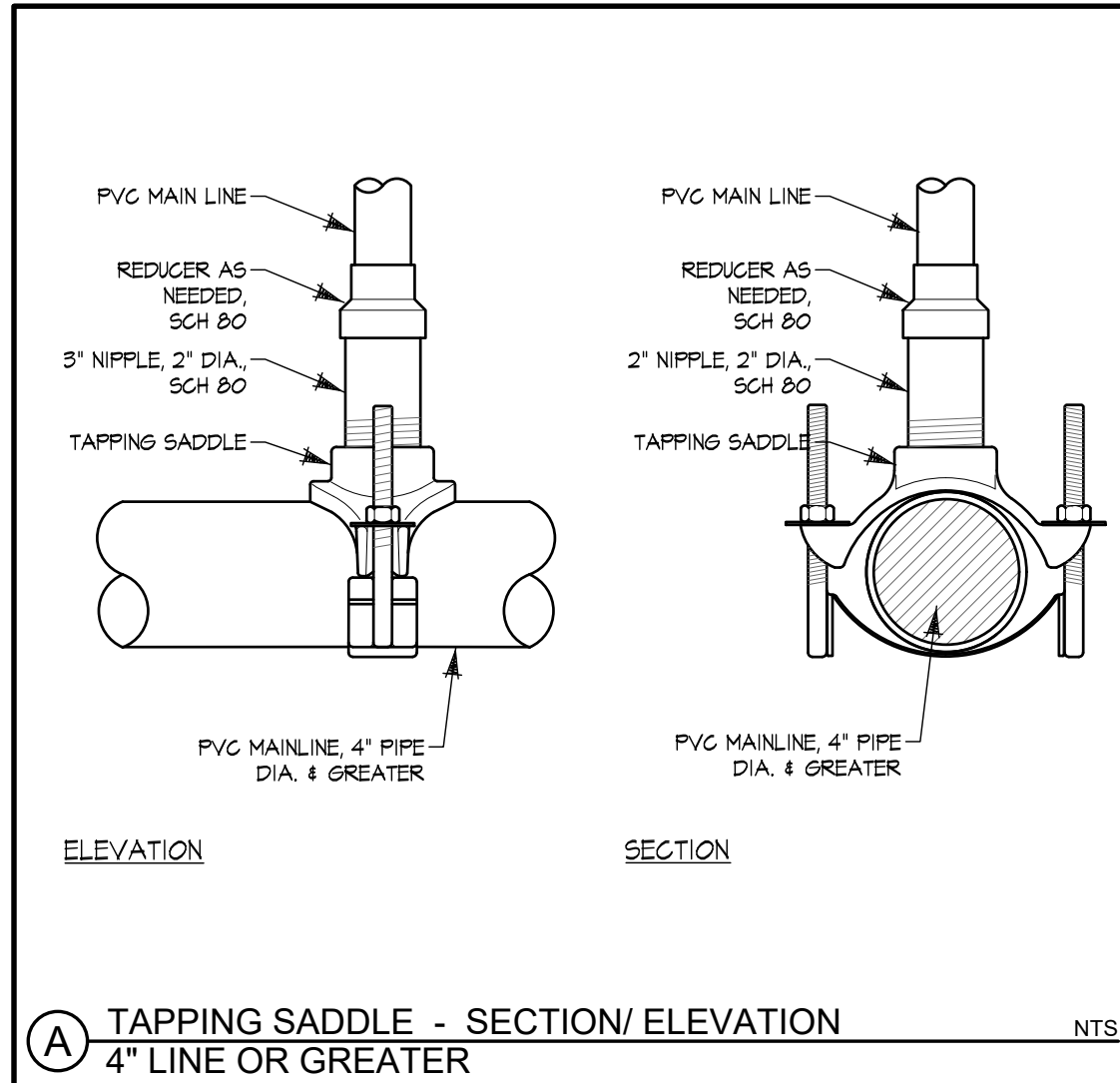
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LICENSED ARCHITECT
 DORIS HAMILTON
 9-30-23
 STATE OF CALIFORNIA

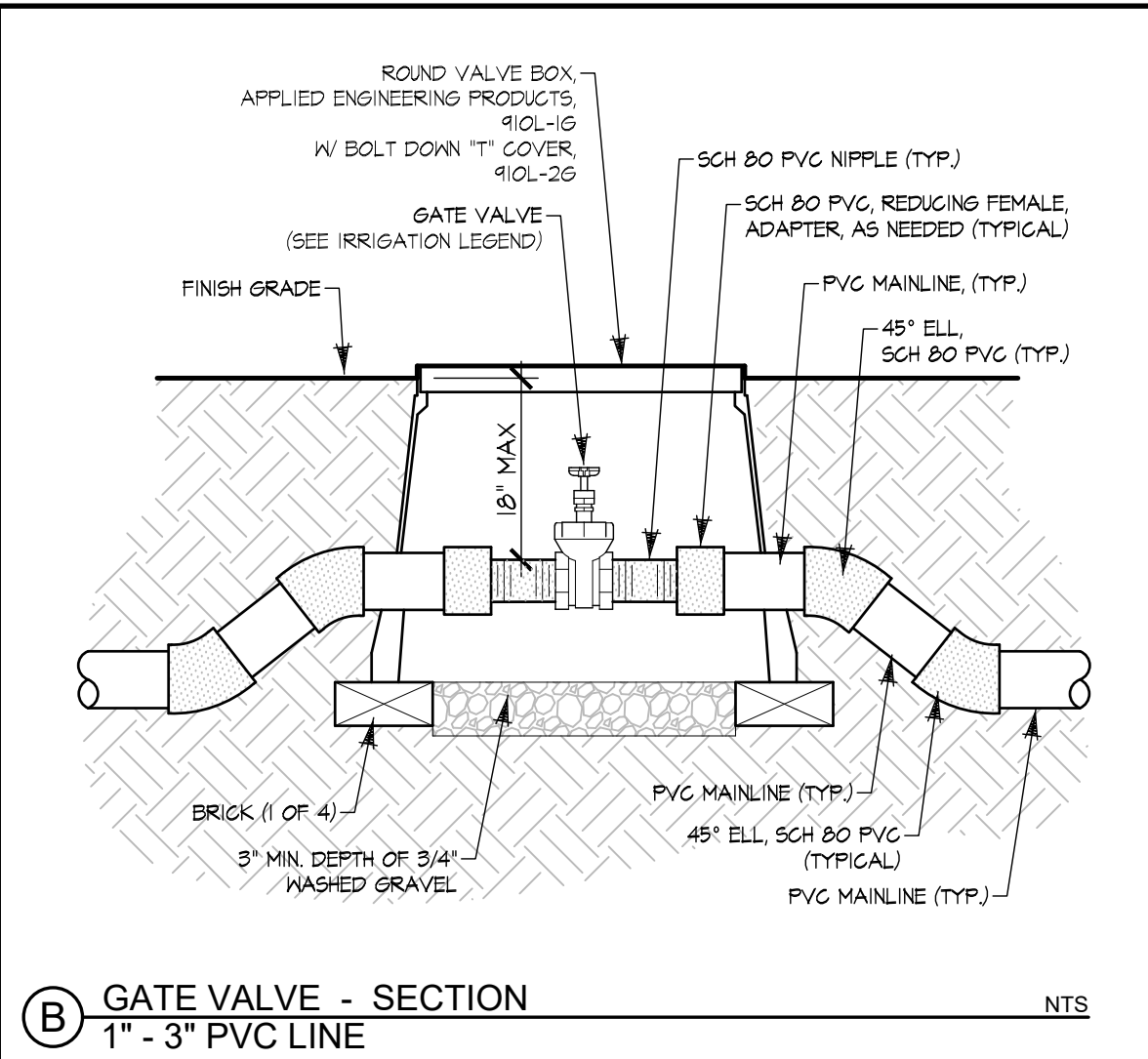
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 DRAWN BY: _____ CHECKED BY: _____ PROJECT ARCHITECT: _____

L2.2

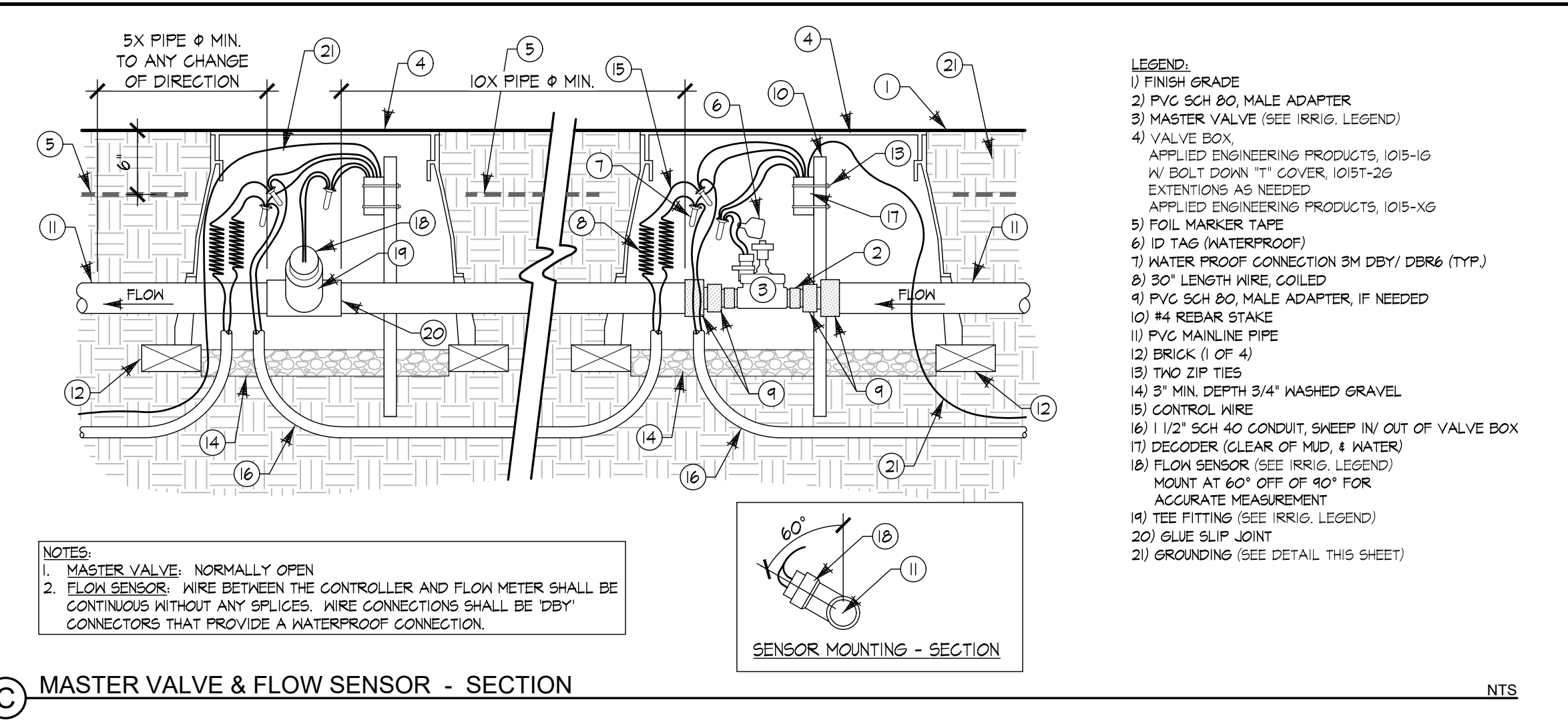
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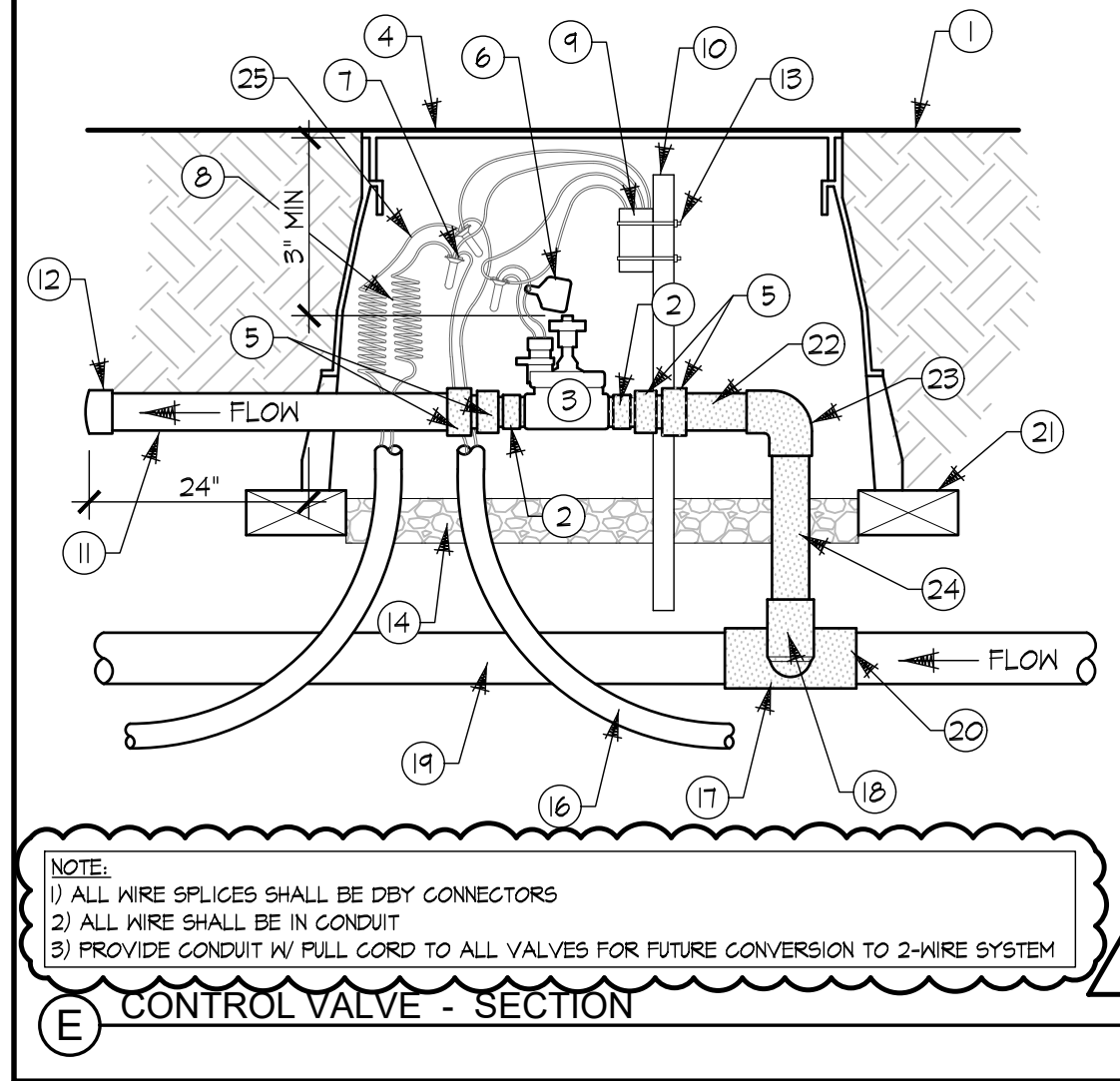
A TAPPING SADDLE - SECTION/ELEVATION
4" LINE OR GREATER NTS



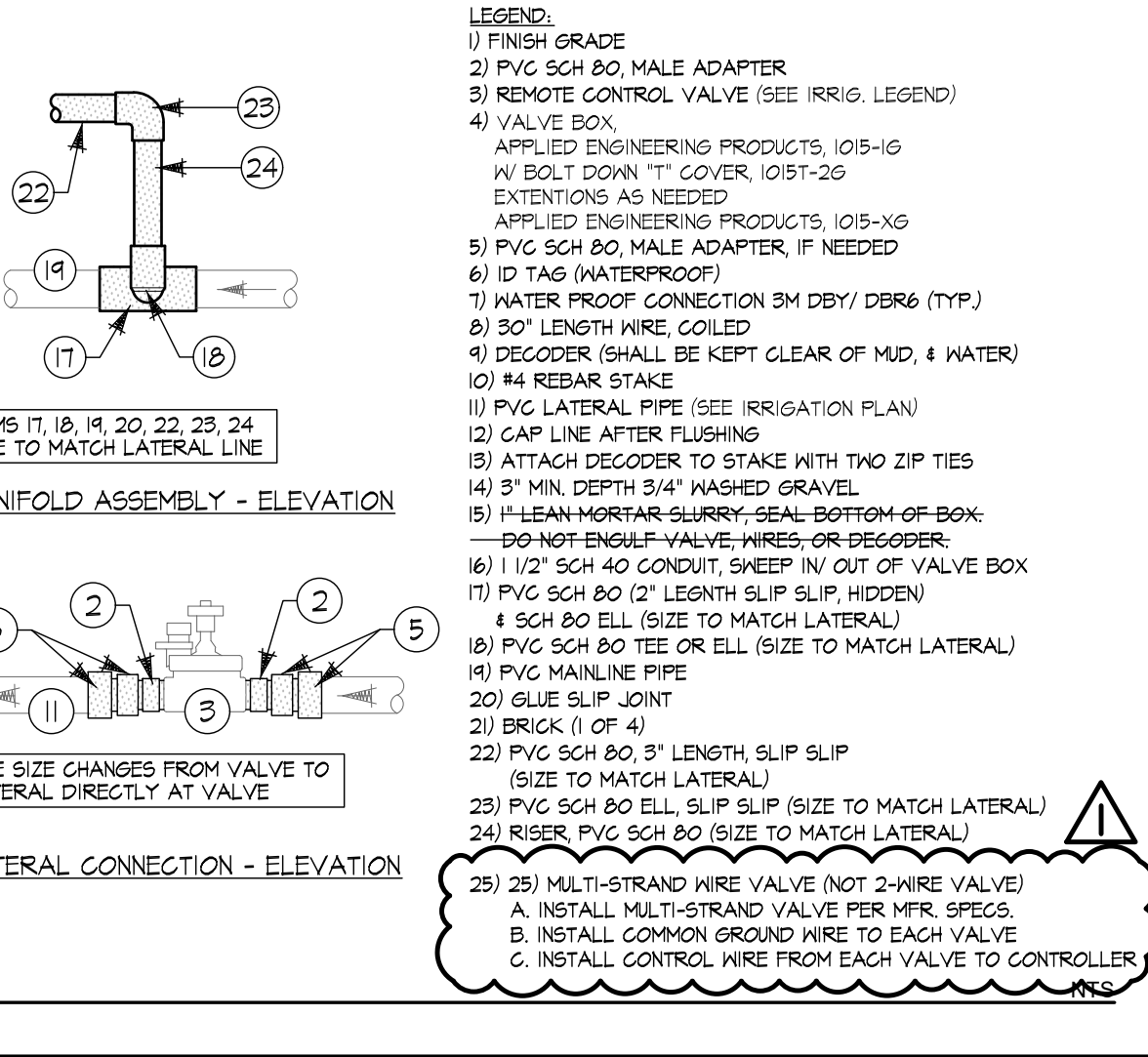
C MASTER VALVE & FLOW SENSOR - SECTION NTS



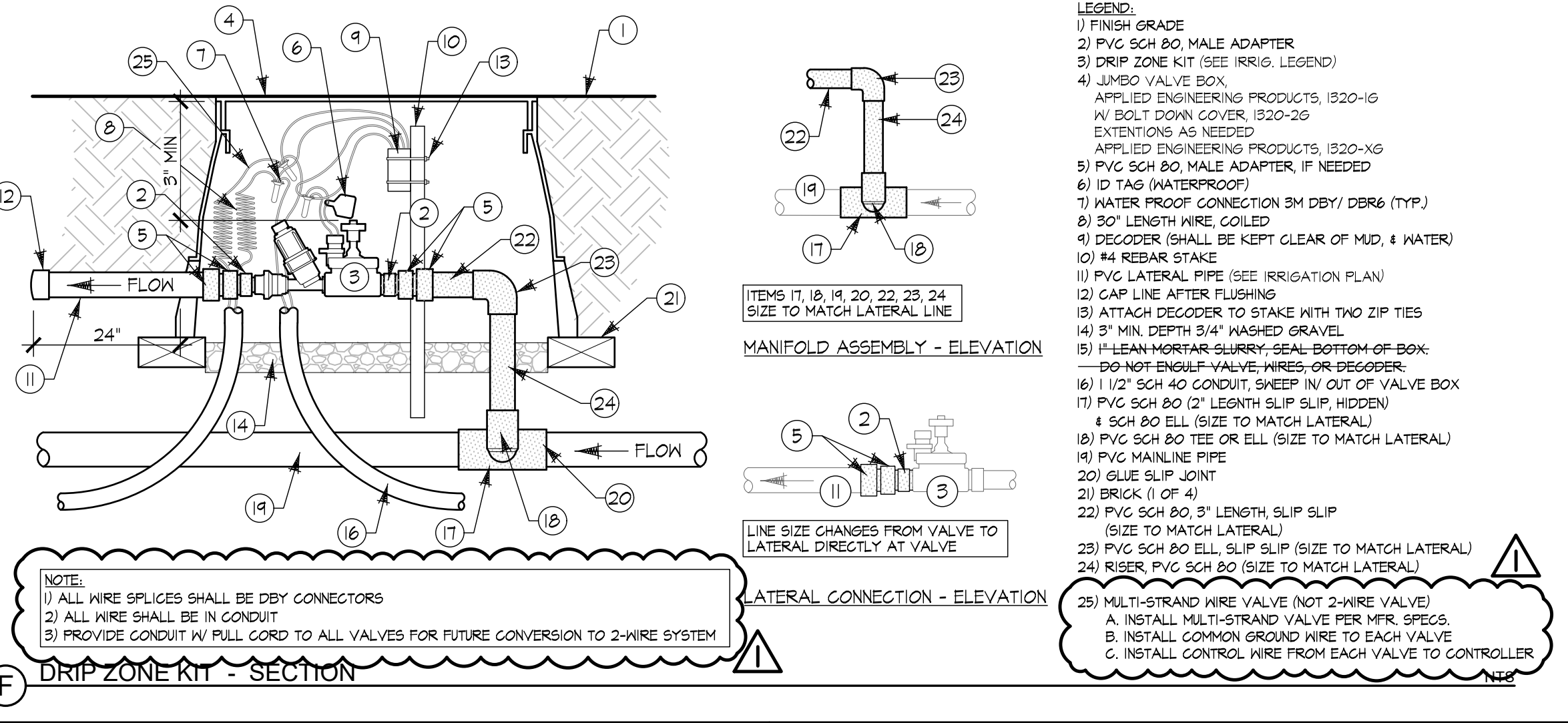
D CONTROLLER - SECTION/ELEVATION
PEDESTAL MOUNT NTS



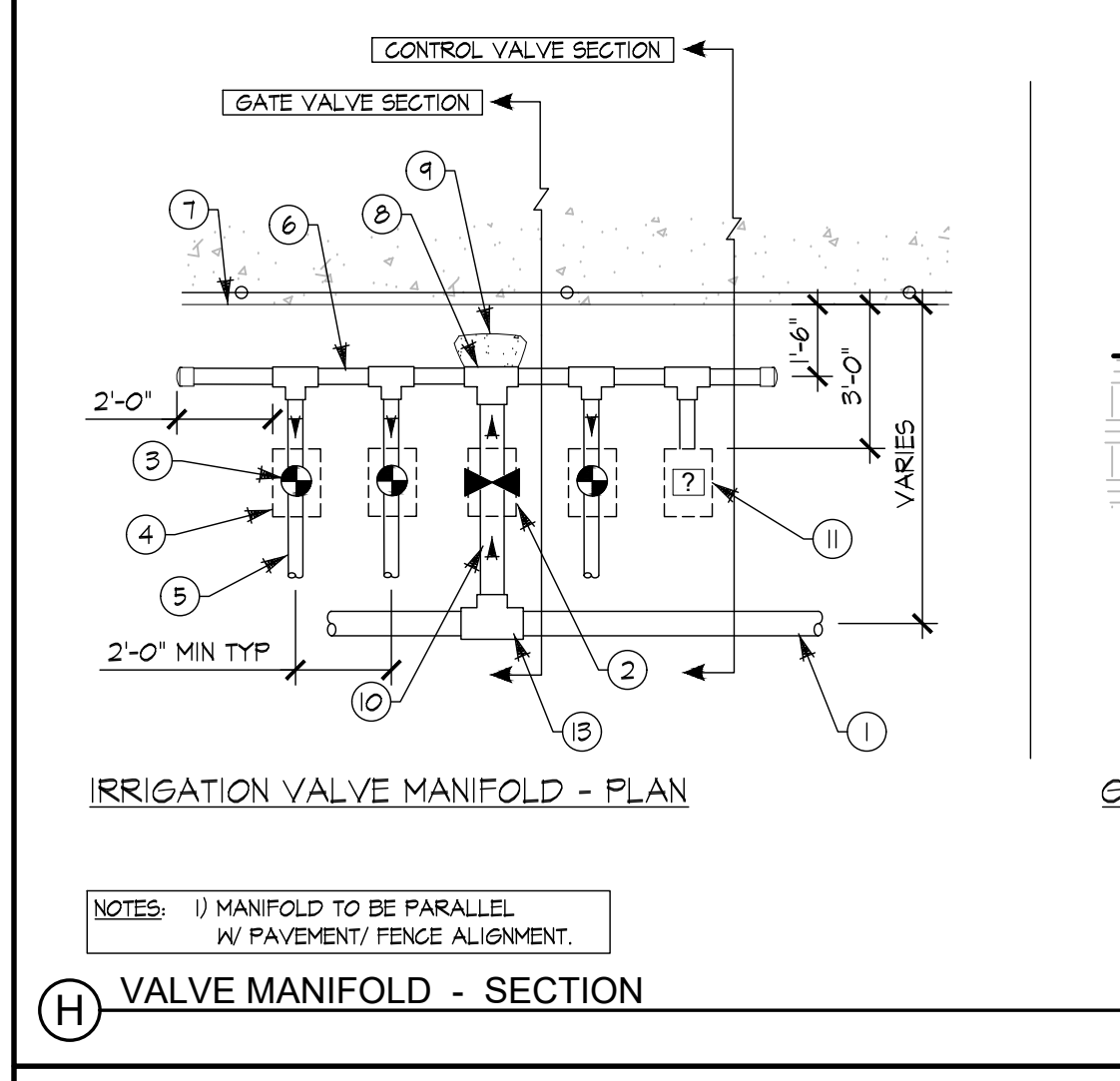
E CONTROL VALVE - SECTION NTS



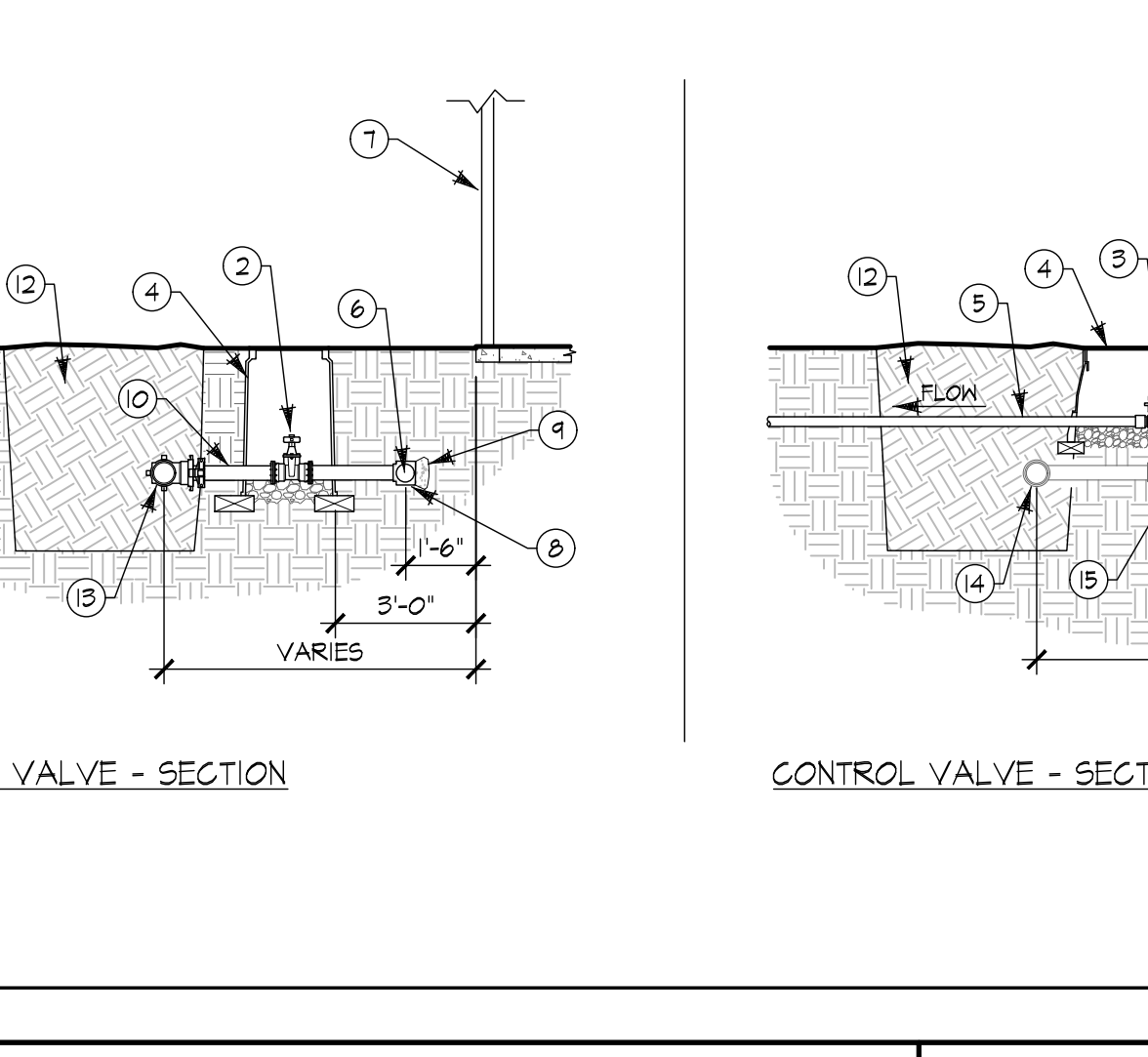
F DRIP ZONE KIT - SECTION NTS



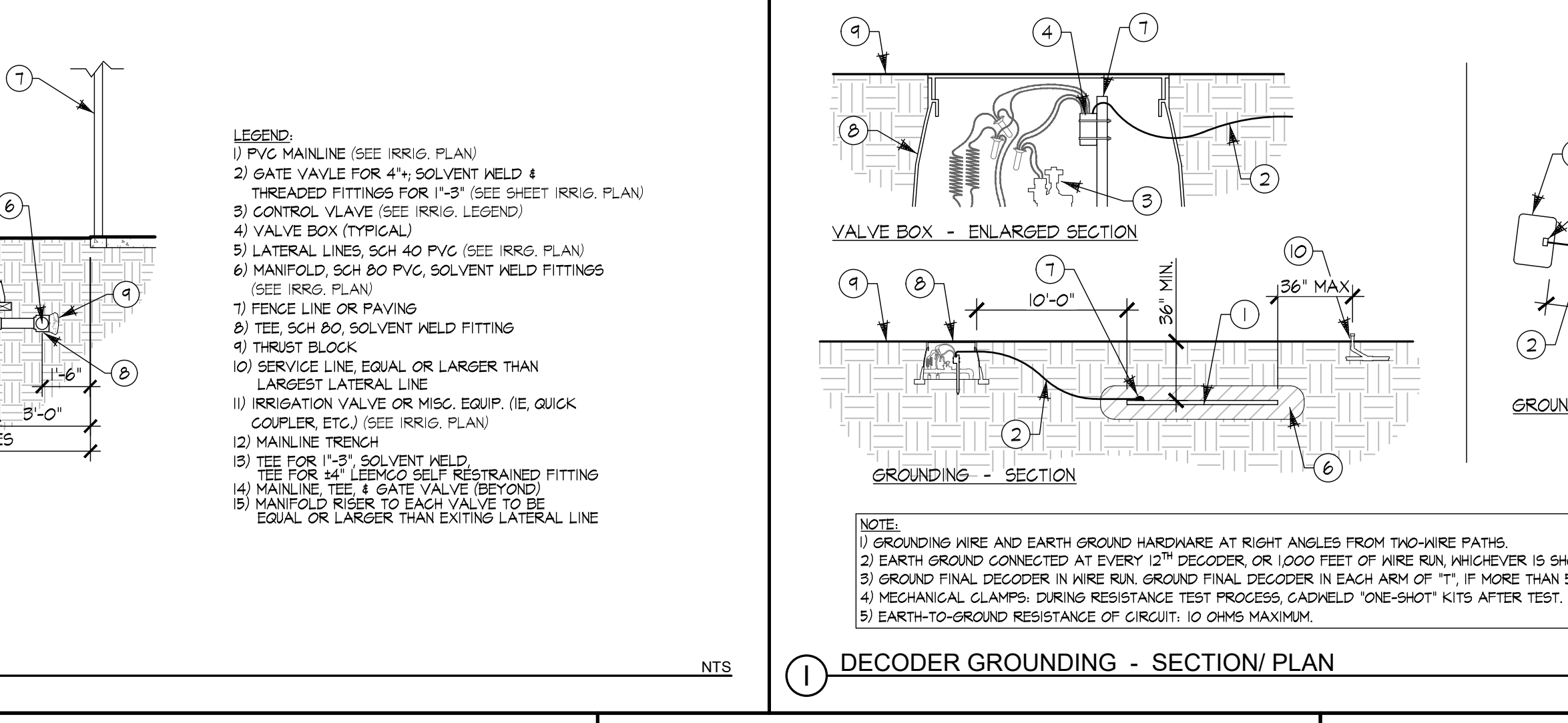
G WEATHER SENSOR - ELEVATION NTS



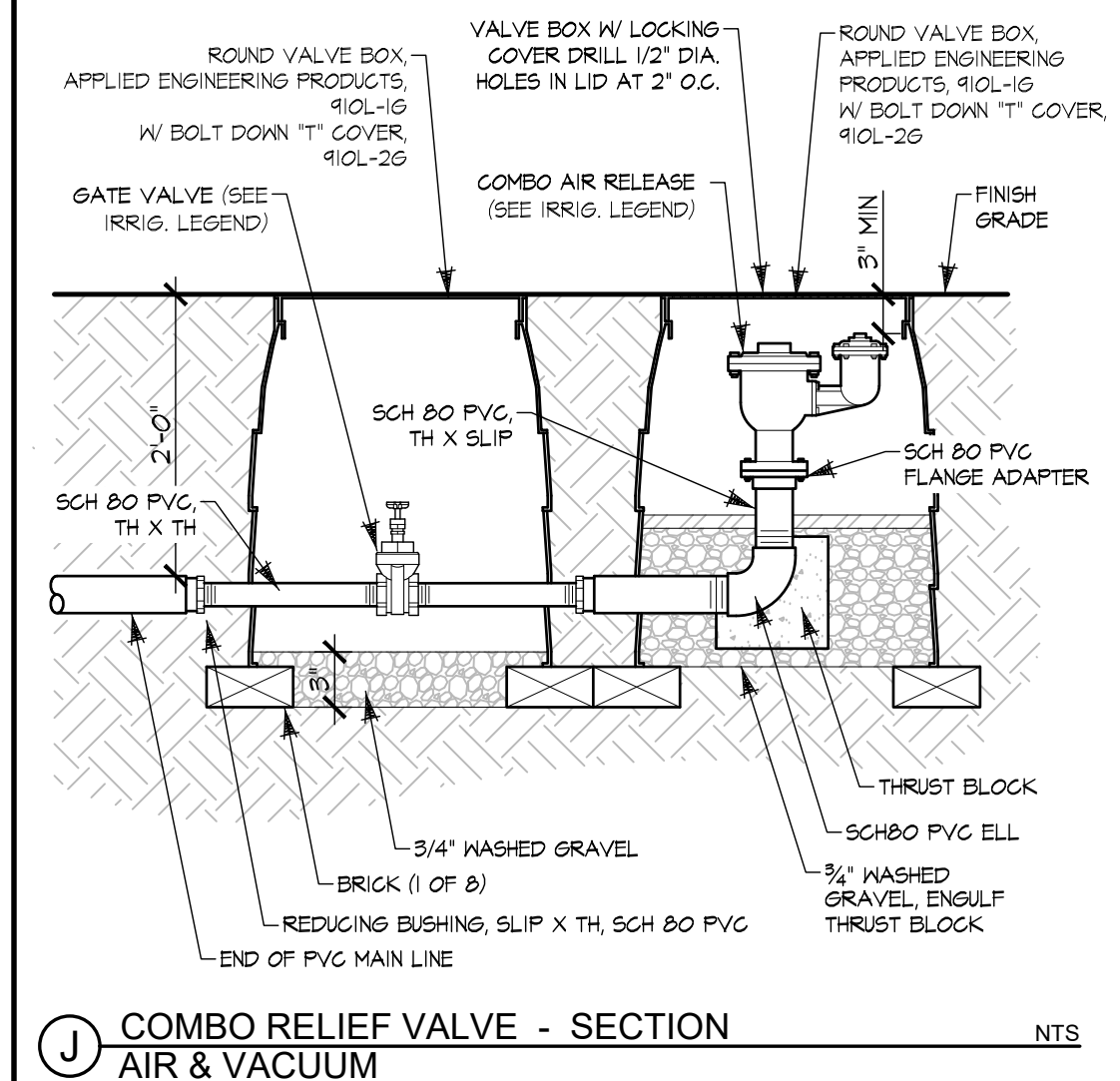
H VALVE MANIFOLD - SECTION NTS



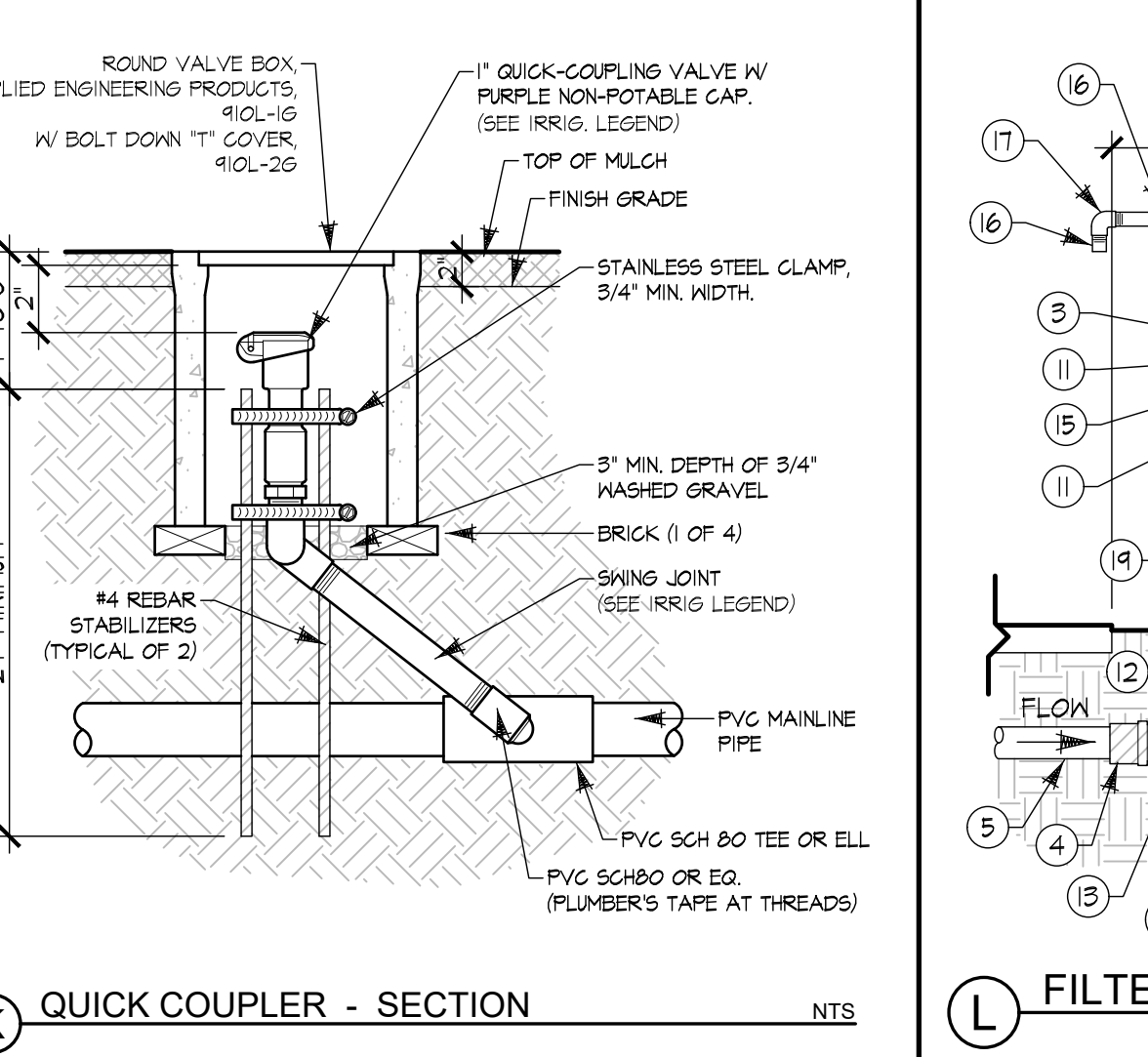
I DECODER GROUNDING - SECTION/PLAN NTS



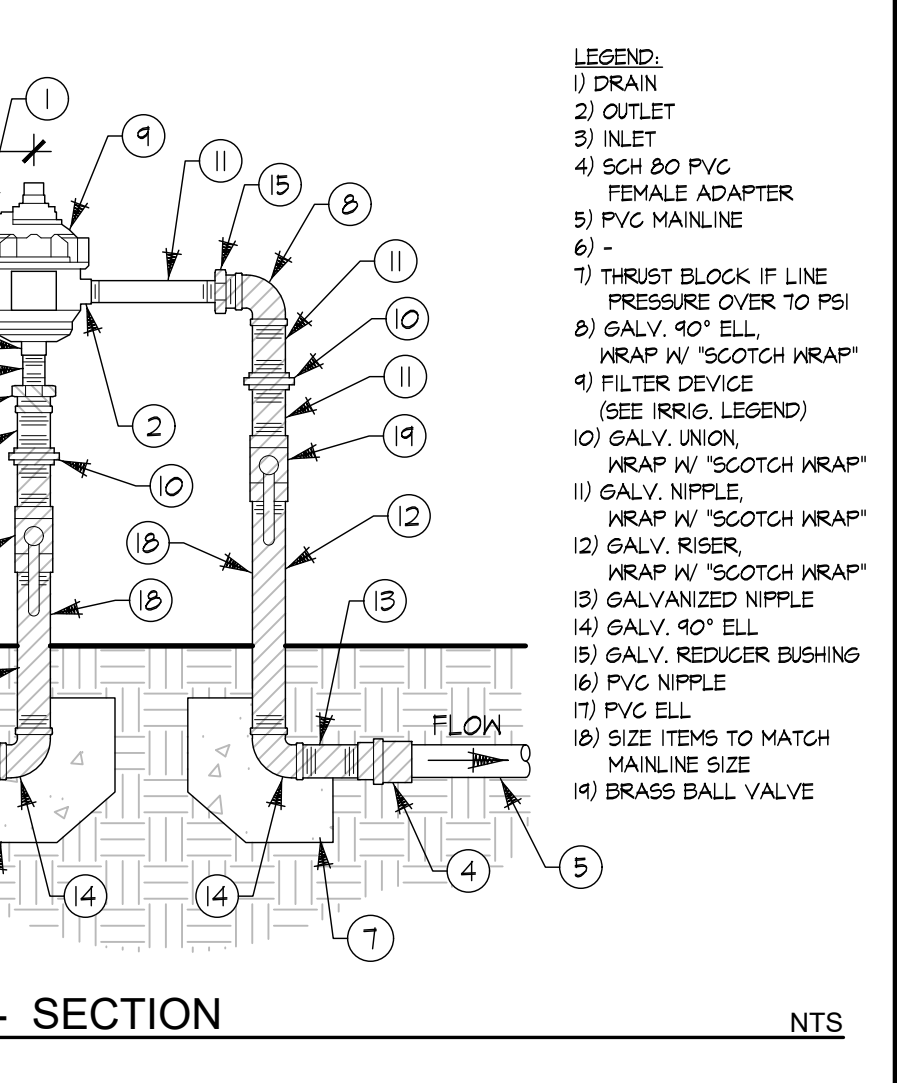
J COMBO RELIEF VALVE - SECTION NTS



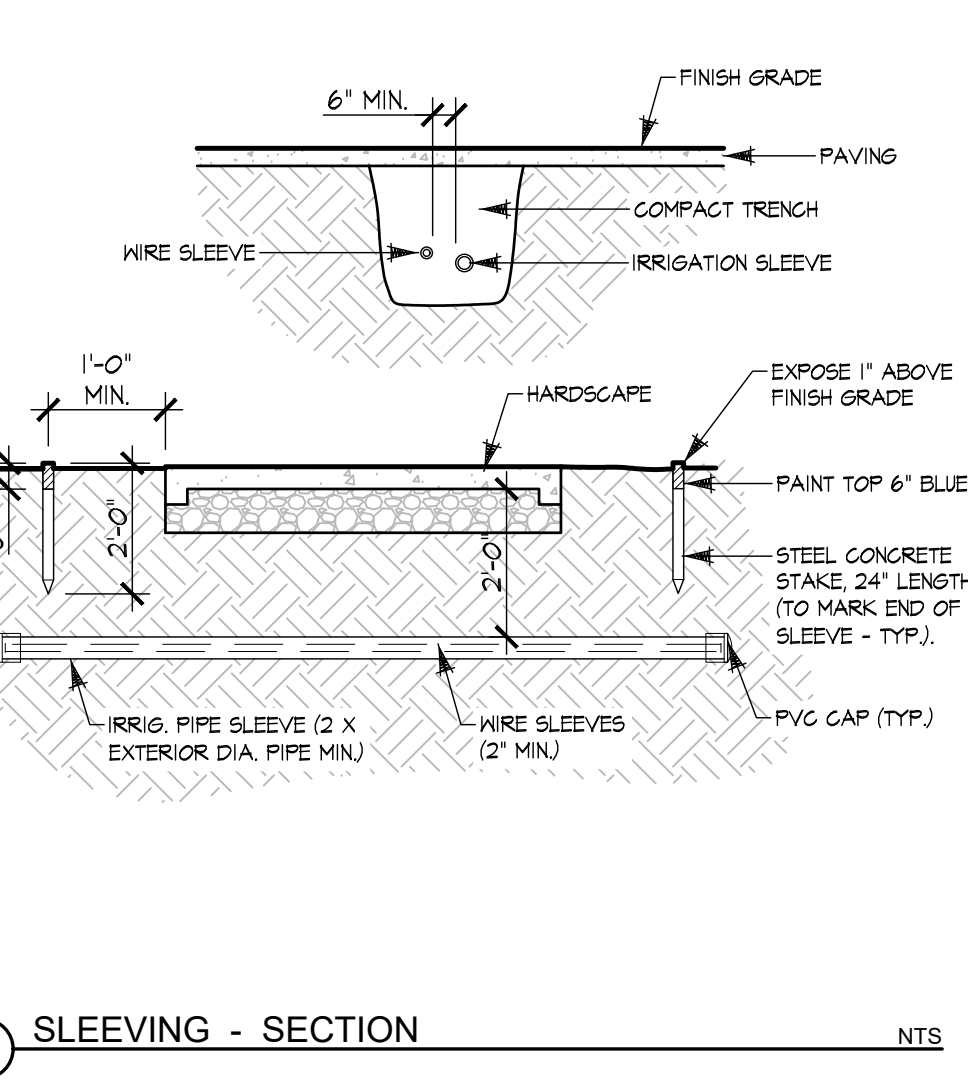
K QUICK COUPLER - SECTION NTS



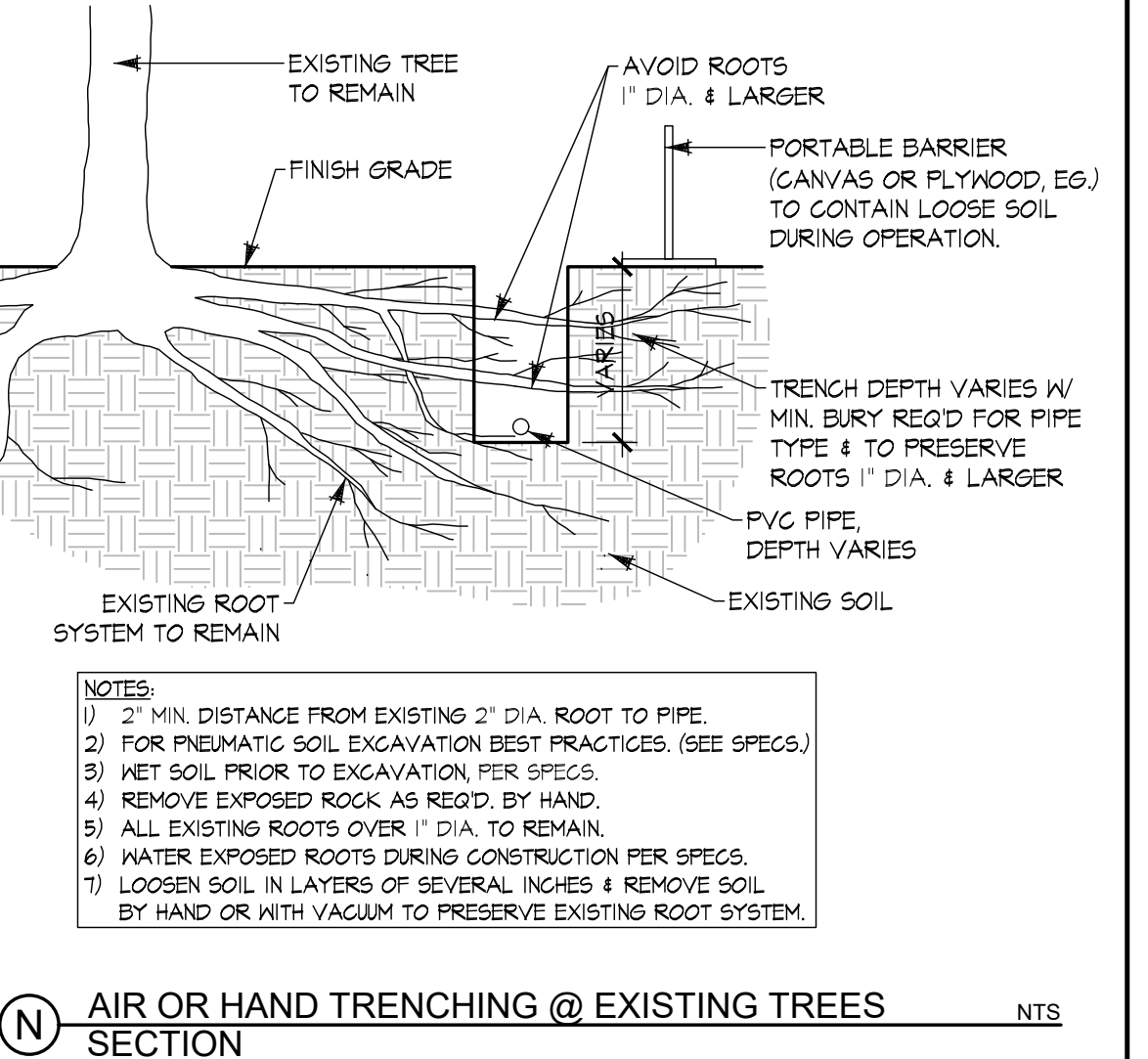
L FILTER - SECTION NTS



M SLEEVING - SECTION NTS



N AIR OR HAND TRENCHING @ EXISTING TREES SECTION NTS



O DECODER GROUNDING - SECTION/PLAN NTS

LANDSCAPING & OUTDOOR
LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
1801 PANORAMA DRIVE
BAKERFIELD, CA
93305

NO.	DATE	DESCRIPTION
1	08/11/2023	BID SET
2	08/25/2023	ADDENDUM 1

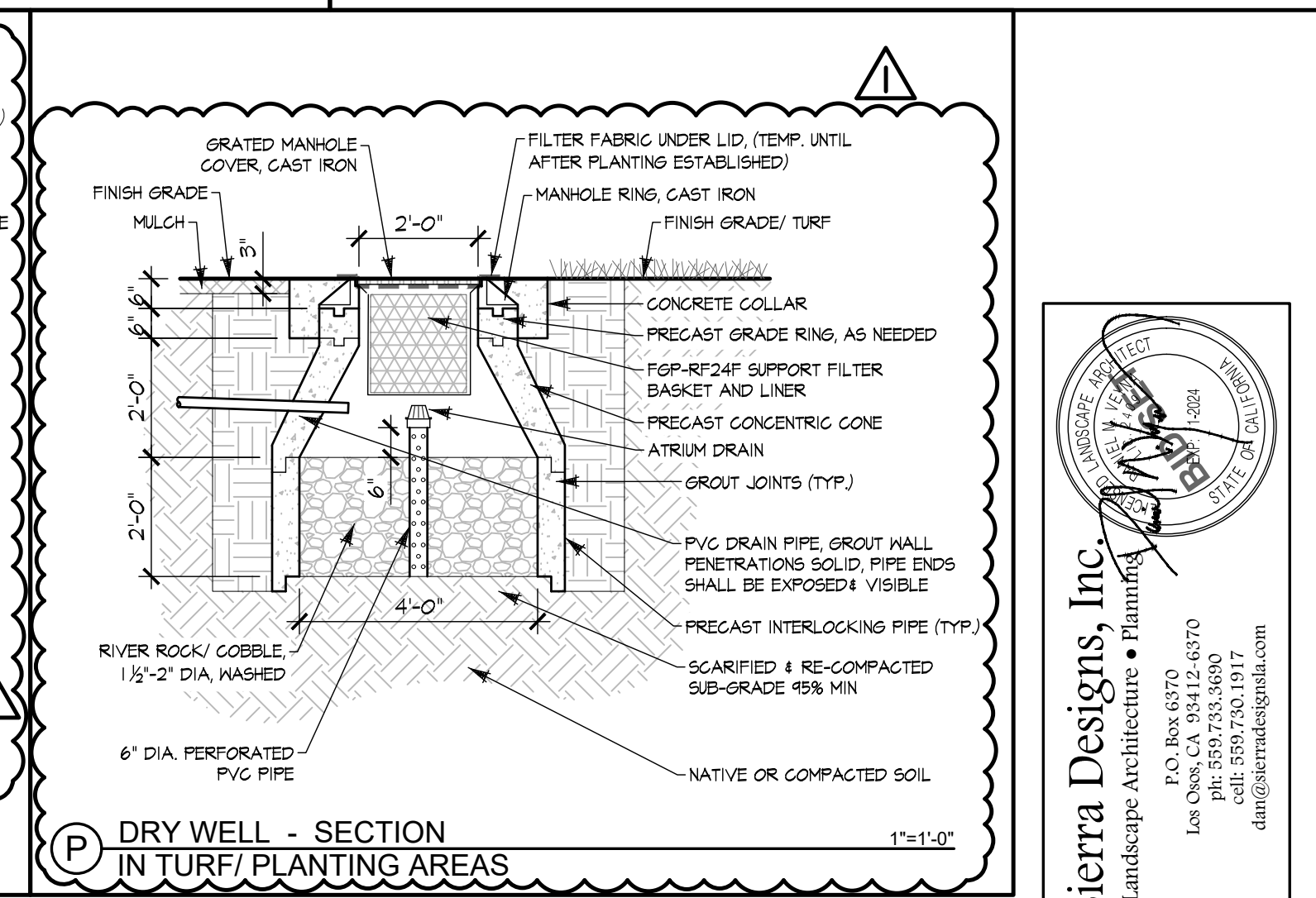
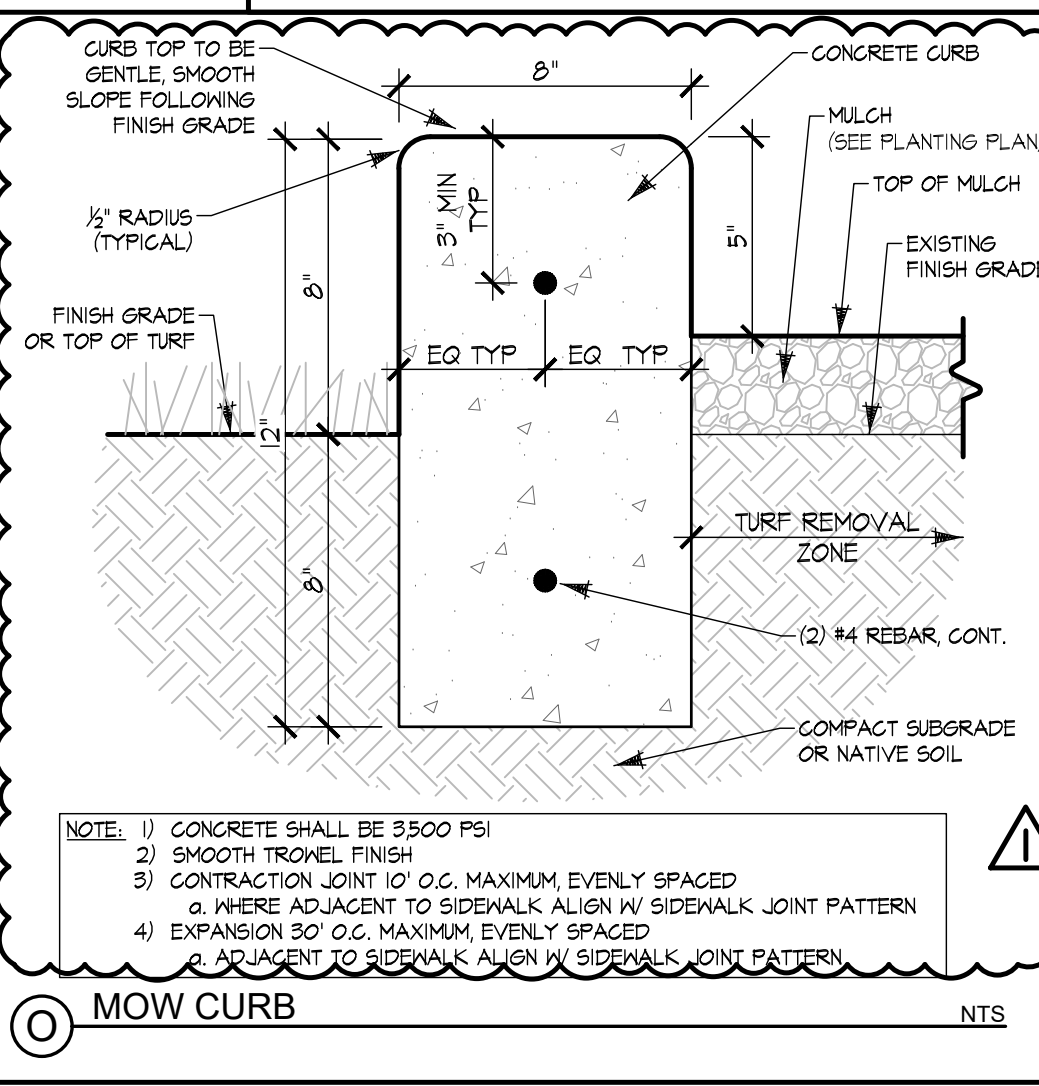
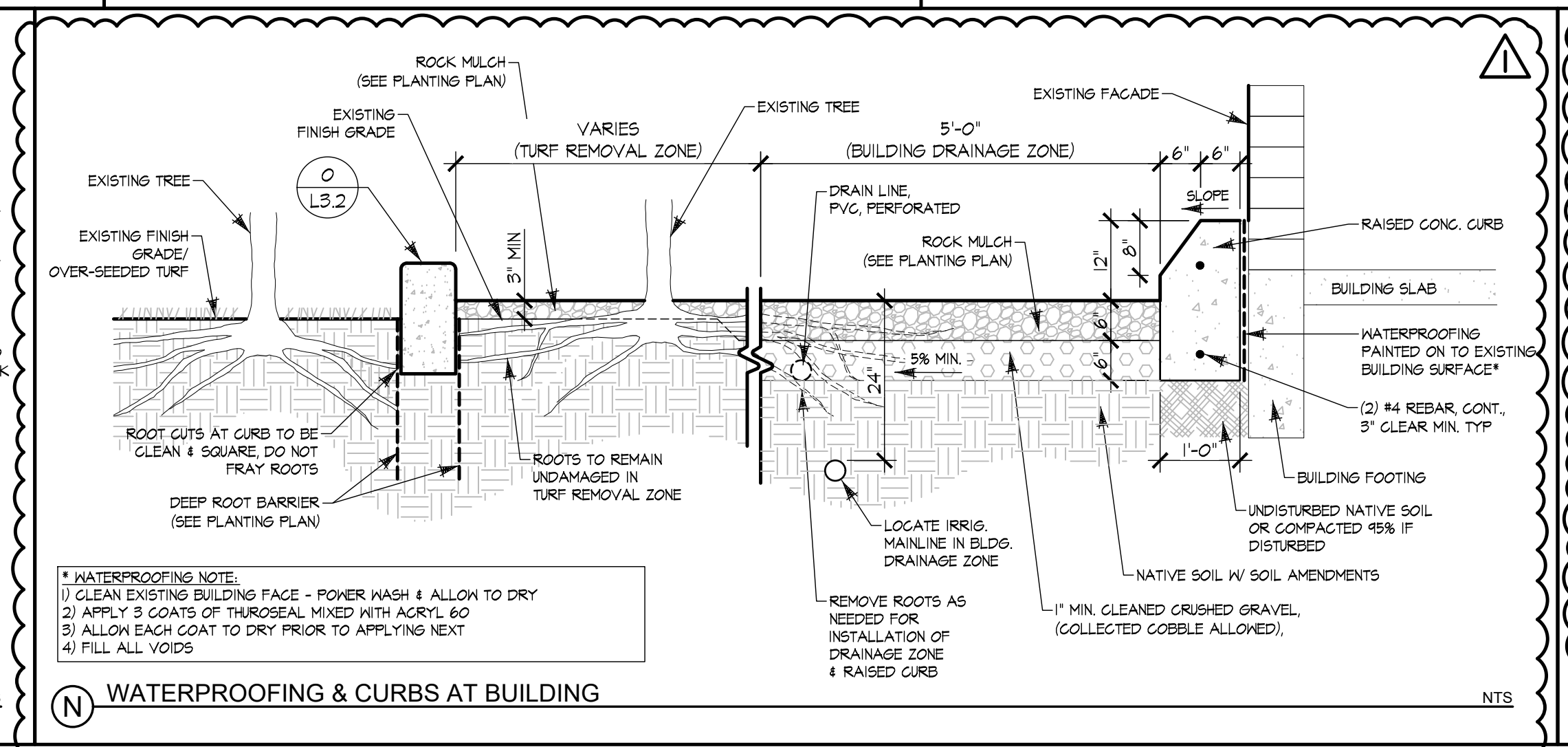
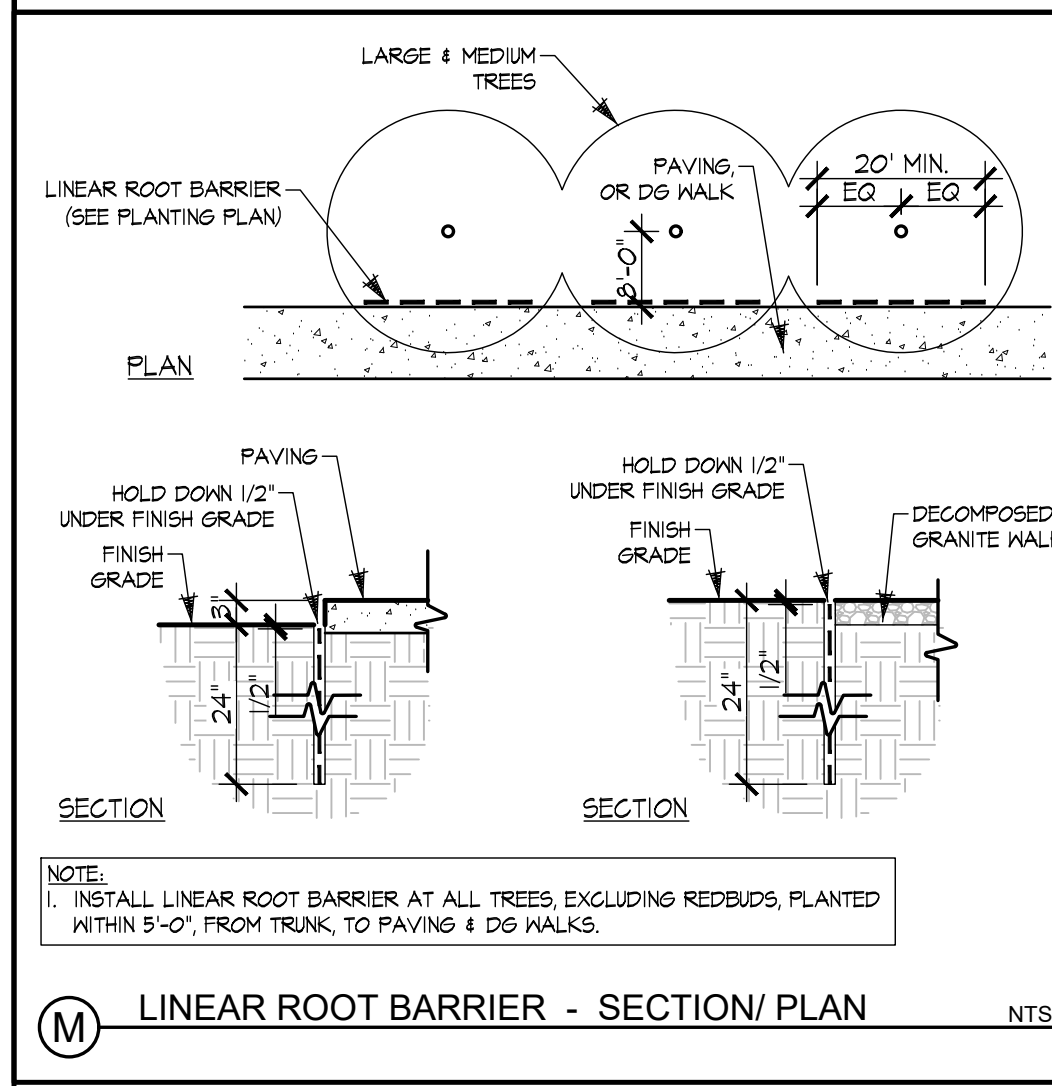
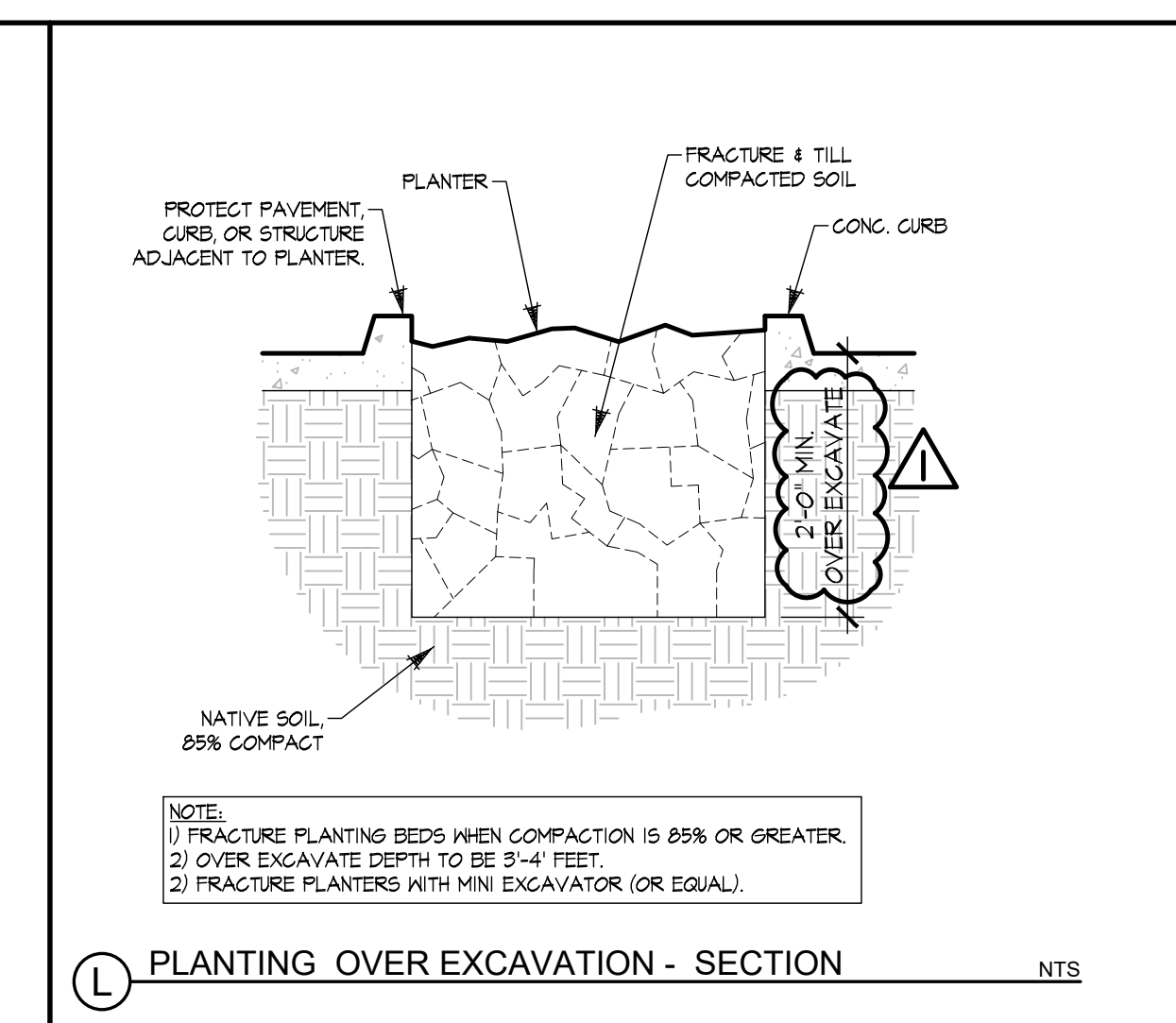
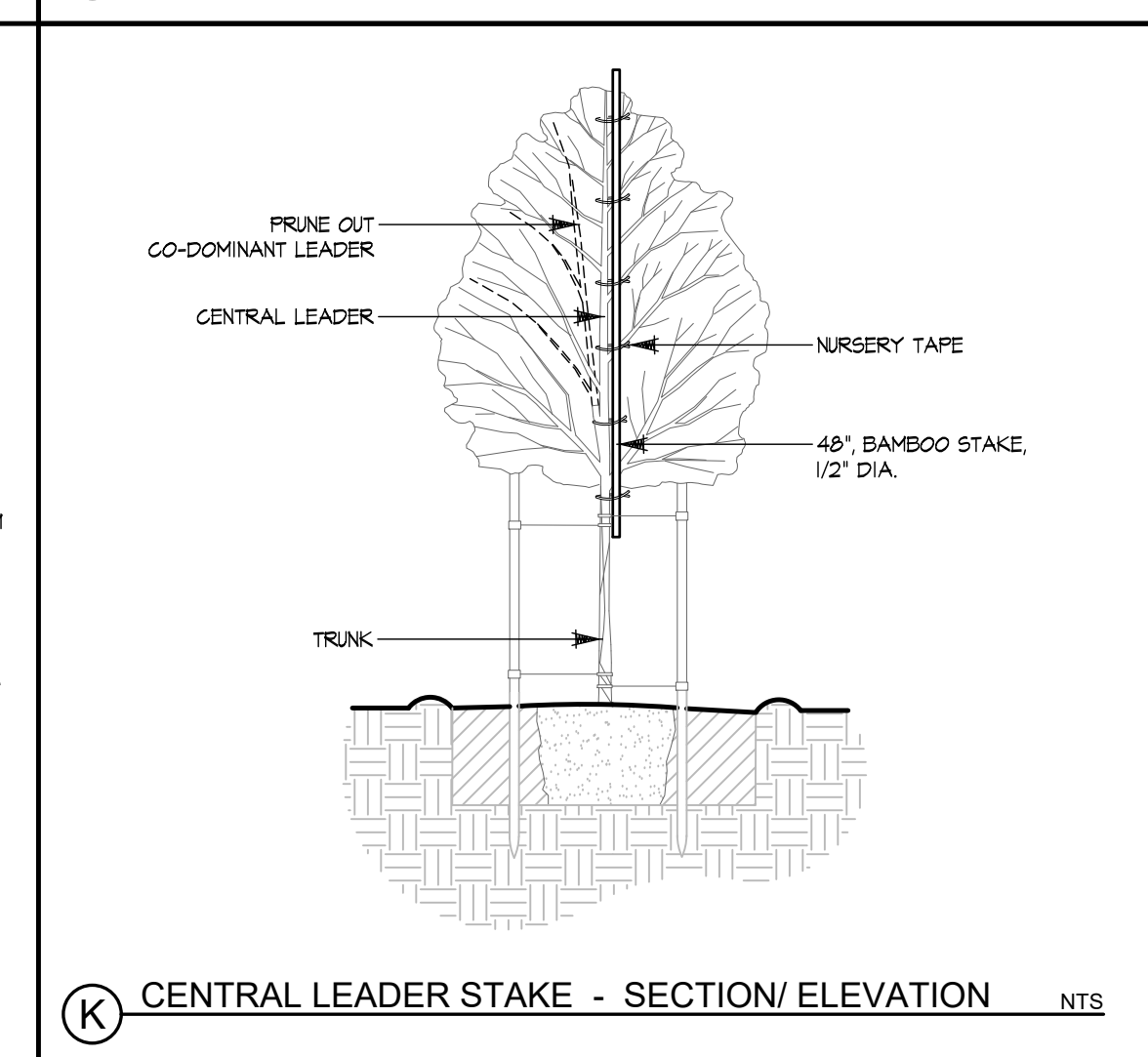
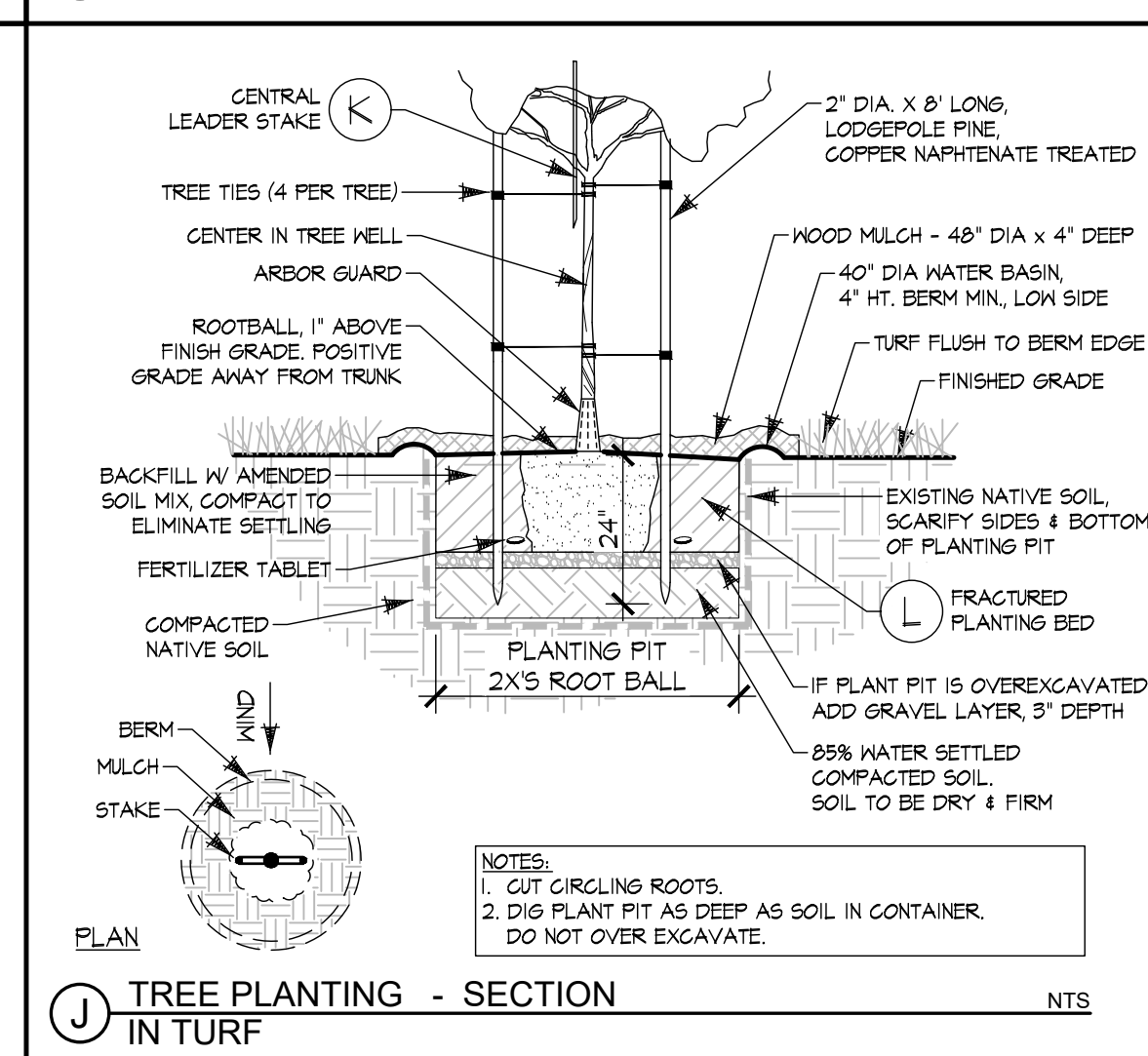
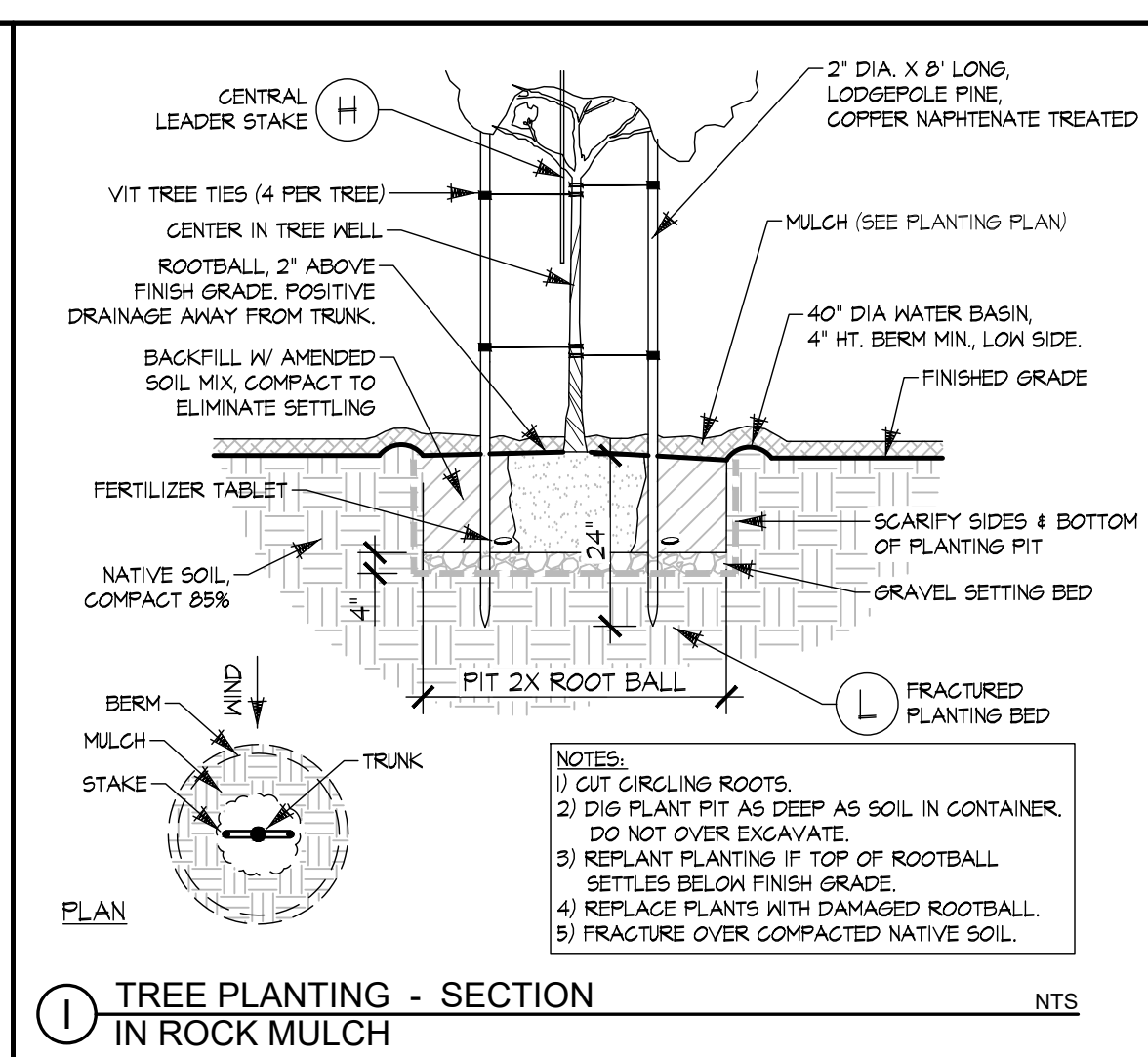
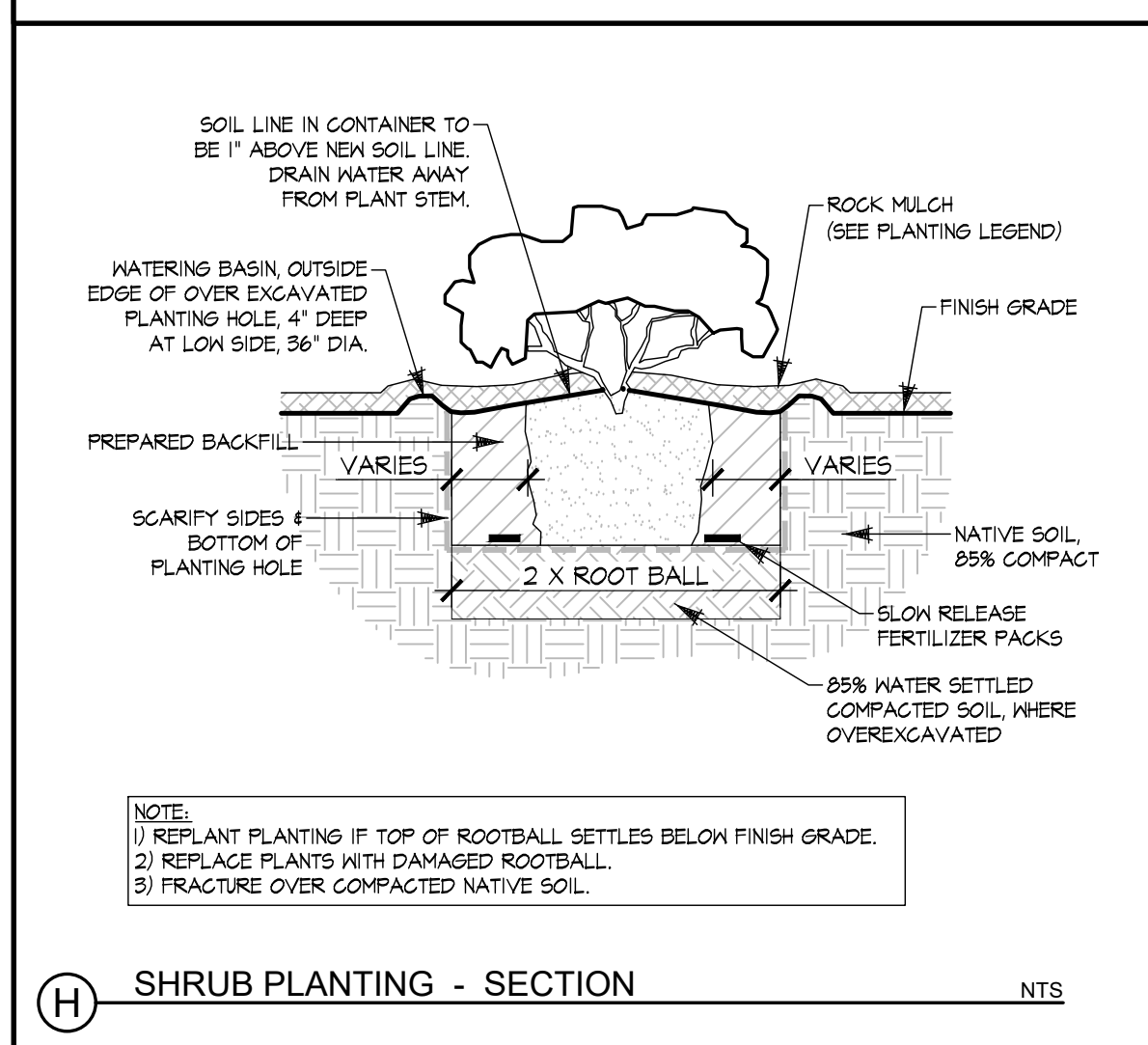
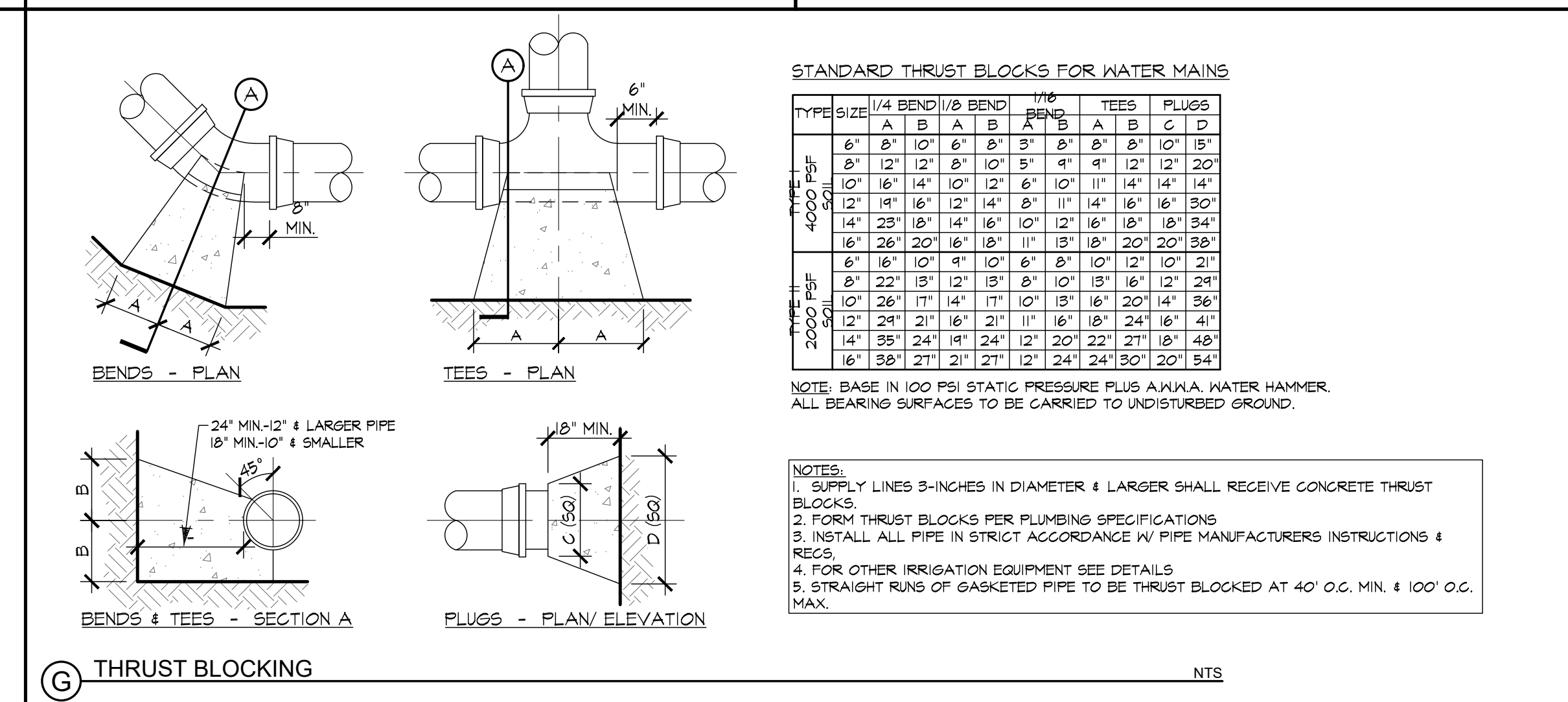
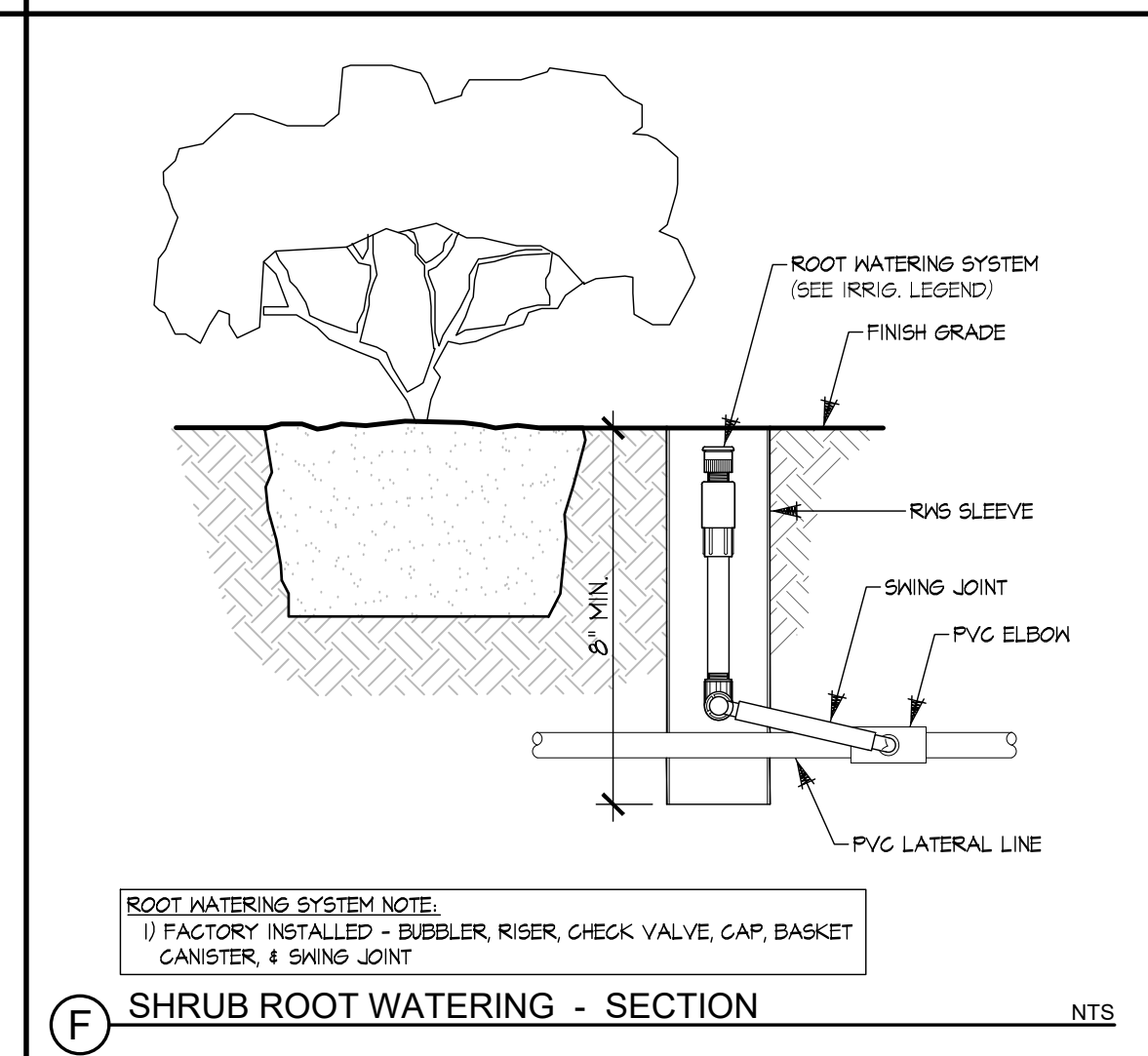
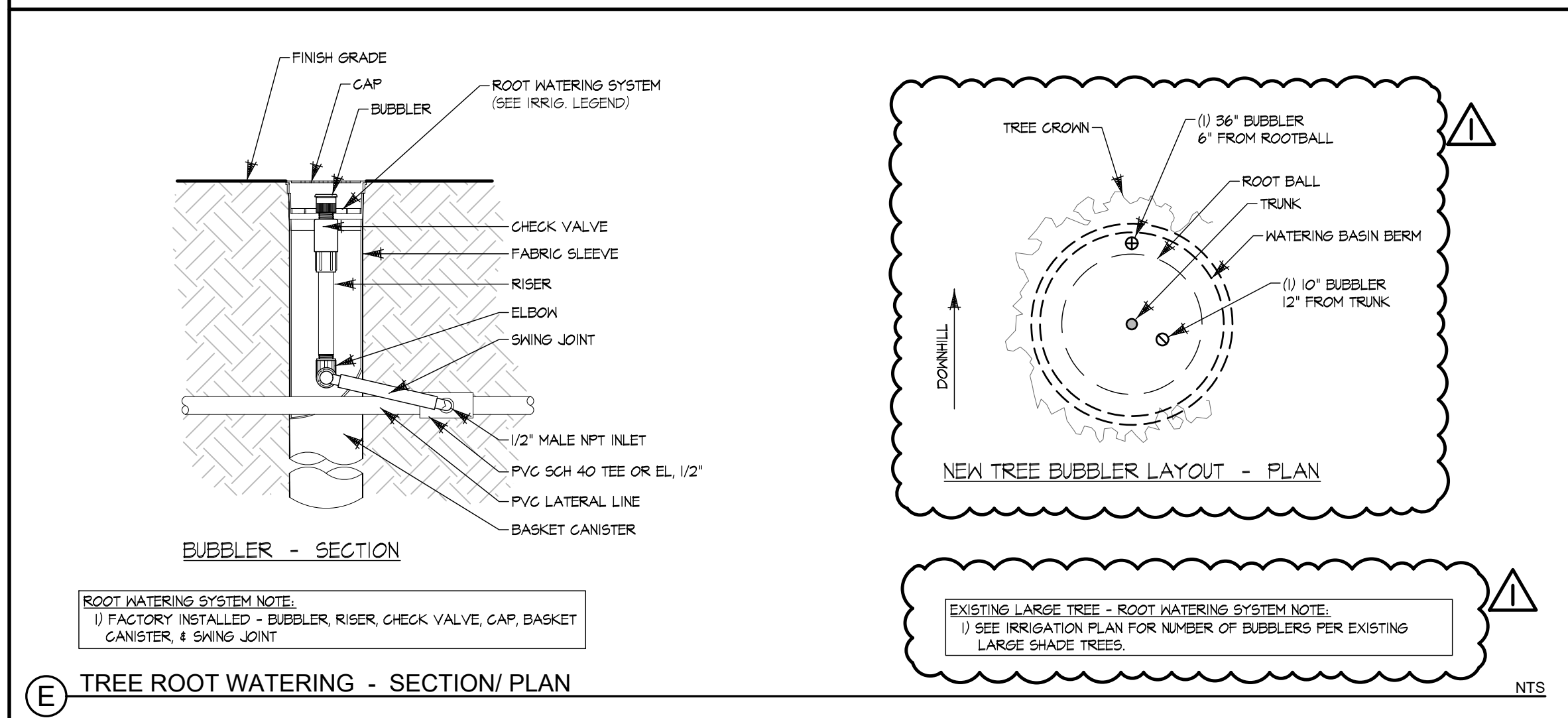
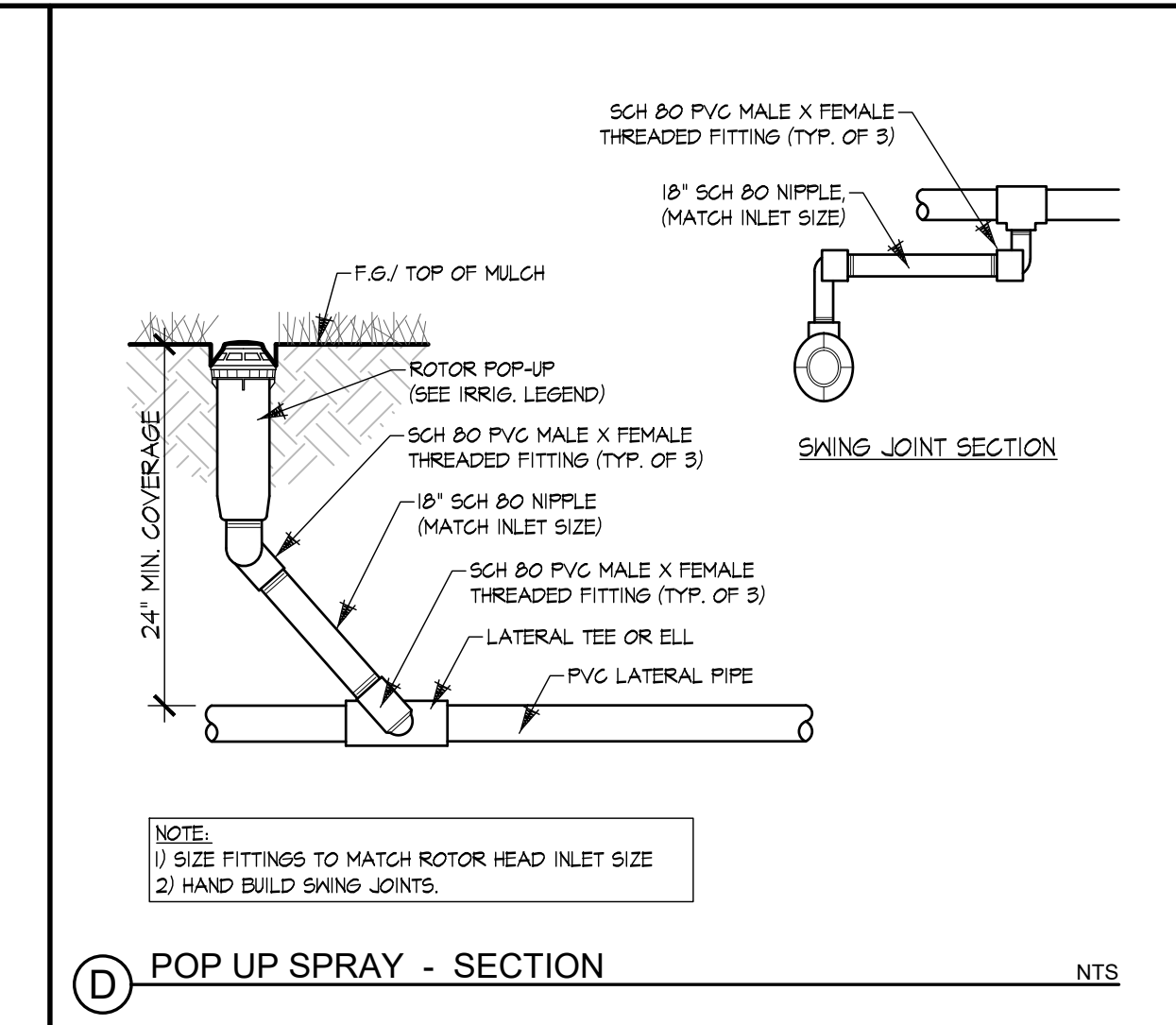
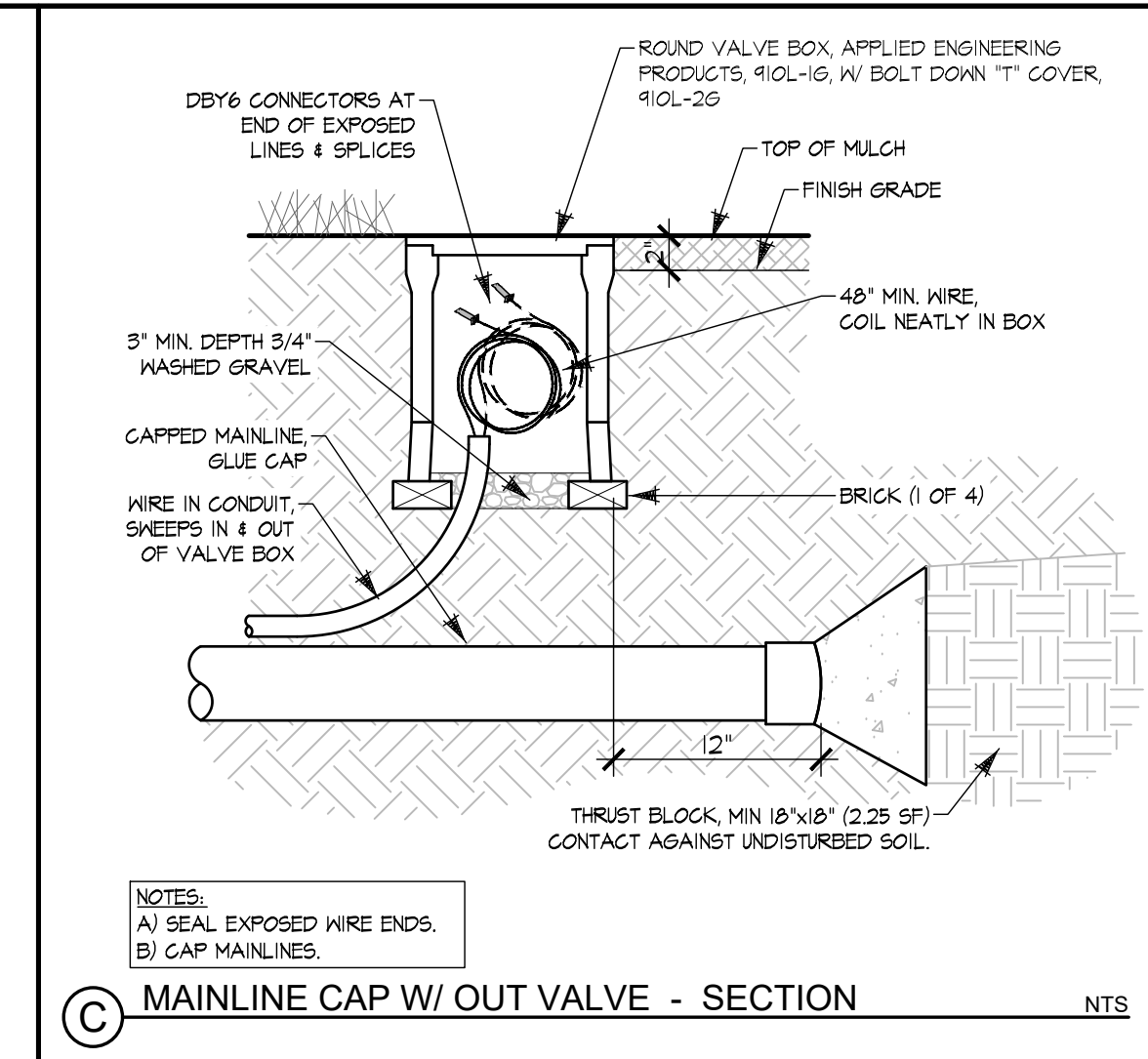
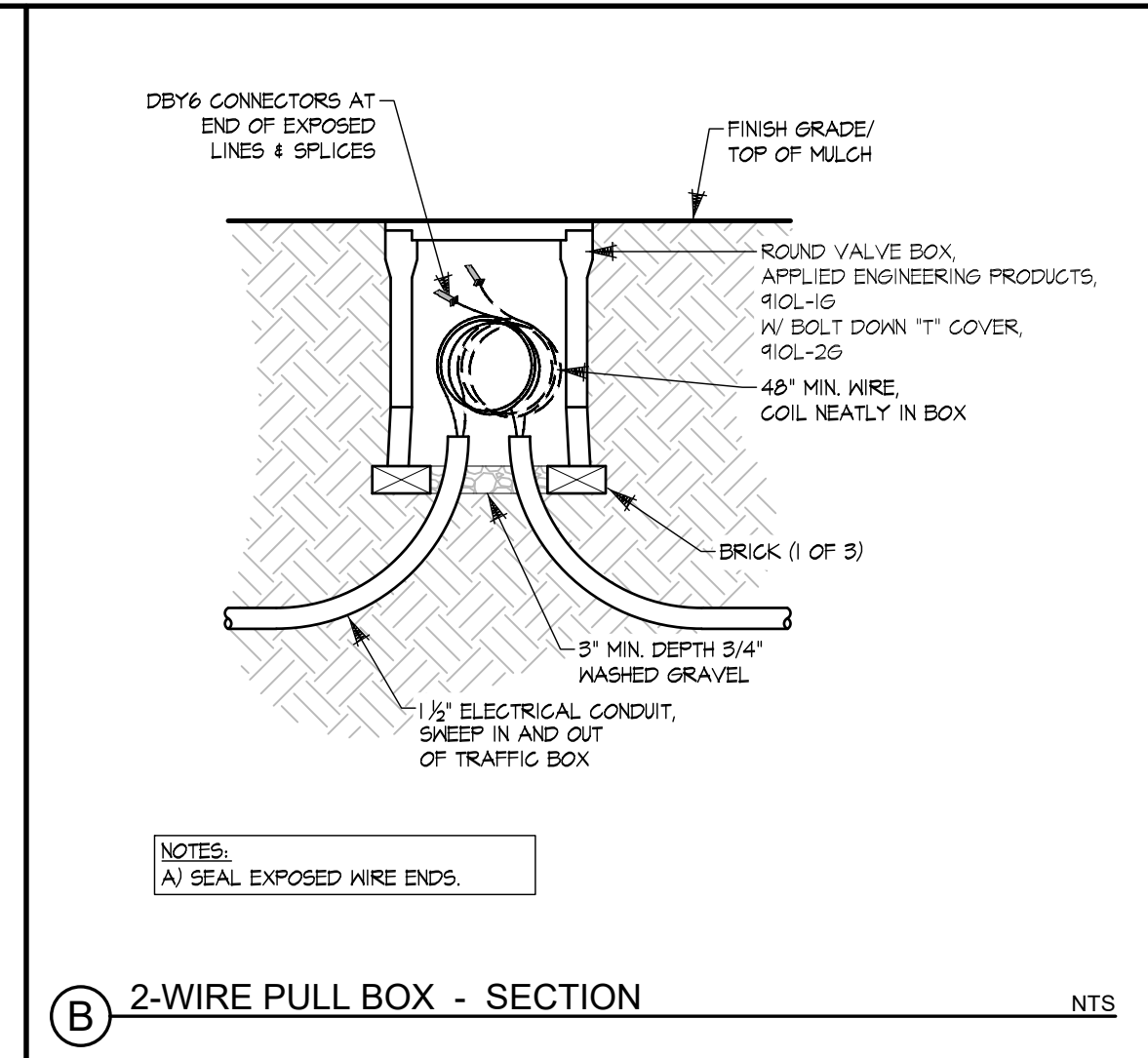
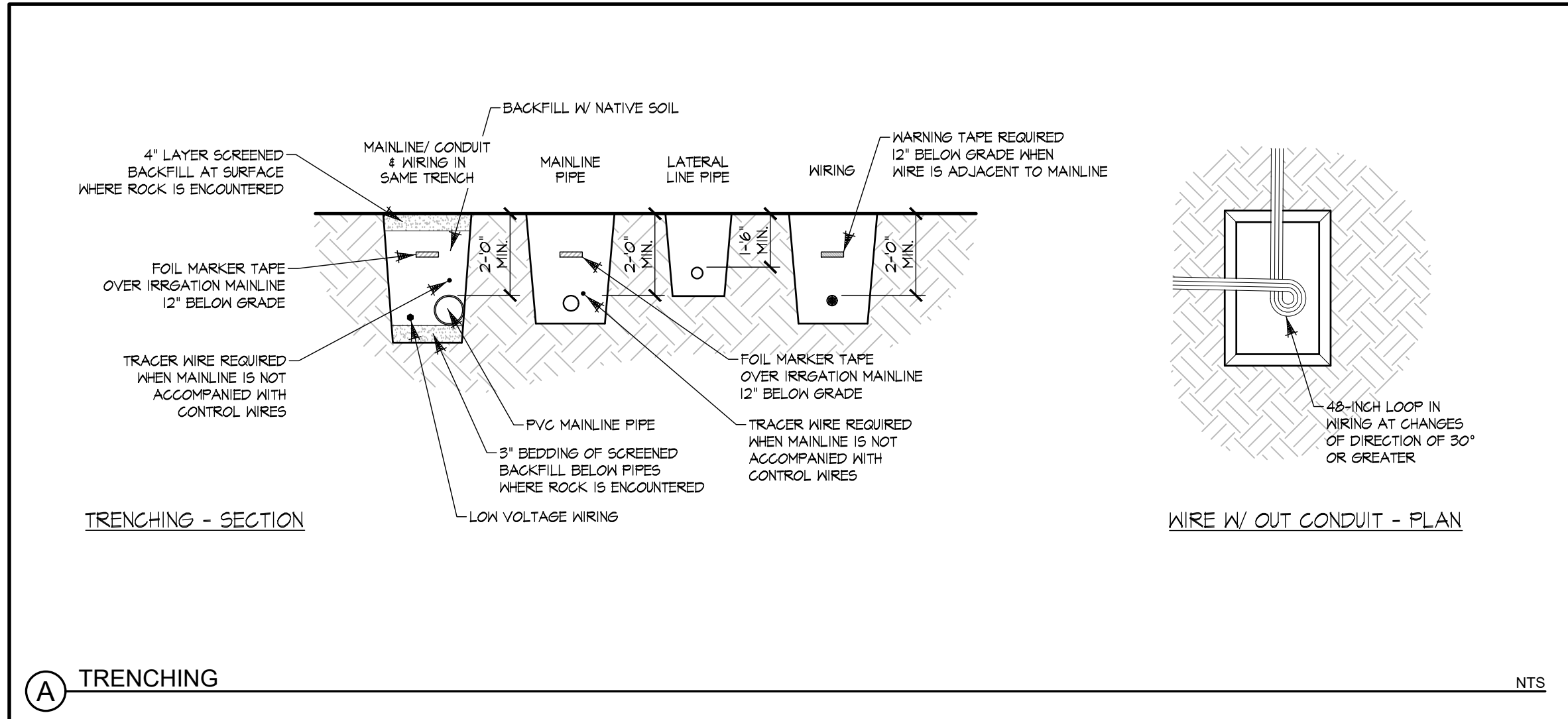
IRRIGATION
DETAILS

Sierra Designs, Inc.
Landscape Architecture • Planning

7780 NORTH PALMA AVE | FRESNO, CALIFORNIA 93711
P: 559-446-6460 | F: 559-446-2467 | www.sierradesigns.com

PROJECT NUMBER: _____ DATE: _____
DRAWN BY: _____ CHECKED BY: _____ PROJECT ARCHITECT: _____

L3.1 (FOR PLAN CHECK ONLY)



LANDSCAPING & OUTDOOR LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE BAKERSFIELD, CA 93305

KCCCD
 KERN COMMUNITY COLLEGE DISTRICT

IRRIGATION & PLANTING DETAILS

Sierra Designs, Inc.
 Landscape Architecture • Planning
 P.O. Box 6370
 Los Angeles, CA 90060
 Tel: 310.733.3680
 Fax: 310.733.3680
 www.sierradesigns.com

7780 NORTH PALM AVE | FRESNO, CALIFORNIA 93711
 P: 559.446.6460 | F: 559.446.2467 | www.pbk.com

DATE: 08/11/2023
 BID SET: 04/25/2023
 APPENDIX I

NO. DATE DESCRIPTION

03-12168
 15-C1
 DSA
 FILE
 P/N
 A/P/N

FOR PLAN CHECK ONLY

NEW FENCING AND 4'-0" GATE PER 14/AX.1. SEE 3/AS1.2 FOR PLAN

EXISTING LIGHT STANDARDS BASE. CLEAN AND SACK

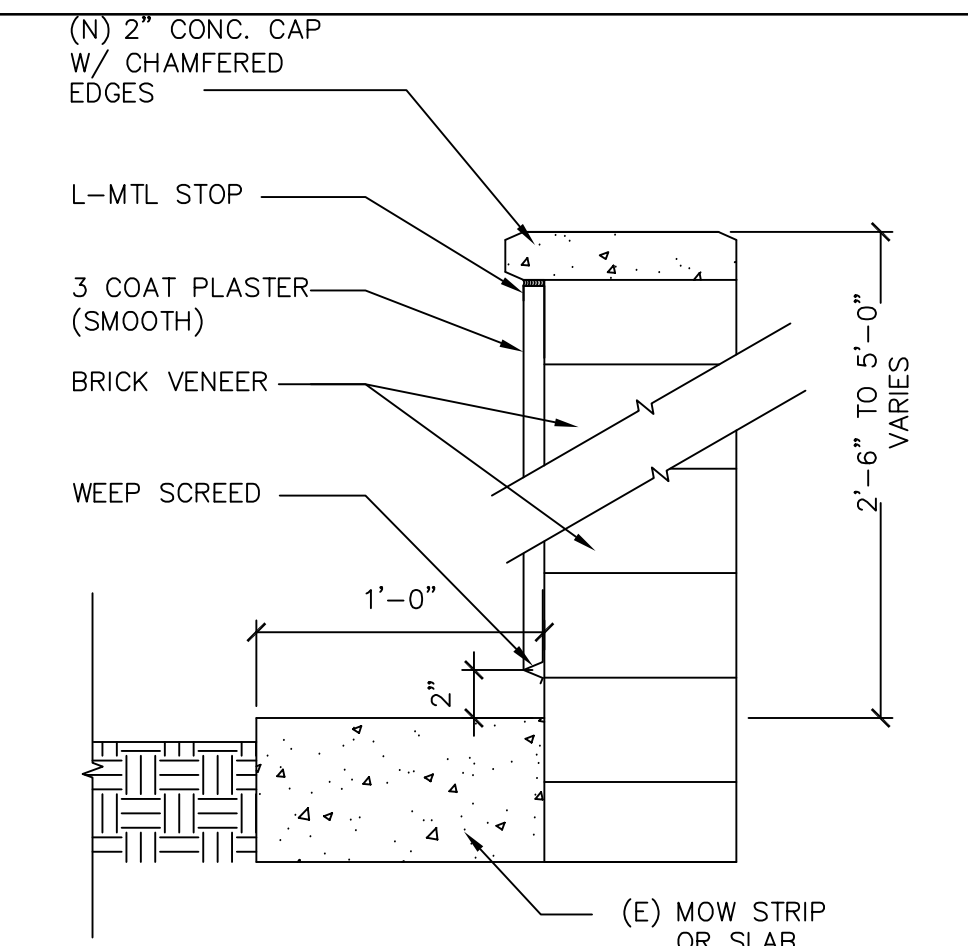
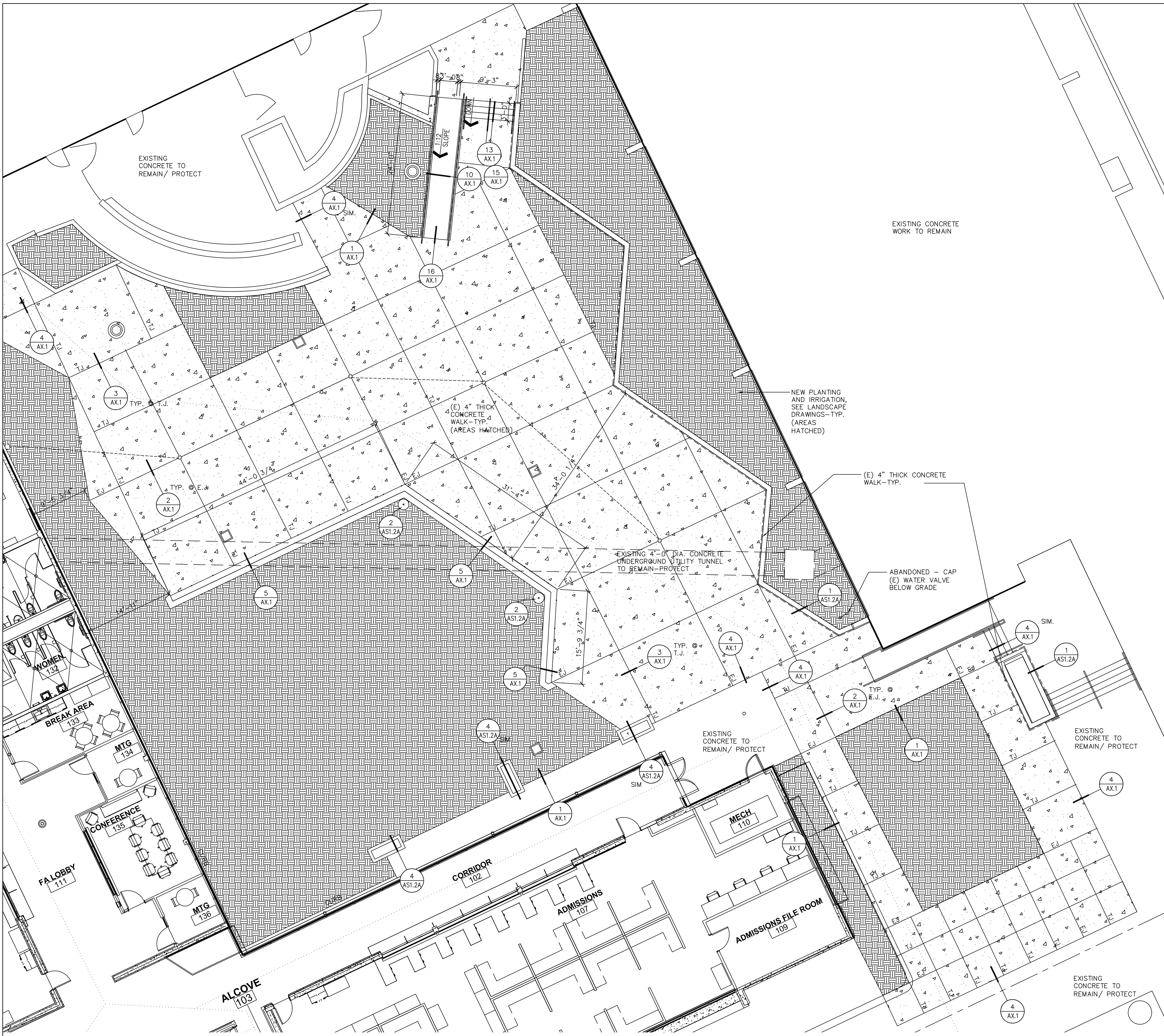
NEW PLANTING AND IRRIGATION. SEE LANDSCAPE DRAWINGS-TYP. (AREAS HATCHED)

NEW 4" THICK CONCRETE WALK-TYP. (AREAS HATCHED)

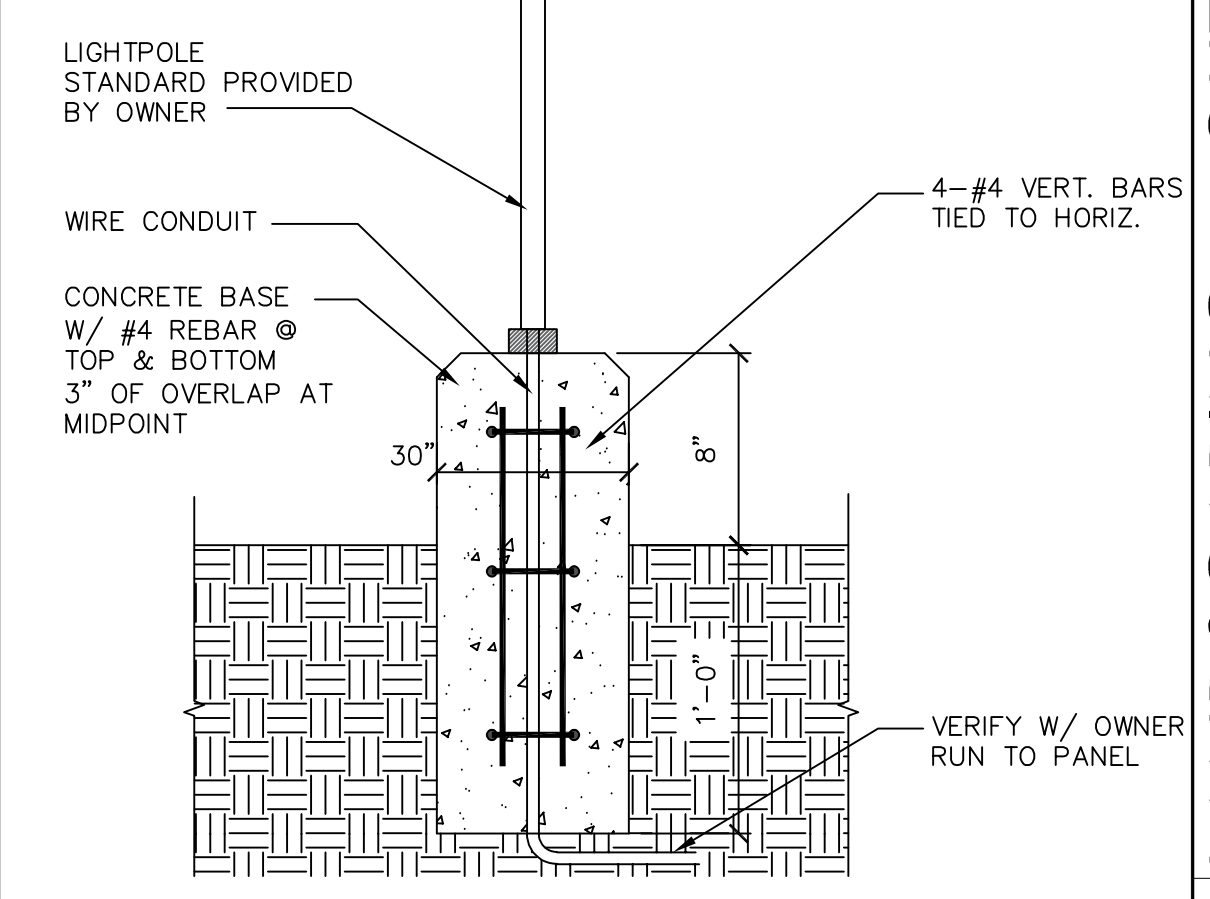
gas lines
1-2"
1-1"

gas line
1"

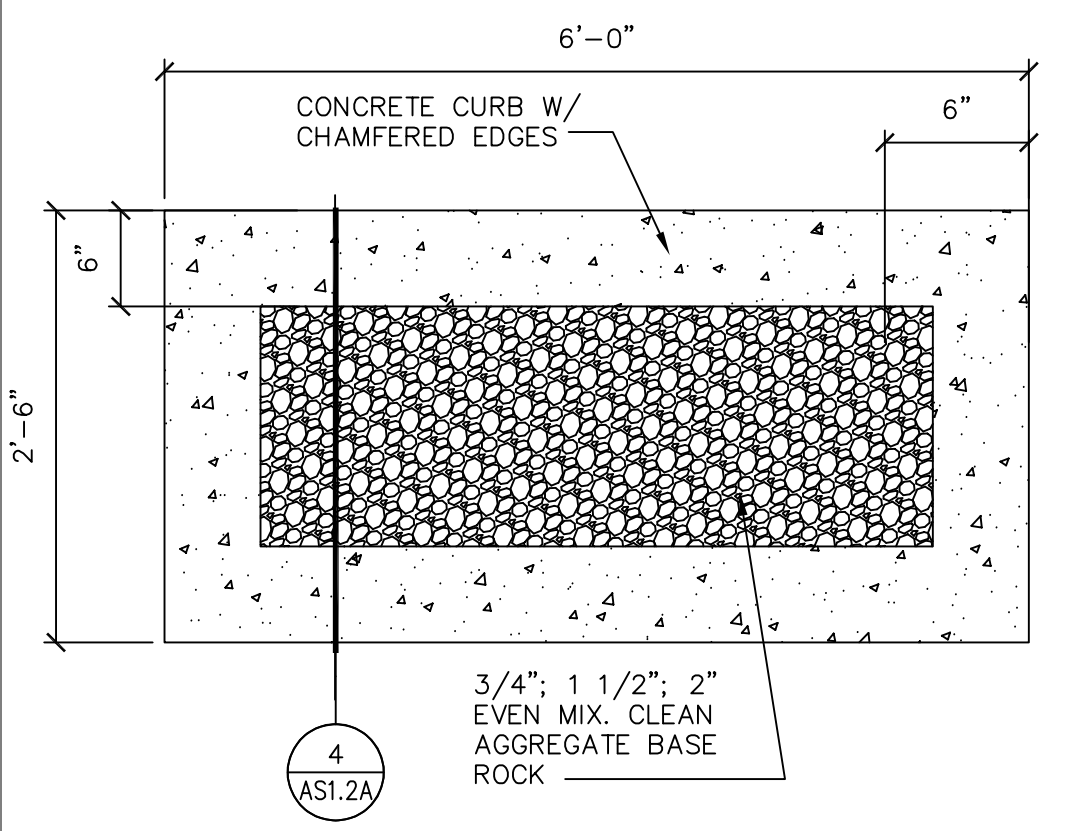




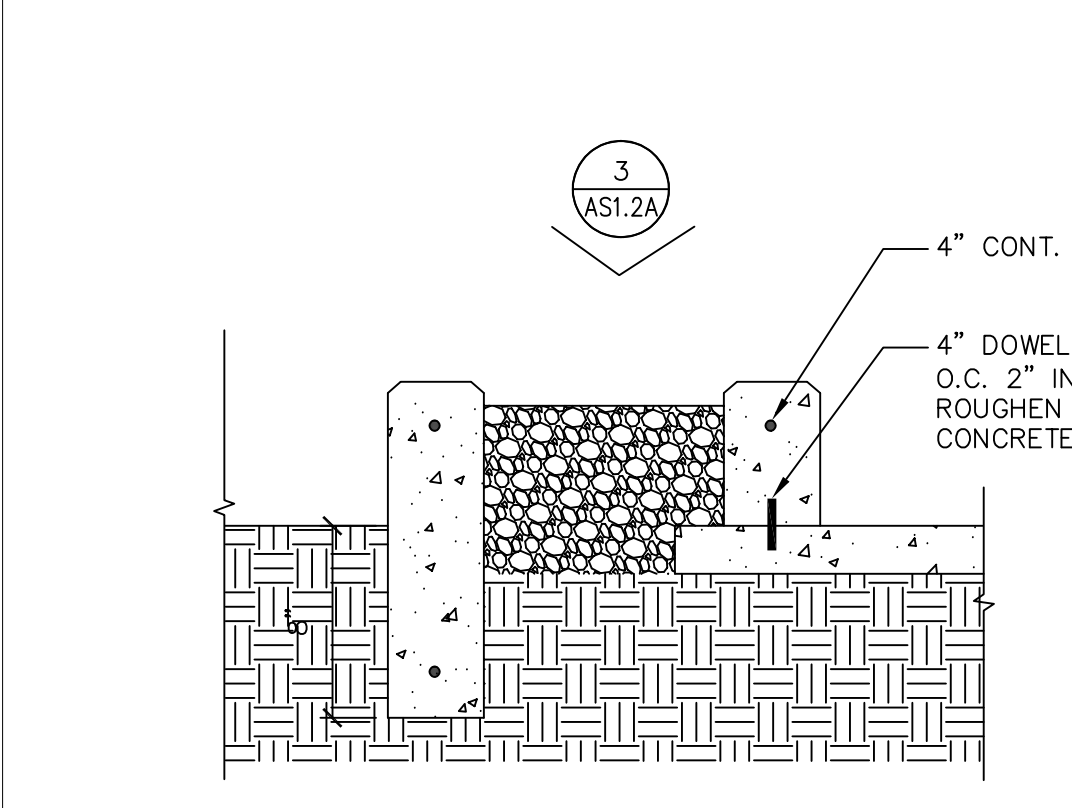
1 GARDEN WALL
SCALE: 1 1/2" = 1'-0"



2 LIGHT POST
SCALE: 1 1/2" = 1'-0"



3 RAIN WATER BOX
SCALE: NTC



4 RAIN WATER BOX
SCALE: NTC

LANDSCAPING & OUTDOOR LEARNING SPACES
KERN COMMUNITY COLLEGE DISTRICT
1801 PANORAMA DRIVE BAKERSFIELD, CA. 93305



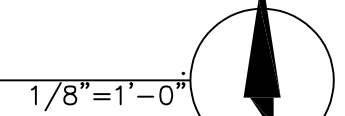
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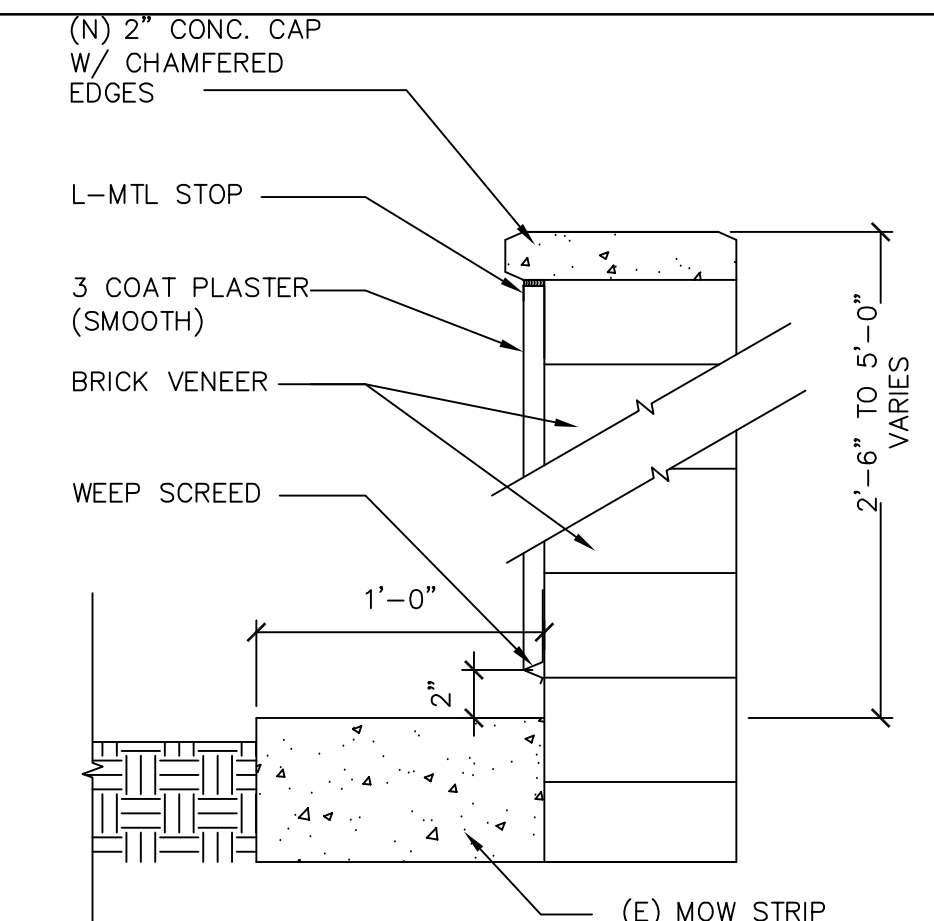
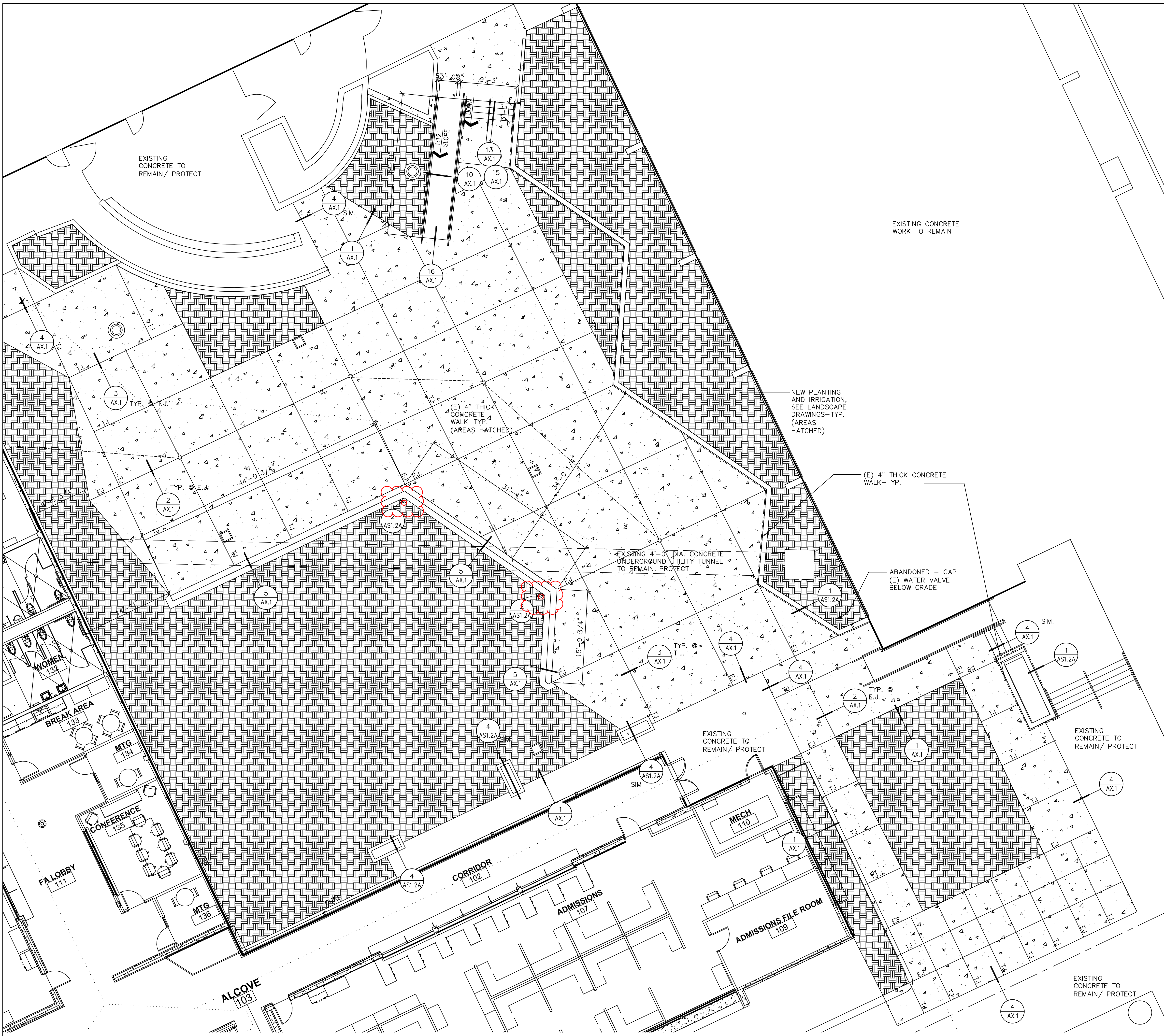
PRSK
7780 NORTH PALM AVE | PRESNO, CALIFORNIA 93711
P 559.448.8400 | F 559.448.8467 | www.psk.com

LICENSED ARCHITECT
JOHN WILTONSWITH
C 15885
9-30-23
STATE OF CALIFORNIA

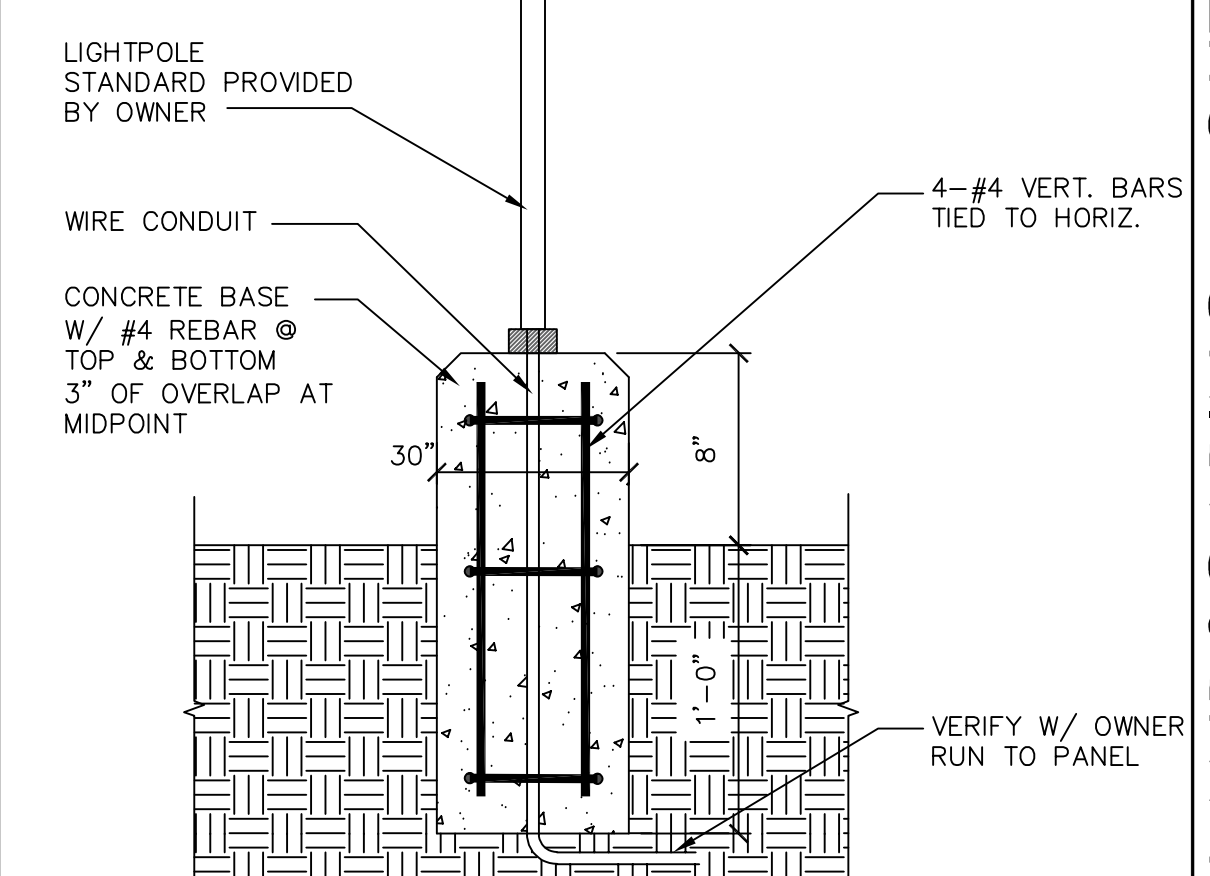
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DATE: _____
PROJECT ARCHITECT: _____

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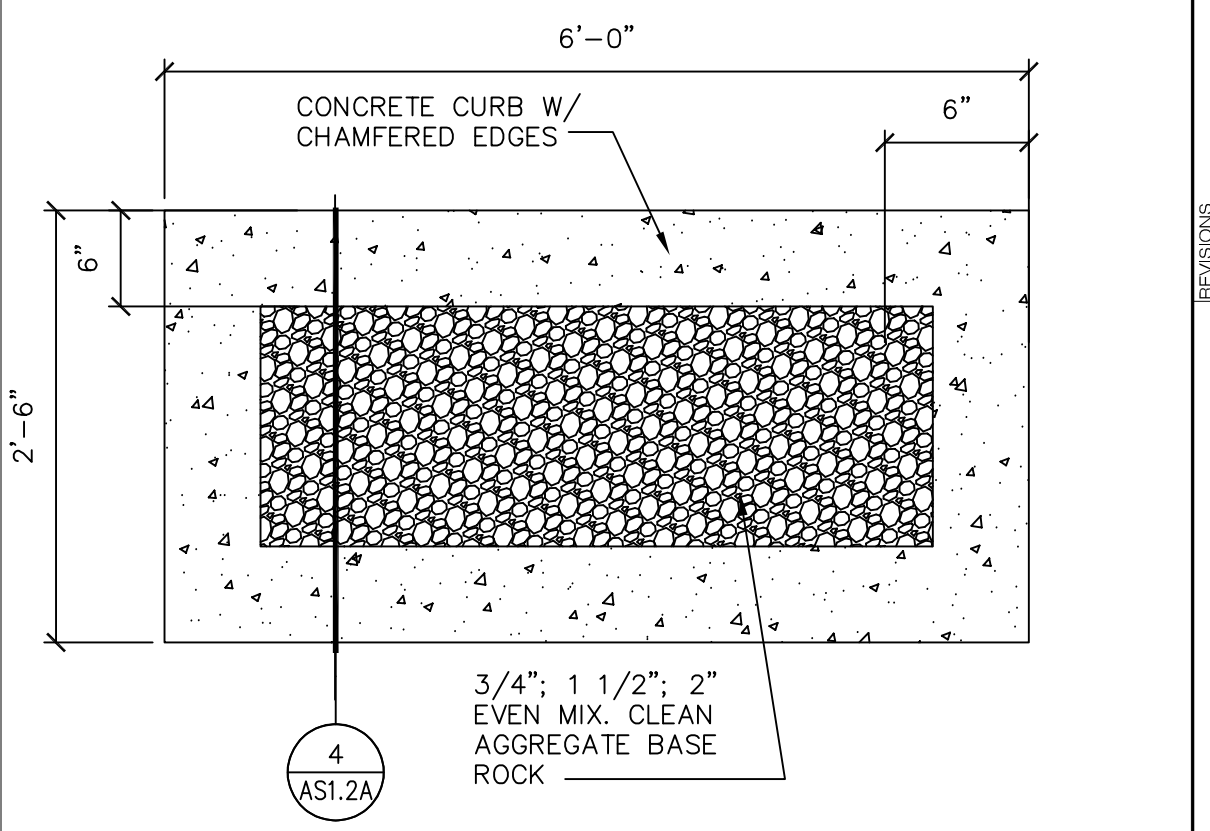




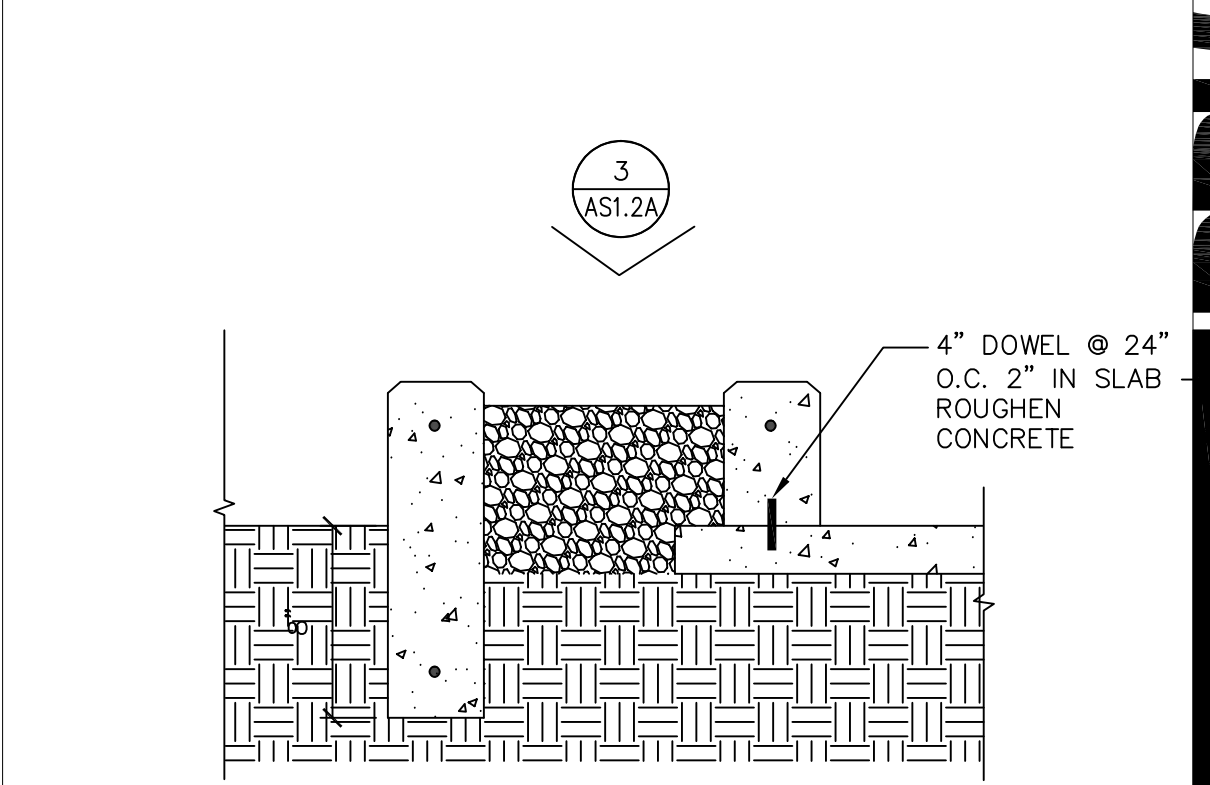
1 GARDEN WALL SCALE: 1 1/2" = 1'-0"



2 LIGHT POST SCALE: 1 1/2" = 1'-0"



3 RAIN WATER BOX SCALE: NTC



4 RAIN WATER BOX SCALE: NTC

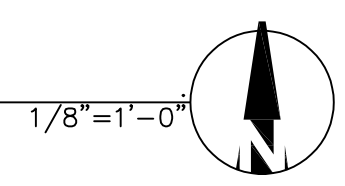
LANDSCAPING & OUTDOOR LEARNING SPACES
 KERN COMMUNITY COLLEGE DISTRICT
 1801 PANORAMA DRIVE BAKERSFIELD, CA. 93305
 DSA: 03-132068# 15-C1
 PPN: APN:

NO.	DATE	DESCRIPTION

PRSK
 LICENSED ARCHITECT
 JOYNT WILTON SMITH
 C 15885
 9-30-23
 7780 NORTH PALM AVE | PRESNO, CALIFORNIA 93711
 P 559.448.8400 | F 559.448.8467 | WWW.PRSK.COM

PROJECT NUMBER: _____ DATE: _____
 CHECKED BY: _____ PROJECT ARCHITECT: _____

ENLARGED SITE PLAN
 NEW WORK



ENLARGED SITE PLAN
AS1.2A

SECTION 31 22 00

GRADING

Addendum 1

Welcome Center and McCuen Hall Courtyard

PART 1 GENERAL

1.01 Summary

- A. Section Includes
 - 1. Excavation and filling.
 - 2. Coordination of work provided by KCCD [and other Contractors.]
 - a. Surface elevations.
 - b. Clearing and grubbing.
 - c. Providing, import topsoil if required and grading.
- B. Related Requirements
 - Section 01 33 00 – Submittal Procedures
 - Section 32 93 00 – Planting
 - Section 32-93-00 - Irrigation

1.02 References

- A. Definitions
 - 1. Topsoil: Material suitable for topsoil obtained from KCCD approved stockpiles or sources.
 - a. Natural, friable soil representative of productive, well-drained soils in the area, free of subsoil, stumps, rocks larger than one inch diameter, brush, weeds, toxic substances, and other material detrimental to plant growth.
 - b. Amended to obtain a pH range of 5.5 to 7.
- B. Reference Standards
 - 1. ASTM International (ASTM) Publications:
 - D1556/D1556M – 15e1 Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method

1.03 Administrative Requirements

- A. Coordination
 - 1. Coordinate site work with KCCD Representative and other Contractors.
 - 2. Clearing and grubbing will be performed by ~~Contractor KCCD and/or others.~~
- B. Preinstallation Meetings
 - 1. Review existing improvements.
 - 2. Review work provided by KCCD and other Contractors.
 - 3. Review Storm Water Pollution Prevention - by others.
 - 4. Review Dust Control Plan – by others.
 - 5. Review Project Schedule.

1.04 Submittals

- A. Section 01 33 00.

1.05 Closeout Submittals

- A. Record Documentation – Provide in Auto Cad 2020 version or later

1.06 Site Conditions

- A. Existing Conditions
 - 1. An underground survey has not been conducted.
 - 2. Contractor shall review the site with KCCD Maintenance and Operations staff to familiarize themselves with:
 - a. Historic drawings (As Built) and records for the site and adjacent buildings
 - b. Plans for recent renovations and remodels.
 - c. On site investigation, including potholing as necessary to locate existing utilities and improvements.

PART 2 PRODUCTS

2.01 Materials

(Numbering Changes)

- A. Topsoil/Backfill
 - 1. Utilize existing onsite material and amend per Section 32 92 00 and Section 32 93 00.
- B. Gravel and Crushed Stone
 - 1. Clean, coarsely graded natural gravel, crushed stone or a combination.
 - a. Landscape Drainage: 1 inch, maximum.
- C. River Rock or Cobble
 - 1. Clean, washed.
 - 2. 3 to 4 inches, 6" maximum.
- D. Sand
 - 1. Low spot fill if needed: Clean, coarse-graded sand ph 6.0 – 7.8
 - a. Horticultural test required to determine suitability for use ~~us~~ to be reviewed and approved by the Landscape Architect

PART 3 EXECUTION

3.01 Examination

- A. Verification of Conditions
 - 1. Verify condition of areas to receive work. Correct detrimental conditions prior to proceeding.

3.02 Preparation

- A. Contact USA to locate and mark existing underground utilities.
- B. Protect existing improvements to remain.
- C. Spray all weeds with KCCD Maintenance and Operations department (M&O) approved herbicide prior to removal. Allow herbicide to remain on plants a minimum of 48 hours prior to removal.

- 3.03 Stripping:**
- A. Remove **excess** topsoil, vegetation, organic, soft or pliant areas, and deleterious material.
- 3.04 Demolition/Removal**
- A. Confirm that all on-site debris, trees, bushes, grasses, and deleterious material has been removed from the site prior to starting work.
 - B. Remove all remaining debris from existing soil unearthed by construction activity.
 - C. Remove all encounter roots and stumps to a minimum of 2' below finished grade.
 - D. Remove existing irrigation backflow device, valves, valve boxes, heads, risers and PVC pipe and wire that is exposed and not needed for reuse.
- 3.05 Surveying – Not Used**
- ~~A. By others.~~
 - ~~B. Re-stake monuments, temporary benchmarks, radius points and off sets lost or damaged.~~
- 3.06 Excavation**
- A. Soil Condition: Perform work when water content is sufficient to work and not damage soil structure. Work in muddy soils is prohibited.
 - B. Excavate soil to required depths and size for structures, paving, irrigation lines and equipment, drain lines and sleeves.
 - C. Remove excess soil from site (Site shall mean the entire campus)
 - D. Keep excavations and site area free of water.
 - 1. Remove water encountered during excavation and filling.
 - 2. Redirect water on site to maintain construction area.
- 3.07 Fill**
- A. Fill and compact each layer in 6-inch lifts:
 - 1. Planted areas: 85 percent.
 - 2. Paving & structures: 95 percent.
 - 3. Drain lines and sleeves: 95% percent.
- 3.08 Grading**
- A. Maintain drainage patterns and comply with ADA requirements.
 - 1. Obtain KCCD review and approval for minor adjustments in grades.
 - B. Blend changes in slope into level areas to create a natural look.
 - C. Control dust during grading operations.
- 3.09 Debris, Historical or Archeological Objects**
- A. If encountered, leave and protect objects in place, tape off location, and immediately contact KCCD.
 - 1. KCCD will determine significance and provide direction.
 - B. Tolerances
 - 1. Design Grade Elevations:
 - a. Fill: Within 0.10 foot.
 - b. Landscape Areas: Within 0.08 foot based on average of elevations.
 - c. Paving: Within 0.08 foot.

- d. Mulch to existing or new concrete: Flush.

3.10 Disposition of Surplus Material

- A. Place surplus material and excavated unsatisfactory material in location designated by KCCD or remove from site as directed.

3.11 Site Quality Control

- A. Site Tests and Inspections
 - 1. Compaction Testing per ASTM D1556/D1556M.
 - a. Fills and Backfills: One test per structure taken 1 foot below finished grade; and one test per lift per 2000 square feet.
 - b. Subgrades: One test per 2500 square feet.
 - c. Native soil subgrade: One test, or one test per 10,000 square feet.
- B. Non-Conforming Work
 - 1. Rework and retest.

1) END OF SECTION

SECTION 32 84 24
Irrigation Sprinkler Systems

Addendum 1

Welcome Center and McCuen Hall Courtyard

PART 1 GENERAL

1.01 Summary

- A. Section Includes:
 - 1. Irrigation Layout
 - 2. Connection to existing Irrigation Systems
- B. Related Requirements
 - Section 01 25 00 – Submittals
 - Section 32 19 00 – Soil Preparation
 - Section 32 93 00 – Planting

1.02 References

- A. Abbreviations and Acronyms
 - 1. CL Class
 - 2. IPS Iron Pipe Size
 - 3. psi pounds per square inch
- B. Reference Standards
 - 1. American Society of Mechanical Engineers (ASME) Publications:
 - ASME B1.2 - 17 Gages and Gaging for Unified Inch Screw Threads
 - 2. American Water Works Association (AWWA) Publications:
 - AWWA C500 - 19 Metal-Seated Gate Valves for Water Supply Service
 - AWWA C651 - 14 Standard for Disinfecting Water Mains
 - 3. ASTM International (ASTM) Publications:
 - ASTM D2241-15 Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
 - ASTM D2466 - 17 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
 - ASTM D2564 - 12 Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
 - ASTM D2774 - 12 Underground Installation of Thermoplastic Pressure Piping
 - ASTM D2855 - 15 Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
 - 4. National Fire Protection Association (NFPA) Publications:
 - NFPA 70 - 20 National Electric Code
 - 5. NSF International (NSF) Publications:

NSF/ANSI 14 – 19 Plastics Piping System Components and Related Materials

6. Underwriters Laboratories (UL) Publications:

UL 651 - 11 UL Standard for Safety Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings

1.03 Administrative Requirements

- A. Coordination
- B. Preinstallation Meetings
- C. Sequencing
- D. Scheduling

1.04 Submittals

- A. Section 01 25 00 – Submittals

1.05 Action Submittals .

- A. All Irrigation Products Listed/shown on Plans/Maps and Specifications

1.06 Informational Submittals

- A. Product data
 - 1. Piping Material, Tubing and Fittings
 - 2. Valves and Accessories - All
 - 3. Sprinkler Heads
 - 4. Backflow Preventers
 - 5. Automatic Controller
 - 6. Controller Enclosure
 - 7. Solvent Cement
 - 8. Control Wiring
 - 9. Drip Irrigation Equipment and Accessories
 - 10. Water Hammer Arresters (Air Release Valves)
 - ~~11. Water Meter~~
 - 12. Rain Shut-Off Device
 - ~~13. Soil Moisture Sensor~~
 - 14. Tapping Tee
 - 15. Valve Boxes and Lids
 - 16. Irrigation heads, nozzles and Accessories
 - 17. Deep Root Watering Assemblies
 - 18. Swing joint assemblies.
 - 19. Quick Couplers
 - 20. System pressure calculations
 - 21. Irrigation requirements
- B. Shop drawings
 - 1. Connections to existing Irrigation Systems
 - a. Controller & wiring
 - b. Mainlines

- c. Valves
- d. Sleeve locations
- e. existing utilities located during construction.
- e.f. Capped and Buried valves
- C. Samples (2 each) Deliver 1 to Construction Manager or KCCD M&O and 1 to Landscape Architect
 - 1. Swing Joint
 - 2. Wire
 - 3. Valve Box
 - 4. Deep Root Watering
 - 5. Irrigation Heads & Nozzles
- D. Certificates
 - ~~1. Backflow preventers~~
- E. Test and Evaluation Reports
 - 1. Valves, and Accessories
 - ~~2. Backflow preventers~~
 - 3. Pressure tests
 - 4. Operation test
 - a. Verification of sprinkler head layout
 - b. Record of pressure tests conducted on recording gage
 - c. Third Party WELO Water Audit
- F. Manufacturing Instructions
 - 1. Automatic controller
 - 2. Sprinkler heads
 - 3. Piping materials, tubing and fittings
 - 4. Backflow preventers
 - 5. Valves
 - 6. Solvent cement
 - 7. Control wiring
 - 8. Drip irrigation and accessories
 - 9. Water hammer arresters
 - 10. Water meter
 - 11. Rain shut-off device
 - 12. Soil moisture sensor
- G. Source Quality Control Submittals
- H. Field [or] Site Quality Control Submittals
- I. Manufacturer Reports
- J. Sustainable Design Submittals
- K. Qualification Statements

1.07 Closeout Submittals

- A. Maintenance Contracts
- B. Operation and Maintenance Data
 - 1. Piping materials and fittings

2. Sprinkler heads and accessories
 3. Backflow preventers'
 4. Valves
 5. Automatic controller
 6. Drip irrigation and accessories
 7. Water hammer arresters
 8. Water meter
 9. Rain shut-off device
 10. Soil moisture sensor
- C. Bonds
- D. Warranty Documentation
- E. Record Documentation
1. Controller Charts - watering schedules to match WELO requirements.

1.08 Maintenance Material Submittals

- A. Spare Parts
- B. Extra Stock Materials
1. Sprinkler heads of each size and type: 4
 2. Manual Operating Valve Keys: 2
 3. Quick Coupler Keys and hose swivels: 2
 4. Irrigation Controller Housing keys: 4
 5. Irrigation controller enclosure keys: 4
 6. Hand-held remotes for controller system: 2
- C. Tools
1. Wrenches for each type of head: 2

1.09 Quality Assurance

- A. Tests
1. Sprinkler head, valve, automatic controller, emitter heads, vacuum breaker, backflow preventer, and water hammer arrester:
 2. Mainline and Valve Pressure Test

1.10 Delivery, Storage and Handling

- A. Delivery and Acceptance Requirements
1. Deliver in original rolls, packages, cartons, and containers.
 - a. Name of manufacturer, brand, and model.
 - b. Inspect materials for damage.
- B. Storage Requirements
1. Store in enclosures or under protective covering.
 - a. Plastic piping and rubber gaskets: Keep out of direct sunlight.
 2. Do not store materials directly on ground.
 3. Keep pipe interiors and fittings clean.
- C. Handling Requirements
1. Pipe, fittings, valves, and accessories:
 - a. Handle and carry to prevent damage.
 - b. Do not drag pipe.

1.11 Site Conditions

- A. Ambient Conditions
- B. Existing Conditions

1.12 Warranty

- A. Products
- B. Labor

PART 2 PRODUCTS

2.01 Manufacturers

- A. Manufacturer List Definitions
- B. Manufacturers:
 - 1. Piping Material:
 - a. PW Pipe
 - b. JM Pipe
 - c. Diamond
 - d. Certainteed
 - e. KCCD approved equal.
 - 2. Joint Restraint Fittings:
 - a. Leemco, Inc.
360 S. Mount Vernon
Colton, CA. 92324
Ph: (909) 422-0088 Fax: (909) 422-0086 Web: www.leemco.com
 - 3. Wire – Decoder Cables:
 - a. Hunter (Paige P7354D)
 - 4. Wire Splice Kits:
 - a. 3M (DBR/Y-6 splice kits)
 - 5. Solvent Cements and Primers:
 - a. IPS Corporation
 - 6. Controllers & Metal Enclosures:
 - a. See Irrigation Legend on Plans/Drawings
 - 7. Grounding:
 - a. Page “Power Set”
 - b. Approved Equal
 - c.
- C. Substitution Limitations
 - 1. Products listing one manufacturer and model number match existing system.
 - 2. Unlisted items to match existing system and KCCD standards.
- D. Rainbird Rewards Submittals:
 - 2-1. Contractor shall provide KCCD with receipts for all Rainbird and other products that qualify for Rainbird Rewards program.

2.02 Performance/Design Criteria

- A. System design water pressure:

1. 100 psi, minimum
2. 125psi, maximum
3. Duration - 72 Hours

2.03 Operation

- A. Operators
- B. Controls
- C. Operation Sequences

2.04 Materials

~~A. Backflow Protection Devices~~

B. Piping and Fittings

1. Rigid Non-Pressure Laterals: IPS Schedule 40 PVC.
 - a. Fittings:
 - 1) Schedule 40.
 - 2) Comply with ASTM D2466.
 - 3) Solvent weld.
 - b. Joints: Solvent weld.
2. Pressure Mainlines:
 - a. Class 200 gasketed pipe.
 - b. Comply with ASTM D2441.
 - c. Fittings:
 - 1) At change in direction:
 - a) 4 inch: Leemco Self-Restrained Fittings
 - 2) Between Mainline and valves or air release valves:
 - a) Schedule 80.
 - b) Comply with ASTM D2467.
 - c) Solvent welded.
 - (1) Exception: Drawings may note otherwise.

C. Wire

1. #6 Solid Copper ground wire.
2. Multi Strand Wire - #14 AWG minimum
 - a. Common wire – Black
 - b. Valve control wire – mixed colors – separate color to each valve
 - c. Compatible with Controller and Valve manufactures
 - d. Install in Schedule 40 conduit with sweeps in and out of boxes Size as needed
- ~~2.3.~~ Decoder Cables (Point of Connection at Existing Valve Stub):
 - a. Controller to Decoders and Valves (direct burial):
 - 1) Jacketed twisted pair.
 - 2) #14 AWG.
 - 3) Manufacturer and Model: Hunter (Paige P7354D)
 - 4) Install in ~~3/4~~ 1 inch Schedule 40 conduit with sweeps in and out of boxes.
- ~~3.4.~~ Splice Kits:

- a. 3 M DBR/Y-6.
- b. Install in round valve boxes
- ~~4-5.~~ CAD Weld Connector
- ~~5-6.~~ Connectors:
 - a. 3M DBR-6
 - b. 3M DBY
 - c. Hunter ICD-100
 - d. ACC 2 wire path
 - e. ICV
- D. Flow Sensor
- E. Tracer Wire
 - 1. #14
- F. Utility Marker Tape
- G. Wire Conduit
- H. Solvent Cements & Primers:
 - 1. Conform to ASTM D2466.
 - 2. NSF approved.
 - 3. Low VOC.
- I. Controllers
 - 1. See Legend
- J. Control Valves
 - 1. See Irrigation Legend
- K. Filters:
 - 1. See Irrigation Legend
- L. Decoders
 - 1. 1, per valve.
 - 2. Match valves.
- M. Grounding
 - 1. Plate-type grounding equipment.
 - 2. 10 AWG copper wire
 - 3. Rod
 - 4. Manufacturer: Page "Power Set"
- N. Irrigation Heads
 - 1. As shown on plans.
 - 2. Substitutions not allowed.
- O. Bubblers
 - 1. As shown on plans.
 - ~~4-2.~~ Substitutions not allowed
- P. Swing Joints:
 - 1. Hand built per detail ~~Hunter SJ-712, or approved equal.~~
 - 2. Inlet and Outlet: ½ inch, minimum.
 - 3. Length: 12 inches, minimum.
- Q. Valve Boxes: All with 'T' Lids
 - 1. Manufacturer: Applied Engineering ~~NDS~~

2. Standard Rectangle
3. Lid: T Lid Solid Cover
4. Stainless Steel pentagon bolt and socket
5. Height: 12 inches
6. Extension Bodies: 6 inches
7. CLOSEOUT: Opening Tool: 6 Hex Bolt
- R. Valve Boxes with Extensions – with Locking Cover
- S. Plastic Valve Box with Cover
- T. ICV Valve Box
- U. Concrete Traffic Box with “T” Locking Cover
- V. Pull Boxes – ‘T’ lids
 1. Requirements
 - a. Green
 - b. 10 inches round
 2. Pull Boxes and Quick Coupler Boxes:
 - a. Manufacturer: NDS
 - b. Size: 6 inches
 - c. Shape: Round
 - d. Extension Bodies
 - e. Lid: Solid “T” Cover
 - f. Stainless Steel Pentagon Bolt and socket
- W. Quick Coupler Boxes
 1. Purple Non-Potable Cap.
- X. Valve Tags –
 1. Manufacturer: Christy Enterprises
 2. Waterproof
 3. Identifications tags: Standard size
 4. Color: Yellow
 5. Lettering: Controller Letter and Valve numbers hot stamped in Black
 - a. Example: Controller A-Valve #1 is labeled “A-1.”
- Y. Waterproof Connectors - 3M DBY/DBR6
- Z. Hand-Held Decoder Programmer
 1. As Recommended by controller manufacturer

2.05 Piping Materials

- A. Galvanized Steel Pipe and Associated Fittings
 1. Unions
 2. Riser Nipples
 3. Els
- B. Polyvinyl Chloride (PVC) Pipe, Fittings and Solvent Cement
 1. Seal of approval for potable water: Conform to NSF/ANSI 14.
 2. Pipe:
 - a. ASTM D2241, PVC 1120 SDR 21, [Class 315] [Class 200].
 3. Fittings:

- a. Solvent Welded Socket Type: ASTM D2466, Schedule 40.
 - b. Threaded Type: ASTM D2464, Schedule 80.
 - 4. Solvent Cement
 - a. ASTM D2564.
- C. Pipe Sleeving
 - 1. At Main or Lateral: PVC piping two time the diameter of piping.
 - 2. At Control Wires: Gray PVC electrical conduit.
 - a. Size:
 - 1) According to number of control wires.
 - 2) 1 2 inches, minimum.
 - 3. Schedule 40 - Conduit, Tee, Ell
 - 4. Schedule 80 – Nipple, eccentric reducer (6x4)
 - 5. Reducer Ell
 - 6. Male Adapter
 - 7. Non-Concentric Reducer
 - 8. Nipples
 - 9. Caps
 - 10. Slip Joints
- D. Dielectric Fittings
- E. Drip Irrigation Tubing
- F. Pipe Sleeving

2.06 Irrigation and Drip Sprinkler Heads

- A. General:
- B. Fixed Riser Irrigation Heads
 - 1. Adjustable Flood Bubbler Head
 - 2. Pressure Compensating Flood Bubbler Head
- C. Pop-Up Irrigation Heads
- D. Bubbler Irrigation Heads
 - 1. Adjustable Flood Bubbler
 - 2. Pressure Compensating Flood Bubbler
- E. Fixed Drip Head
 - 1. Single Outlet Pressure Compensating Emission Device
- F. Pop-Up Drip Head

2.07 Valves

- A. Isolation Valves
 - 1. Ball Valves, less than 3 inches
 - 2. Gate Valves, 3 inches and larger
- B. Control Valves- with Filter
 - 1. Pressure Regulating Master Control Valve
 - 2. Remote Control Valve, Electrical
- C. Quick Coupling Valves
 - 1. With Locking cap

- D. Hose Bib
 - 1. Attached to quick coupler key
- E. Check Valves
 - 1. As needed to prevent low head drainage
- F. Backflow Preventers
 - 1. Reduce Pressure Type Backflow Preventers
- G. Gate Valve
- H. Ball Valve, full port, line size

2.08 Accessories and Appurtenances

- A. Tapping Tee
- B. Head Accessories
 - 1. Screen / Strainer
 - 2. Riser Adapters
 - 3.
 - 4. Check Valves
 - 5. Valve Boxes
 - a. Locking Cover 'T' Lid
- C. Backflow Preventer Accessories
 - 1. Pressure Gages
 - 2. Water Hammer Arresters
 - 3. Backflow Preventer Enclosure
 - 4. Concrete Pads
 - 5. Cage
 - 6. Polar Blanket
- D. Moisture Sensing Device
 - 1. Automatic Rain Shut-Off Device
 - 2. Automatic Freeze Shut-Off Device
 - 3. Soil Moisture Sensor Device
- E. Air/Vacuum Relief
- F.
- G. Pressure Regulator
- H. Flow Meter
- I. Steel Concrete Stake, 24" long, paint top 6" blue

2.09 Automatic Controller Electrical

- A. Controller Features
- B. Controller Enclosure

2.10 Electrical Circuits

- A. Control Wiring for Electrically Operated Valves
- B. Conduit
- C. UL Copper Ground Plate

2.11 Thrust Block

2.12 Concrete Materials

- A. Concrete Thrust Block
 - 1. At Mainline Stubs: 5 sack mix, minimum.
- B. Concrete Pad
- C. Lean Concrete Slurry

2.13 Other Materials

- A. $\frac{3}{4}$ " Washed Gravel

PART 3 EXECUTION

3.01 Examination

- A. Verification of Conditions
 - 1. Verify site grading is completed.
- B. Preinstallation Testing
- C. Evaluation and Assessment

3.02 Preparation

- A. Protection of In-Place Conditions
- B. Surface Preparation
- C. Demolition/Removal

3.03 Trenching

- A. Roots 2 inches diameter, or greater for plant material to remain:
 - 1. Hand trench around or under roots.
- B. Trench Width:
 - 1. Wider of:
 - a. 4 inches, minimum.
 - b. 3x times pipe diameter.
- C. Backfill and hand tamp over excavation.
- D. When Rock is encountered:
 - 1. Excavate 4 inches deeper.
 - 2. Backfill to pipe grade with:
 - a. Silty sand (SM), or
 - b. Well-graded sand (SW).
- E. Remove obstructions and all debris.
- F. Obstructions encountered, including concrete walks and drives:
 - 1. Bore under.
 - 2. Depth: Bottom of adjacent trenches.
 - 3. Install pipe sleeve:
 - a. 2 pipe diameters larger than pipe in trench.
 - 4. Prior to backfilling trench KCCD will inspect and verify location of irrigation heads.

3.04 Piping System

- A. Clearances between lines:
 - 1. Horizontal:
 - a. 2 inches or less pipe: 4 inches, minimum.
 - b. 2 inches or more pipe: 12 inches, minimum.
 - 2. Vertical:
 - a. 1 inch, minimum.
- B. Thrust Blocks
 - 1. Install at bends, tees, plugs and valves , or 2½ inches and larger mainline piping.
 - 2. Place concrete so that:
 - a. Sides subject to thrust or load are against undisturbed earth.
 - b. Valves and fittings are serviceable.
- C. Backfill Cover, Minimum
 - 1. Pressure mainline pipe and valve control wire: 18 inches
 - 2. Non-pressure lateral pipe: 12 inches
 - 3. Piping under paved or non-paved pedestrian paths: 24 inches
 - a. Pipe Sleeve required.
 - 4. Piping under traffic loads: 36 inches
 - a. Pipe Sleeve required.
 - 5. Fill trench to within 3 inches of top with excavated soil.
 - a. Compact soil:
 - 1) Use plate hand-head compactors or water settle.
 - 2) Density: Same as undisturbed adjacent soil.
 - 6. Fill remainder of trench with topsoil.
 - a. Compact soil:
 - 1) Use plate hand-head compactors or water settle.
 - 2) Density: Same as undisturbed adjacent soil.
 - b. Restore area.
- D. Sterilization
 - 1. For sprinkler systems fed from a potable water system:
 - a. Sterilize upstream of backflow preventer before placing in service.
 - 1) Sterilize new water lines for 24 hours, minimum.
 - 2) Comply with AWWA C651.
 - 3) Minimum retention period: 3 hours.

3.05 Piping Installation

- A. Polyvinyl Chloride (PVC) Pipe
 - 1. Joints:
 - a. Solvent-Cemented: ASTM D2855
 - b. Threaded:
 - 1) Full cut.
 - 2) 3 threads, maximum remaining exposed on pipe and nipples.
 - 3) Make tight without wicks or fillers.

- a) Acceptable: polytetrafluoroethylene thread tape.
- 2. Piping:
 - a. Install in a serpentine (snaked) manner.
 - b. Ambient Temperature: 40 degrees F, minimum.
 - c. Follow pipe manufacturer's instructions.
 - d. Comply with ASTM D2774 or ASTM D2855.
- B. Threaded Galvanized Steel Pipe
 - 1. Ream pipe prior to installation.
 - 2. Cut threads per ASME B1.2.
 - 3. Apply pipe joint compound to male end.
- C. Dielectric Protection
 - 1. At dissimilar metal pipes: Use dielectric fitting.

3.06 Irrigation Heads

- A. General: Install plumb and level with terrain.
- B. Fixed Riser Irrigation Heads
 - 1. Mount nozzle above grade:
 - a. In planter beds with mulched planter beds: 6 inches, minimum.
 - b. In planter beds with groundcover: 12 inches, minimum.
 - 2. Between lateral lines and fixed risers: Provide swing joint assembly attachment.
- C. Pop-Up and Bubbler Irrigation Heads
 - 1. Install top of irrigation head flush with finish grade in planters with organic mulch – 1" below top of mineral (rock) mulch .
 - 2. Between lateral line and pop-up body: Provide swing joint assembly attachment.
- D. Drip Heads
 - 1. Install connecting to a swing joint.

3.07 Valves

- A. Isolation Valves
 - 1. Install in valve box extending from grade to below valve body.
 - a. Cover from finish grade to top of valve stem: 4 inches, minimum.
- B. Control Valves
 - 1. Install in valve box extending from grade to below valve body.
 - a. Cover from grade to top of valve: 4 inches, minimum.
 - 2. Install automatic valves beside sprinkler heads with valve box.
- C. Quick Coupling Valves
 - 1. Install in valve box extending from grade to below valve body.
 - a. Cover from finish grade to top of valve stem: 4 inches, minimum.
 - 2. In planter bed: Install 2 inch above finish grade.
 - 3. .
- D. Quick Coupler
 - 1. Install below grade in valve box with support.
 - 2. Install below grade in valve box with support.

~~3.08 Backflow Preventers Not Used~~

~~A. General:~~

- ~~1. Location: 24 inches, minimum from trees, walls, fences, structures and obstructions.~~
- ~~2. Prior to installing: Flush pipe lines.~~
- ~~3. Do not install in pits, or areas subject to potential standing water.~~
- ~~4. Connect to existing water distribution system:
 - ~~a. Install between connection and control valves.~~
 - ~~b. Install with concrete pads.~~~~

~~B. Reduced Pressure Backflow Preventer~~

- ~~1. Install strainer upstream from device.~~
- ~~2. Install device 12 inches, minimum between finish grade and bottom of relief port.~~
- ~~3. Provide galvanized steel support with concrete footing.~~

3.09 Accessories

A. Connection to Existing Water Supply Systems (Tapping Tee)

1. Prepare area before beginning connection.
2. For connections to be made under pressure:
 - a. Use tapping or drilling machine valve and mechanical joint type sleeves.
 - b. Bolt sleeves around mains.
 - c. Bolt valves to branch.
 - 1) Conform to AWWA C500.
3. Without interrupting service:
 - a. Open valve
 - b. Attach drilling machine
 - c. Make tap
 - d. Close valve
 - e. Remove drilling machine
 - f. Remove and provide disc to KCCD representative
4. KCCD Notify and Approval:
 - a. Notify KCCD in writing 15 days prior to date connections are required.
 - b. Receive approval before interrupting service.

B. Valve Boxes and Lids

1. Install 3/4~~3~~" crushed gravel sump 2 cubic foot below valve.
2. Support valve box with brick at all corners.
3. Rodent Protection: Provide wire screen between gravel sump and bottom of valve body.
4. Planter beds: Install 2 inches above finish grade.
5. Sloped conditions: Install level with terrain.

~~C. Backflow Preventer Enclosure~~

- ~~1. Install with concrete pad.~~
- ~~2. Place hinges so swing direction will not conflict with other site features.~~

~~D. Rain [and Freeze] Shut-Off Device[s]~~

- ~~1. Install per manufacturer's recommendations.~~
 - ~~2. Wall mounted controllers~~
 - ~~3. Pedestal mounted controllers~~
- ~~E. Soil Moisture Sensing Device~~
- ~~1. Bury device at depth per manufacturer's recommendation, and in effective root zone of hydrozone to be monitored.~~
 - ~~2. Place sensor protection plate above device.~~
 - ~~3. Waterproof connections to field splices in valve boxes.~~
- F. Air/Vacuum Relief Valve
1. Locate at highest point in piping system.
- G. Electrical Circuits
1. General:
 - a. install in electrical conduit
 - b. Bury wires beside mainline pipe in same trench.
 - c. Where wires run under paved or non-paved pedestrian paths and vehicular roads: Provide sleeve.
 - d. Wires at controller and control valve locations: Provide plastic tie wrapped tags.
 - e. Control valve locations: Provide 1 spare 2 wire control wire from controller to each valve.
 2. Loops
 - a. Provide 12 inches loop of wire at valves connected to controls.
 3. Expansion and Contraction
 4. Splices
 - a. Locate field electrical splices in valve boxes
 - b. Any splices not in valve boxes shall be in a wire pull box.
 - c. Make waterproof with specified DBY connectors.
 5. Automatic controller
 - a. Contact manufactures representative prior to construction to provide training and direction for proper ~~connection~~connection.
 - b. Determine location of controllers and mark.
 - c. Coordinate electrical services to locations.
 - d. Install according to manufacturer's recommendations.
 - e. Comply with NFPA 70.
 6. Flushing
 - a. Verify piping, risers, and valves are in place and connected.
 - b. Flush piping system under full head of water.
 - 1) Maintain flushing for 5 minutes – longer if needed until the water flows clear until no debris flows out.
 - 2) Install sprinkler heads and valves after flushing is completed.
 7. Adjustment
 - a. Perform work after grading, planting and rolling of planted areas is completed.
 - b. Adjust sprinkler heads flush with finished grade.

8. Sterilization
 - a. Sprinkler systems fed from potable water system:
 - 1) Sterilize upstream of backflow preventer.
 - 2) Comply with AWWA C651.
 - b. New waterlines:
 - 1) Sterilize for 24 hours, minimum before placing in service.
 - 2) Retention period: 3 hours, minimum.

3.10 Field Quality Control

- A. General:
 1. Conduct field inspections and field tests.
 - a. Arrange for KCCD Representative to witness.
 - b. Provide notification to KCCD Representative: 2 day, minimum prior to event.
 - c. Perform field tests.
 - 1) Provide labor, equipment and incidentals required for testing.
- B. Pressure Test - Mainlines
 1. Maintain hydrostatic pressure.
 - a. Duration: 72 hours
 - b. Pressure: 100 psi without pumping.
 - c. Allowable pressure drop: 0 psi before backfilling system.
 2. Leaks
 - a. Locate and Correct to stop.
 3. Retest twice until pressure can be maintained for duration of test.
- C. Operation Test
 1. Accessories
 - a. At conclusion of pressure test:
 - 1) Install irrigation heads or drip heads, quick coupling assemblies, and test hose bib key.
 - b. Test entire system for operation under normal operating pressure.
 - c. Correct or adjust system, as needed, to raise or lower pressure.
 - d. Condition for Acceptance

Operate system for areas to be irrigated: Successfully complete one cycle.
- D. Controller Charts
 1. Provide 1 laminated chart for each controller.
 - a. Indicate area controlled.
 - b. Plan format:
 - 1) Reduce to fit inside controller housing.
 - 2) Colors:
 - a) Chart: Black line.
 - b) Each station coverage area: Transparent color.
 - 3) After final approval, seal chart between two 20 mil pieces of clear plastic.

END OF SECTION

**SECTION 32 91 00
SOIL PREPARATION**

Addendum 1

Welcome Center and McCuen Hall Courtyard

PART 1 GENERAL

1.01 Summary

- A. Section Includes:
 - 1. pH Adjusters
 - 2. Soil Amendments
 - 3. Planting Soil Mixtures
 - 4. Fertilizer
 - 5. Herbicides
- B. Related Requirements
 - 1. Section 01 25 00 – Substitution Procedures
 - 2. Section 01 33 00 – Submittal Procedures
 - 3. Section 01 42 16 – Definitions
 - 4. Section 01 74 00 – Cleaning and Waste Management
 - 5. Section 03 30 10 – Cast-in-Place Concrete
 - 6. Section 31 22 00 - Grading

1.02 References

- A. Abbreviations and Acronyms
 - 1. EC Soil Electrical Conductivity
 - 2. mmho millimho
- B. Definitions
 - 1. Section 01 42 16
- C. Reference Standards
 - 1. ASTM International (ASTM) Publications:
 - a. D4972 - 19 Standard Test Methods for pH of Soils

1.03 Administrative Requirements

- A. Preinstallation Meeting
 - 1. One week prior to commencing work.
 - 2. Purpose: Review conditions of operations, procedures, and coordination with related work.
 - 3. Attendees: General Contractor, Landscape Subcontractor, KCCD Representative and Landscape Architect.
 - 4. Agenda:
 - a. Tour, inspect, and discuss conditions of site and surrounding areas.
 - b. Review procedures.
 - c. Review schedule.
 - d. Review required inspections.

1.04 Submittals

A. Comply with Section 01 33 00.

1.05 Action Submittals

- A. Product Data:
 - 1. Labels and data sheets
 - 2. Amendments, Fertilizers and Organics
- B. Quality Control:
 - 1. Products Supplier list
 - 2. Distributor licenses
- C. KCCD Approvals
 - 1. Herbicides
- D. Certifications and Licenses
 - 1. Bulk Materials
 - 2. Business Licenses
 - 3. Individual licenses and certificates

1.06 Closeout Submittals

- A. Warranty Documentation
- B. Record Documentation

1.07 Quality Assurance

- A. Qualifications
 - 1. Suppliers
 - a. Material Suppliers: Licensed distributors of products.
- B. Certifications
 - 1. Licenses and Certifications for Businesses and individuals providing, handing, and applying herbicides.
- C. Preconstruction Testing
 - a. Compaction Tests - Locations selected by Landscape Architect.
 - 2. Topsoil Composition Tests
 - a. Independent Testing Lab provided by Landscape Architect.
 - 1) Landscape Architect will direct Contractor on the locations where samples shall be taken from. Contractor shall deliver the samples to the Landscape Architect.
 - b. Include:
 - 1) Basic soil groups (moisture and saturation percentages
 - 2) Nitrogen-Phosphorus-Potassium (N-P-K) ratio
 - 3) pH (ASTM D4972)
 - 4) Soil salinity
 - 5) Secondary nutrient groups (calcium, magnesium, sodium, Sodium Absorption Ratio (SAR))
 - 6) Micronutrients (zinc, manganese, iron, copper)
 - 7) Excessive soil elements (boron, chloride, sulfate),
 - 8) Soil amendment and fertilizer recommendations with quantities for plant material being transplanted.
 - c. Soil Samples:

- 1) Mark and note locations of sample areas on planting map.
- 2) Or as directed by the Landscape Architect at the start of the project

1.08 Delivery, Storage and Handling

- A. Deliver to site in original, unopened containers bearing manufacturer's chemical analysis, name, trade name, or trademark, and indication of conformance to state and federal laws.
- B. Store in dry locations away from contaminants.
- C. Fertilizer, gypsum, sulfur, and iron may be furnished in bulk.
 1. Provide certificates upon delivery of materials.

1.09 Application and Time Restrictions

- A. General
 1. Apply amendments during normal business hours and under supervision of KCCD Representative.
- B. Fine Ground Amendments (gypsum, sulfur and other fine ground products):
 1. Do not apply when wind speed exceeds 3 miles per hour as measured by an anemometer positioned 4 feet above ground.
 - a. Do not allow dust to leave site.
 - b. Delay application, incorporate immediately in soil, or apply in a suspended water solution.

1.10 Warranty

- A. Manufacturer Standard Warranty

PART 2 PRODUCTS

2.01 Manufacturers, Producers and Suppliers

- A. General
 1. Where more than one manufacturer is listed, select one.
 2. Where only one manufacturer is known to provide products and material complying with the Performance and Design Criteria, local suppliers are provided.
 3. Supplier information is provided as a convenience. This is not intended to limit other licensed suppliers from providing products and materials.
 4. Lists of Manufacturers, Producers and Suppliers with contact information provided below.
 5. Name Codes, or abbreviated names for manufacturers and suppliers are utilized when describing products and materials.

B. List of Manufacturers

Name Codes	Contract Information
Green	Green as it Gets 300 Morning Dr. Bakersfield, CA 93306 Phone: 800-476-0034 Fax: 661-366-3770 Website: www.greenasitgets.com
Helena Ag.	Helena Agri-Enterprises, LLC 25114 Rd. 204 Exeter, CA 93221 Phone: 559-562-5400 Fax: 559-562-5403 Website: www.helenaagri.com
Mycorrhizal App.	Mycorrhizal Applications Sales: Jason Padden Direct Phone: 503-523-6863 Email: Jason.Padden@mycorrhizae.com Manufacturer: Phone: 866-476-7800 Phone: 541-476-3985 Fax: 541-476-1581 Website: www.mycorrhizae.com
Western Mining	Western Mining and Minerals, Inc. 1601 New Stine Rd. Bakersfield, CA 93309 Sales Phone: 610-893-6200 Phone: 888-449-7786 Fax: 888-449-4329 Website: www.westernminerals.com

C. List of Suppliers

Name	Contract Information
American Ag	American Ag Inc. 6701 McDivitt Dr. Bakersfield, CA 93313 Phone: 661-635-0778 Fax: 661-833-8244 Email: office@americanaginc.com

Name	Contract Information
Anelus	Anelus Soil Products Contact: Eric Carlstom 949-616-2047 anelussoilproducts@gmail.com
Central Valley	Central Valley Bulk Materials Contact: Bruce Chastain 559-909-3172 brucecvbm@yahoo.com
Crop Prod.	Crop Production Services 12768 Ave. 402 Cutler, CA 93615 Phone: 559-528-3032
Ewing	Ewing Irrigation & Landscape Supply 9443 W. Goshen Ave., Visalia, CA 93291 Phone: 559-651-0282
Floyds	Floyds Stores 3560 Chester Ave. Bakersfield, CA 93301 Phone: 661-327-5105
Helena Chem.	Helena Chemical Company 25114 Rd. 204 Exeter, CA Phone: 559-562-5400
Horizon	Horizon Distributors 744 N. Elko St. Visalia, CA 93291 Phone: 559-702-4896
Imperial	Imperial Sprinkler Supply 2549 Harris Ave. Sacramento, CA 95838 Phone: 916-245-1500
Morris Levin	Morris Levin and Son 1816 South "K" Street Tulare, CA Phone: 559-686-8665
Nutrien	Nutrien Ag Solutions 12838 Ave. 256 Visalia, CA 83277 Phone: 559-686-3375

Name	Contract Information
Sequoia	Sequoia Horticultural Products Contact: Garrett Worrell 559-591-1177 garrett@seqhort.com
Simplot	Simplot Growers Solutions 4295 Ave. 228 Tulare, CA 93274 Phone: 559-685-0365
Site One Land.	Site One Landscape Supply 5530 W. Spruce Ave. Fresno, CA 93722-2823 Phone: 559-277-1630
SiteOne Hard.	SiteOne Hardscape Center 293 Noble Ave. Farmersville, CA 93223 Phone: 559-635-7833
Superior Soil	Superior Soil 10367 Houston Ave. Hanford, CA 93230 Phone: 559-584-7695
West Coast	West Coast Forest & Cinder Products 4734 David Road Arvin, CA 93203 Phone: 661-444-1624 Fax: 661-833-8282 Contact: Stormy Lee Storm Email: stormy@westcoastforest.com Website: www.westcoastforest.com
White Forest	White Forest Nursery Inc. 300 Morning Dr. Bakersfield, CA 93306 Phone: 661-366-6291
Wilbur-Ellis	Wilbur-Ellis Company 25244 Rd. 204 Exeter, CA 93221 Phone: 559-562-2574

2.02 Product and Material Requirements

- A. Buy North America Requirement
 - 1. Materials and products are required to be manufactured, fabricated, or assembled in North America.
- B. Substitutions
 - 1. Comply with Section 01 25 00.
- C. Product Options
 - 1. Where options are provided, select one.
- D. Prohibited: Material previously opened, caked, segregated, exceeding expiration date of application or damaged.
- E. Fertilizer: Neutral character, dry, pelletized, or granular, uniform in composition, free-flowing and thoroughly mixed by Manufacturer.

2.03 Topsoil

- A. On-Site Topsoil
 - 1. Free of sticks, stones (over 1 inch in diameter), subsoil, roots, grass, noxious weeds, debris, and hazardous substances.

2.04 Micro-Nutrients

- A. Provide as directed by Landscape Architect.
 - 1. Zinc
 - 2. Manganese
 - 3. Iron
 - 4. Copper
 - 5. Epsom Salts

2.05 pH Adjusters

- A. Provide as directed by Landscape Architect.
 - 1. Soil Sulfur
 - 2. Sulfate Ammonia

2.06 Soil Amendments

- A. General
 - 1. Provide singly or in combination.
 - 2. Prohibited Material: Manure.
 - 3. Organic Amendments: EC less than 3 mmho
- B. Gypsum – 95 Percent Ultra Fine Grind Solution Grade
 - 1. Manufacturer:
 - a. Western Mining
 - 2. Suppliers:
 - a. American Ag
 - b. Crop Prod.
 - c. Helena Chem.
 - d. Imperial
 - e. Site One Land.
 - f. Simplot

- g. Superior Soil
- h. Wilbur-Ellis
- 3. Model: Ultra Fine AG™ Calcium Sulfate Dihydrate
 - a. Ultra Finex95® Solution Grade Gypsum
- 4. Product Requirements:

Composition:

calcium sulfate dihydrate (CaSO ₄ 2H ₂ O)	92 percent
calcium (Ca)	21 percent
sulfur	17 percent

Particle Sizing:

100 mesh	80 percent
200 mesh	55 percent
325 mesh	35 percent

Minimum Purity: 92 percent

- 5. Application Method (Options):
 - a. Powder: Directly to ground.
 - b. Water Soluble Spray: Water-suspended in agitating tank, and spray applied
- 6. O.M.R.I Listed, All Organic
 - a. Organic Materials Review Institute (O.M.R.I.)

C. Humic Acids

- 1. Manufacturer:
 - a. Helena Ag.
- 2. Suppliers:
 - a. Helena Chem.
 - b. Superior Soil
- 3. Model:
 - a. Hydra-Hume® DG (Coated)

4. Product Requirements:

Active Ingredients:

Humic Acids (Derived from Leonardite)	35 percent
Inert Ingredients	65 percent

- 5. Application Method (Options):
 - a. Broadcast

- D. Mycorrhizal Fungi Inoculants
 - 1. Manufacturer:
 - a. Mycorrhizal App
 - 2. Suppliers:
 - a. Nutrien
 - b. Horizon
 - 3. Model:
 - a. MycoApply® Ultrafine Endo
 - 4. Application:
 - a. Trees and Shrubs:
 - 1) MycoApply® Endo
 - b. Turf and Grasses:
 - 1) MycoApply® Ultrafine Endo

2.07 Organics for Fill and Import Soils

- A. Known Supplier:
 - 1. Anelus
 - 2. Central Valley
 - 3. West Coast
- B. Backfill Soil Amendments and Ratios:

Material	Percent by Volume
Virgin Redwood Shavings	20
Native Soil	80

- 1. Mixed to uniformly blend.

2.08 Fertilizer

- A. Soil Treatment for Lawns
 - 1. Manufacturer:
 - a. Green
 - 2. Suppliers:
 - a. Floyds
 - b. Morris Levin
 - c. White Forest
 - 3. Model:
 - a. TurfMAX
 - 4. Application: Turf and Grasses.
- B. Slow-Release Fertilizer Packets
 - 1. Manufacturer:
 - a. Green
 - 2. Suppliers:
 - a. Floyds
 - b. Morris Levin
 - c. White Forest

3. Model: Nutri-Pack Trees, Shrubs & Evergreens
 - a. 3-year Time Release Fertilizer Packets
 - b. N-P-K: 16-8-8
 - c. Sulfur: 16 percent

2.09 Herbicides

- A. Pre-Emergent and Post-Emergent:
 1. Post-Emergent: Use exclusively during construction.
 2. Pre-Emergent: Not allowed until start of Maintenance Period.
 3. Conform to Federal, State, County and KCCD requirements.
 4. KCCD approved.
 5. As recommended by Contractor's Pest Control Advisor.
- B. Licenses and Certifications:
 1. Businesses and individuals:
 - a. Possess applicable current licenses and certificates from California Department of Pesticide Regulation:
 - 1) Agricultural Pest Control Advisor (PCA)
 - 2) Qualified Applicator License (QAL)
 - b. Submit copies.
 2. Designations:
 - a. Individual License and Certification:
 - 1) Agricultural Pest Control Adviser (PCA)
 - 2) Qualified Applicator License (QAL)
 - b. Business License and Certification:
 - 1) Agricultural Pest Control Adviser (PCA)
 - 2) Qualified Applicator License (QAL)

PART 3 EXECUTION

3.01 Examination

- A. Verification of Conditions
 1. Site is clean and free of debris.
 2. Estimate landscape rough grade soil level to accept amendments and organics.
 - a. Displacing and removal of amended soil is not allowed to achieve finished grade.
 3. Landscape rough grade to be certified by KCCD Surveyor.
 4. Do not proceed until unsatisfactory conditions have been corrected.

3.02 Soil Preparation

- A. Planting areas exceeding 86 percent compaction.
 1. Fracture to depth shown on details.
 2. After fracturing:
 - a. Rototill to 8 inches.
 - b. Water to settle.

- B. Planting areas less than 86 percent.
 - 1. Rototill to 8 inches
 - 2. Water to settle.
- C. Remove stones, sticks, roots, rubbish, and other extraneous material.
- D. Establish rough grades to receive amendment and fertilizer at level to meet final grade after placement, tiling, and compaction.
- E. **Turf Renovation Areas per Notes on plans**

3.03 Installation

- A. General
 - 1. Adjust application rates of soil amendments and fertilizers as directed by Landscape Architect.
 - a. Application Rate Schedule:
 - 1) See Attachments.
 - 2) If application rates vary by more than 10 percent, contract price will be adjusted.
- B. Soil Amendments and Organics for Grasses
 - 1. Confirm materials and volumes.
 - a. Confirm field measurements of areas to be amended.
 - b. Calculate material volumes based on required application rates.
 - 1) Obtain confirmation and approval from KCCD Representative that calculations are correct.
 - c. Provide weight tickets and delivery tickets to KCCD Representative to confirm approved quantities have been delivered.
 - d. KCCD Representative will confirm material has been evenly spread.
 - 2. Do not place when subsoil or topsoil is frozen excessively wet, or when it is detrimental to Work.
 - 3. Spread amendments, fertilizers, and organics evenly over area.
 - a. Add specified products at application rate on subgrade.
 - 1) Till to depth of 8 inches until soil and amendments are thoroughly mixed and to create a thoroughly friable soil
 - 4. Rough grade soil to eliminate rough or low areas; maintain levels, profile, and contours.
 - 5. Remove stones exceeding 1 ~~3~~³/₄-inch, roots, sticks, debris, and foreign matter during and after placement.
 - 6. Do not remove amended soil from site.
 - 7. After final rough grading has been completed, and KCCD Representative and Landscape Architect will review.
- C. Fertilization for Trees and Shrubs
 - 1. Fertilizer ~~Tablets~~ Paks (by Green AS It Gets)
 - a. Place evenly spaced around plant pits.
 - b. Comply with manufacturer's recommended depth.

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- D. Contact Herbicides
 - 1. Recommended by PCA to maintain a weed-free site during construction and maintenance periods.
 - 2. Applied by QAL as recommended by manufacturer and PCA.
 - 3. Apply pre-emergent only after planting.
 - 4. Identify all noxious weed locations, including nutgrass, purple nut sedge, and Bermuda grass.

3.04 Protection

- A. Protect existing improvements and materials found on-site, above and below grade.
- B. Before excavation, locate buried utilities and structures.
- C. Install temporary fencing to protect plant material in vulnerable locations.
- D. Repair damage cause by Work.

3.05 Restoration

- A. Immediately restore areas damaged during Work.

3.06 Field Quality Control

- A. Landscape final rough grade to be certified by KCCD Surveyor.
- B. Planting area is level, smooth and at required grade.
- C. Non-Conforming Work
 - 1. Remove and replace as directed by KCCD Representative and Landscape Architect.

3.07 Cleaning

- A. Waste Management
 - 1. Remove waste and debris from site.
 - 2. Section 01 74 00.

3.08 Attachments

- A. Application Rate Schedule

END OF SECTION

Application Rate Schedule

Category	Materials	Manufacturer	Model	Application Rate*
Micro-Nutrients	Zinc Manganese Iron Copper Epsom salts	--	--	As directed by Landscape Architect.
pH Adjusters	Soil Sulfur	--	--	50 lbs./1000 sf 1.1 tons/acre
	Sulfate Ammonia	--	--	7 lbs./1000 sf 0.15 tons/acre
Soil Amendments	Gypsum	Western Mining	Ultra Finex95®	500 lbs./1000 sf 11 tons/acre
	Humic Acids	Helena Ag.	Hydra-Hume® DG	100 lbs./1000 sf 2.2 tons/acre
	Mycorrhizal Fungi Inoculants	Mycorrhizal App.	MycoApply® Endo (Trees and Shrubs)	80 lbs./acre
			MycoApply® Ultrafine Endo (Turf and Grasses)	2.5 oz./5000 sf
Fertilizer	N-P-K	--	6-24-24	20 lbs./1000 sf
	Slow-Release Fertilizer Packets	Green	Nutri-Pack Trees, Shrubs & Evergreens	2 packets/1 gallon 4 packets/5 gallon 6 packets/15 gallon 8 packets/24-inch box 8 packets/existing tree
Organics for Grasses	Virgin Redwood Shavings	Anelus Central Valley West Coast	Virgin Redwood Shavings, 1 inch minus	12 cy/1000 sf
Herbicides	Pre-Emergent	As approved by KCCD.		As recommended by Pest Control Advisor.
	Post-Emergent			

***Abbreviations**

cf cubic feet
 cy cubic yards
 lbs. pounds
 oz. ounces
 sf square feet

PRE BID REQUEST FOR INFORMATION LOG

ARCHITECT'S PROJECT NO: **220165**
 PROJECT NAME: **BC Welcome Center Landscape & Irrigation**
 BID NUMBER: _____
 DSA File No: **15-C1**
 DSA App No: **03-123080**
 DATE: **Monday, September 25, 2023**

RFI #	DATE RECEIVED	QUESTION	CONTRACTOR / SUBCONTRACTOR TRADE	RESPONSE	DISC.	TO	FROM	DATE RETURNED
						DATE	DATE	
01	9/15/23	Model of root barrier is VESPRO 24" depth. I cannot find model on the website. Please help me clarify and provide an alternate product if necessary.	Marina Co.	MFR: Deeproot Tree Root Barriers		PBK 9/15/23	Sierra Designs 9/22/23	9/22/23
02	9/15/23	Section 32 84 24 3.04 shows thrust block "INSTALL AT BENDS, TEES, PLUGS, & VALVES OR 2 1/2" AND LARGER MAINLINE PIPING". But detail G sheet L3.2 shows, "SUPPLY LINE 3-INCHES IN DIAMETER & LARGER SHALL RECEIVE CONCRETE THRUST BLOCKS". Please clarify which size of mainline will be receiving thrust block.	Marina Co.	Install thrust blocks on mainlines 2 1/2" and larger.		PBK 9/15/23	Sierra Designs 9/22/23	9/22/23
03	9/21/23	Refer to sheet L2.1 of the McCuen Hall Entry Bid Set of plans - the material of the new turf area per KCCD STD. When they checked the STD, no material was provided. Please advise	Marina Co.			PBK 9/21/23		9/25/23
04	9/21/23	Refer to sections 32 93 00-2.03 & 2.04, Topsoil & Soil conditioners shall be referred to section 32 92 00 and that section was not provided. Please clarify.	Marina Co.	Specification section has been added to addendum #1.		PBK 9/21/23	PBK 9/25/23	9/25/23
05	9/21/23	There are 2 ratios for soil preparation shown in sections 32 91 00-13 3.08 & section 32 93 00-3.04 and they are different. Please confirm which is correct to follow.	Marina Co.	Specification section has been added to addendum #1.		PBK 9/21/23	PBK 9/25/23	9/25/23
06	9/21/23	There are 2 ratios for backfill soil amendment shown in section 32 91 00-09-2.07 & section 32 93 00-09 2.05 and they are different. Please confirm which is correct to follow.	Marina Co.	Specification section has been added to addendum #1.		PBK 9/21/23	PBK 9/25/23	9/25/23
07	9/22/23	Please confirm whether the new fencing and gate shown on sheet AS1.2 are included in the scope of work or already installed.	Marina Co.	A. Fence to be installed by others. B. It is unknown if the fence will be installed prior to construction.		PBK 9/22/23	Sierra Designs 9/22/23	9/22/23
08	9/22/23	The bid set "2023 McCuen Hall" is noted as "for plan check only" and "not for construction". Please confirm whether this bid set is included in the scope of work or not.	Marina Co.	A. Please disregard the "for plan check only" note on the title block; B. This set is for bid.		PBK 9/22/23	Sierra Designs 9/22/23	9/22/23
09	9/22/23	Please provide the seed rate for new turf areas and seeding at the existing material yard shown on sheet L2.1.	Marina Co.	A. Turf Seed Mix & Application Rate: a. For bid purposes, blend the following two products equally and apply at the rates noted below. 1. Mfr: Delta Blue Grass; 2. Bolero Plus mix of Dwarf Fescue and Blue Grass a. application rate: 10lbs./1000 square feet; 3. Double Play Bermuda Grass seed blend a. application rate: 4 lbs./1000 square feet, b. Confirm with KCCD M&O prior to purchase - KCCD may choose to substitute with a different blend.		PBK 9/22/23	Sierra Designs 9/22/23	9/22/23
10	9/22/23	1. The license requirement for this project is listed as C-27. During the mandatory pre-bid mtg, held 9/20, it was brought to our attention this project encompasses various scopes of work, including fence installation, sidewalk replacement, waterproofing, irrigation and landscaping. We hold an "A" license which aligns w/ the broader range of services required for this project. We request the classification be adjusted from C-27 to A. Please advise.	Superb Eng.	A General "A" license is acceptable.		PBK 9/22/23	PBK 9/25/23	9/25/23
11	9/22/23	2. Please provide the Engineer's Cost Estimate for this project.	Superb Eng.	\$250,000		PBK 9/22/23	PBK 9/25/23	9/25/23
12	9/22/23	3. During the job walk, it was noted that fencing is needed as shown on the plans. Please provide a detail for our review.	Superb Eng.	Fence will be installed by others		PBK 9/22/23	Sierra Designs 9/22/23	9/22/23
13	9/25/23	Please confirm all irrigation sleeves for pipe through under existing paving are already installed.	Marina Co.	As-built sheet provided in addendum #1.		PBK 9/25/23		
14	9/25/23	Please confirm material of backfill for irrigation pipe trench. If sand backfill, provide the deep layer.	Marina Co.	A. No special backfill in pipe trench is required. B. San backfill is not required.		PBK 9/25/23	Sierra Designs 9/25/23	9/25/23
15	9/25/23	On sheet L1.1, legend shows 2-wire cable will be installed in 1 1/2" conduit. However, spec section 32 84 24 shows it is installed in 3/4" Schedule 40 conduit. Please clarify	Marina Co.	Install wire in 1 1/2" conduit.		PBK 9/25/23	Sierra Designs 9/25/23	9/25/23
16	9/25/23	On sheet L1.1 of KCCD McCuen Hall Entry - Bid Set, there are weather sensor, master valve, flow sensor, and fertigation system on irrigation legend. These symbols are not shown on plan. Please confirm these valves are not required on project.	Marina Co.	A. a. Rainbird controller - i. LXME2/PRO, IQ4G-USA cartridge; ii. ESPLXMSM12 expansion module; iii. IQPSCMLXM IQ Pro smart; iv. Strongbox Enclosure. b. Rainbird Master Valve - i. 200-PESBIVM-PRS-D c. Rainbird Flow Sensor - i. 2" UFS200 1. LXIVMSEN decoder. B. Weather Sensor - a. WR2-RFC i. Locate near controller.		PBK 9/25/23	Sierra Designs 9/25/23	9/25/23
17	9/25/23	On sheet L1.1 of Drawing A, there are weather sensors on irrigation legend. The symbol is not shown on plans. Please confirm this valve is not required on project.	Marina Co.	A. Regarding L1.1 of KCCD McCuen Hall Entry - Bid Set, 1. Rainbird Weather Sensor, WRC-RFC, Locate near controller.		PBK 9/25/23	Sierra Designs 9/25/23	9/25/23
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