Franklin Elementary School District

September 28, 2023

TK & Kinder Building Additions

PROJECT NUMBER: #23-01-01

ADDENDUM NO. 1

TO ALL PROSPECTIVE BIDDERS:

Please incorporate the following revisions as part of the contract documents for subject project. Any workmanship and/or materials involved shall be set forth in the original drawings and/or specifications unless otherwise directed herein.

ADDENDUM ITEM	
Non-Mandatory Job Walk	**TK & Kinder Building Additions - Pre-Bid Site Walk – Sign In Sheet** (attached)
Bidder Questions	1. **Question:** Is this project subject to Skilled & Trained Workforce? **Answer:** No. Design-Bid-Build Projects are not subject to California's Skilled and Trained Workforce requirements.
	2. **Question:** Will the School District be paying for the building permit? **Answer:** The District will be responsible for all DSA and County permit fees.
	3. **Question:** Is there an Engineer's Estimate for this project? **Answer:** Yes. The engineer's estimate for the total project, Increment #1 & Increment #2 (including Modular Buildings) is $3.2 million.
	4. **Question:** We may only receive a quote from one of the basis of design manufacturers, if that happens we won't have pricing for both Modular Building options on the Bid Form. Is it acceptable to fill out only one of the Modular Building Options on the bid form? If not, please advise. **Answer:** It is expected and acceptable that some contractors will submit bids for only 1 Modular Building Option.
	5. **Question:** Specs: "Bid Alternates Playground Fill Surface" call for Base Price to include "SpectraTurf Synthetic Turf", but Plans (page C03) call for "Versa Lush Synthetic Turf". Which one should be included in the Base Bid pricing? **Answer:** Base bid for playground fill surfaces to be SpectraTurf Synthetic playground turf. Bid Alternates may reflect a reduction in cost relative to the Base Bid Product – please be clear if the Bid Alternate value is an increase or decrease in the base bid value.

6. **Question:** May I please request a Plan Holders List for the mentioned project?
   Answer: Based on the method of bid document publication and distribution, there is no Plan Holders list available. This addendum includes a copy of the Non-Mandatory Job Walk Sign-in sheet.

7. **Question:** Is there a specification section for the casework & countertops on this project?
   Answer: Casework & countertops are to be provided by the modular building manufacturer according to their DSA PreCheck, PC, plans. Refer to basis of design PC plans or contact the modular manufacturer's if you would like to submit a price for casework & countertops.

8. **Question:** Can another Modular Building Manufacture be submitted as an equal to the Basis of Design Manufacturers & PC designs identified?
   Answer: Yes, but confirmation of 'equalness' would be required to be made and issued to all bidders not less than 72 hours prior to bid opening. If a bidder would like to propose a modular manufacturer or PC design other than those identified as the basis of design, the bidder would be required to submit sufficient documentation to the District for the District to determine that the alternate PC is in fact equal not less than 120 hours prior to bid opening.

9. **Question:** The modular building manufacture does not yet have DSA approval for their 2022 PC building that is comparable to the PC referenced as the Basis of Design. Can we base our bid price based on the 2019 PC's as identified as the Basis of Design and will DSA accept the 2019 PC's as identified as the Basis of Design for the Increment #2 DSA submittal?
   Answer: Yes. Bidder may base their bids on the 2019 PC identified as the Basis of Design *and* DSA will accept an Increment #2 submittal based on a Modular Building Manufacture's DSA approved 2019 PC design provided that Increment #2 is submitted to DSA prior to March 1, 2024.

10. **Question:** The Basis of Design for Modular Building Option 2 identifies that the building should have a dual sloped standing seam metal roof. DSA PC 02-118326 has a single sloped roof. Please confirm the Modular Building Option 2 roof slope.
    Answer: The Modular Building Option 2 roof slope and configuration and all other building elements and components are to be consistent with DSA PC 02-118326 Basis of Design – single sloped standing seam roof.

11. **Question:** The Basis of Design for Modular Building Option 2, DSA PC 02-118326, appears to have several site-specific options available as identified sheet TS of the PC drawings. Are any of the site-specific options to be included in this project?
    Answer: Yes. see the attached Completed Building Data and Site-Specific Options form for additional Modular Building Option 2 Basis of Design information.

12 **Question:** We would like to submit Meehleis Modular Buildings A#02-119872 PC as an equal to Modular Building Option 1. Please confirm that it will be accepted as an equal.
   Answer: MMB PC 02-119872 is not considered an equal for the Modular Building Option 1 Basis of Design therefore, the District has added a Modular Building Option 3 that will include the following as Basis Of Design;

Modular Building Option 3

BASE BID - The contractor shall base their bid to include (2) approximately 40' x 72' modular buildings designed to meet all current California Building Code Requirements for use as a California Public School Building and that is based on a 2019 CBC or 2022 CBC DSA PC approval. Base Bid to include the design, engineering, and DSA submission, delivery, and construction of buildings per the below:

Basis of Design – Meehleis Modular Buildings PC 02-119872 (sim) and to include:
12' modular moment frame lateral bracing system,
5" Concrete slab on grade floor & shallow perimeter foundation,
Dual slope standing seam metal roofing,
Dual sloped suspended acoustical ceiling
3 coat - 7/8" thick exterior stucco finish,
4'-4" roof overhang at the front and rear,
18" side wall roof overhangs
18 ga hallow metal exterior doors with side lites,
Solid core interior doors vision panels,
LED Lighting,
All electric ground mounted HVAC system,
125 amp single phase electrical panel @ each classroom or equivalent,
Vinyl covered tackable wall covering,
Casework per the Basis of Design drawings to be WIC plastic laminate cabinetry,
See Basis of Design Drawings for additional information.

13 **Question:** Is the base bid value on the Bid Form intended to reflect the cost of all the work reflected in the DSA Approved Increment 1 documents, the Modular Buildings and associated identified options, and site electrical, low voltage, and fire alarm work
Answer: Yes.

14. **Question:** The landscape & irrigation plans do not currently include any notes and much of the pertinent information required for bidding is not currently provided. Please provide specification sections for planting & irrigation.
Answer: Specifications are now included.

15. **Question:** Will existing irrigation mainline pipe & wiring that will now pass under new pavement need to be placed in new sleeves?
Answer: No.

16. **Question:** Please confirm if root barriers are required and if so, provide detail.
Answer: Yes, root barriers are required per Specification Section 32 90 00.

17. **Question:** Please provide information on the duration of the landscape maintenance period.
Answer: 90-day maintenance period per Specification Section 32 90 00.

18. **Question:** Notes on the irrigation pages indicate that we are to replace the existing controller, but the irrigation legend shows 2 controllers are to be installed. Is this accurate?
Answer: 90-day maintenance period per Specification Section 32 90 00.

19. **Question:** Additionally, where does the existing mainline end and the new begin? All seem to be the same symbol which indicated all mainline shown on plans are to be new. Please verify.
Answer: Existing main line now shown on the plans in a lighter line type.

ADDENDUM ITEM	PAGE OR DRAWING	LOCATION AND DESCRIPTION OF CHANGE
1.1	Schedules 00 01 15	**PROJECT SCHEDULE: REVISE** the Contract Construction Duration for the Construction of Increment #1 & Increment #2 to; October 19, 2023 thru December 29, 2024
1.2	BID Form 00 41 13	**PROJECT MANUAL: REVISE** Bid Form that adds Modular Building Option 3 (attached)
1.3	Tech Specs	**SPECIFICATIONS: REPLACE** the technical specifications, Division 02 through 33, with the DSA-approved record technical specification set (135 pages) that can be downloaded from the link below: **"Franklin ES TK & K Additions_DSA Approved_Tech Specifications.pdf"** LINK https://www.dropbox.com/scl/fo/fhjurx6p7r224x3qy2wkp/h/02-121504_INC%2001_SPC_A.pdf?rlkey=sefkuacpxxak9stqhk25mwjzj&dl=0 This document is also available at the link provided in the Invitation to Bid Note: There are no changes to the previously advertised drawings other than the DSA Approval Stamp.
1.4	32 84 00 Irrigation	**SPECIFICATIONS: ADD** the following: See **"32 84 00 IRRIGATION.PDF"** attached.
1.5	32 90 00 Planting	**SPECIFICATIONS: ADD** the following: See **"32 90 00 PLANTING.PDF"** attached.
1.6	Drawings	**DRAWINGS: REPLACE** the drawing set, T0.0 through A0.5 with the attached DSA-approved record drawing set (16 pages) that can be downloaded from the link below: **"Franklin ES TK & K Additions_DSA Approved_Drawings.pdf"** LINK https://www.dropbox.com/scl/fo/fhjurx6p7r224x3qy2wkp/h/02-121504_INC%2001_DWG_A.pdf?rlkey=sefkuacpxxak9stqhk25mwjzj&dl=0 This *document is also available at the link provided in the Invitation to Bid* Note: There are no changes to the previously advertised technical specifications other than the DSA Approval Stamp.

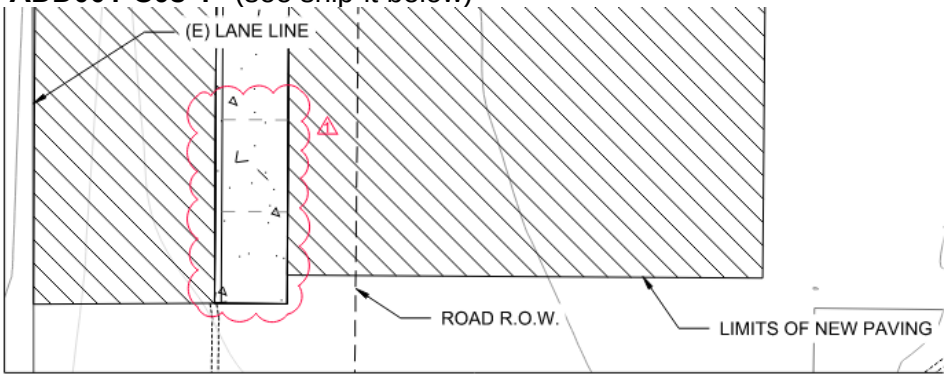
1.7 C02 **DRAWINGS:** Refer to C02 and **REVISE** the following:

DEMO NOTES:
ASPHALT PARKING LOT REMOVAL – ~~**12,500**~~ **12,600** SF

1.8 C03 **DRAWINGS:** Refer to C03 and **REVISE** the following:

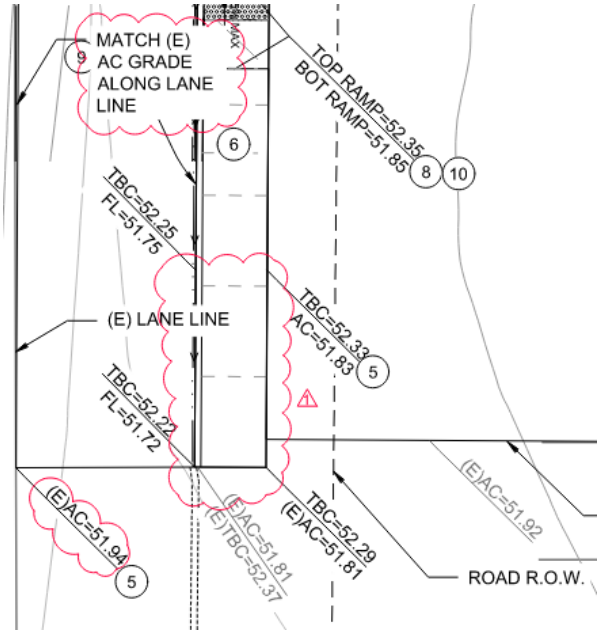
ENGINEERED FILL LEGEND:
EXTERIOR FLATWORK – ~~**9,400**~~ **11,100** SF
LANDSCAPING AREA – ~~**12,200**~~ **12,300** SF
HOT MIX ASPHALT (HMA / AC): ~~**1,200**~~ **9,200** SF

1.9 C03 **DRAWINGS:** Refer to C03 and **REVISE** the following:
"ADD001-C03-1" (see snip-it below)



Modified limits of new paving

1.10 C04 **DRAWINGS:** Refer to C04 and **REVISE** the following:
"ADD001-C04-1" (see snip-it below)



New grades for modified limits of new paving

1.11 L1.1 **DRAWINGS:** Refer to L1.1 and **REPLACE** the drawing sheet with the following:

"L1.1 PLANTING PLAN.pdf" *(attached)*

1.12 L2.1 **DRAWINGS:** Refer to L2.1 and **REPLACE** the drawing sheet with the following:

"L2.1 IRRIGATION PLAN.pdf" *(attached)*

1.13 L3.1 **DRAWINGS:** Refer to L3.1 and **REPLACE** the drawing sheet with the following:

"L2.1 LANDSCAPE DETAILS.pdf" *(attached)*

END OF ADDENDUM

Franklin Elementary School

TK & K Classroom Building Addition

322 N. Township Road, Yuba City, CA

Contractor Sign-in Sheet
Date: September 21, 2023
Time: 10:00 AM

This Pre-Bid Conference is non-mandatory.

Please print clearly

Name of person Attending	Name of firm you are representing	Email Address
John DeGrace	Kelly Moore Paints	JDegrace@kellymoore.com
Brycen Seiler	Ginno Construction Inc.	Ian@ginnoconstruction.net

Franklin Elementary School

TK & K Classroom Building Addition

322 N. Township Road, Yuba City, CA

Contractor Sign-in Sheet
Date: September 21, 2023
Time: 10:00 AM

This Pre-Bid Conference is non-mandatory.

Please print clearly

Name of person Attending	Name of firm you are representing	Email Address
EDGAR IBARRA	UNITED BUILDING CONTRACTORS	EDGAR1@UNITEDBUILDINGCONTRACTORS.COM
Armando Ramirez	Arrow Fence	Armando@arrowfencecompany.com
Chris Pizzo	Abide Builders	bids@abidebuilders.com
Luca Lathrop	BRCO Constructors	llathrop@gobrco.com
TIM SCHNEIDER	NORTH STAR CONST	tim@northstarinc.com

Franklin Elementary School

TK & K Classroom Building Addition

322 N. Township Road, Yuba City, CA

Contractor Sign-in Sheet
Date: September 21, 2023
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This Pre-Bid Conference is non-mandatory.

Please print clearly

Name of person Attending	Name of firm you are representing	Email Address
Anthony Dobyns	Craftmanship Print & Siding.	CPprinting885@gmail.com
Will Cannell	JL Construction / JL Modular	Will C@JLCBuild.com
Scott Heyland	Norcal Excavating Inc.	scott@norcalexcavating.com
Jason Deschaine	Deschaine Enterprises Inc	Jason@deschaineenterprises.com 530 2779353
John Deschaine	Deschaine Enterprises Inc	d.ent@icloud.com 530 274 9975

Franklin Elementary School

TK & K Classroom Building Addition

322 N. Township Road, Yuba City, CA

Contractor Sign-in Sheet
Date: September 21, 2023
Time: 10:00 AM

This Pre-Bid Conference is non-mandatory.

Please print clearly

Name of person Attending	Name of firm you are representing	Email Address
Brandon Reitz	Hilbers Inc.	breitz@hilbersinc.com
CARMEN O'CAMPO	MEEHLEIS Modular Buildings Inc MMBI	CARMENC@MEEHLEIS.COM
Ken Norton	Lamon Const Co. Inc	Knorton@lamonconstruction.com
Zach Milner	Zach@northstarinc.com	North Star Construction

BUILDING DATA

OCCUPANCY	E OR B (CLASSROOM USE FOR COLLEGE)
TYPE OF CONSTRUCTION	V-B
WIND LOAD ASCE 7-16 SECTION 28.5.3 SIMPLIFIED PROCEDURE	V = 99 MPH BASIC WIND SPEED EXPOSURE = C INTERNAL PRESSURE COEFF., $GC_{P,I}$ = ±0.18 ROOF ANGLE = 4.8° RISK CATEGORY II K_{ZT} = 1.00 λ = 1.21
ICE LOAD	NOT CONSIDERED, SEE GENERAL NOTE #15 THIS SHEET
SITE SPECIFIC SNOW LOAD	SITE SPECIFIC GROUND SNOW LOAD, P_g= _____ PSF (SEE GENERAL NOTE #14 THIS SHEET IF > 0) SITE SPECIFIC ROOF EXPOSURE FACTOR, C_e (REFERENCE ASCE 7-16 TABLE 7.3-1): ☐ FULLY EXPOSED, C_e = 0.9 ☐ PARTIALLY EXPOSED, C_e = 1.0 ☐ SHELTERED, C_e = 1.2 ☐ NOT APPLICABLE (P_g= 0 PSF) ROOF SLOPE FACTOR, C_S = 1.0 | THERMAL FACTOR, C_t = 1.0 | IMPORTANCE FACTOR, I_s = 1.00 SITE SPECIFIC ROOF SNOW LOAD, $P_s = 0.7C_eC_sC_tI_sP_g = 0.7C_eP_g$ = _____PSF (30 PSF MAX)
ROOF LIVE OR ROOF SNOW LOAD (MAX PSF)	☒ 20 (NO SNOW) | ☐ 20 SNOW* | ☐ 30 SNOW* | * AT SITES w/ SNOW (SEE GENERAL NOTE #14 THIS SHEET)
FLOOR LIVE LOAD (PSF)	☐ 50+15 | ☒ 100 | ☐ 150 (NON-STORAGE)
DESIGN DEAD LOADS (MAX PSF)	25.0 ROOF & ROOF OVERHANGS - 18.0 WOOD FLR - 50.0 CONC. FLR 18.0 EXTERIOR WALLS - 15.0 FRONT SUNSHADE
FIRE SPRINKLER SYSTEM DESIGN WT.	1.5 PSF AT ROOF (SEE GENERAL NOTES #5 - #7 THIS SHEET)
SOLAR PANEL SYSTEM DESIGN WT.	3.0 PSF AT ROOF & AT FRONT SUNSHADE OVERHANG (INCLUDED IN DESIGN DEAD LOADS ABOVE) (SEE GENERAL NOTE #9 THIS SHEET)
ALLOWABLE SOIL PRESSURE (PSF)	1,500 (PC DESIGNED USING ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC 1605A.3.2.)
FLOOD HAZARD AREA	NO (SEE GENERAL NOTE #11 THIS SHEET)
RAIN INTENSITY (IN/HR)	3" MAX.
BUILDING AREA (SQ. FT.)	960 MIN. THRU 4800 MAX.
CLIMATE ZONE	☒ 1-14 | ☐ 16 | ☐ 1-16 (DESIGNED FOR WORST CASE CZ15)
MODULES	LIGHT MODULAR STEEL MOMENT FRAMES PER CBC SECTION 2212A
SYSTEM	12'x40' MODULES (2 MODULES MINIMUM)
FOUNDATION TYPE	CONCRETE

SITE-SPECIFIC OPTIONS

FLOOR DECK	☐ 1⅛" PLYWOOD SHTG.	☒ BH-36 DECK 1½" x 18 GA.	☐ 3WxH DECK 3" x 18 GA	
WALL STUDS	☒ WOOD	☐ LIGHT-GAUGE STEEL		
EXTERIOR WALL FINISH	☐ DURATEMP 303	☐ SYNTHETIC STUCCO	☐ LAP SIDING	☒ STUCCO
HVAC	☐ INTERIOR FLOOR MOUNTED	☐ EXTERIOR WALL MOUNTED	☒ SPLIT SYSTEM	☐ ROOF MOUNTED
ROOFING	☒ 3" x 22 GA. STANDING SEAM	☐ SINGLE-PLY	☐ BUILT-UP ROOFING	
ROOF BEAMS	☒ STANDARD	☐ ALTERNATE 10 GA (LOW SEISMIC ONLY - SEE SHEET S5.3)		

SOLATUBE ON ROOF	☒ NO	☐ YES	
FIRE SPRINKLERS	☒ NO	☐ YES (SEE GENERAL NOTES #5-#7 THIS SHEET)	
FRONT OVERHANG	☐ NO	☒ YES - LENGTH: **5'-0"**	(SEE SHEET S5.4)
REAR OVERHANG	☐ NO	☒ YES - LENGTH: **3'-0"**	(SEE SHEET S5.2)
FRONT SUN SHADE	☐ NO	☒ YES	(SEE SHEET S5.2)
SOLAR PANELS	☒ NO	☐ YES (SEE GENERAL NOTE #9 THIS SHEET)	
ALTERNATE OPEN CANOPY	☒ NO	☐ YES - LENGTH:	(SEE SHEET S5.4)
OPTIONAL SIDE WALL CANOPY	☒ NO	☐ YES	(SEE SHEET S5.4A)
NANA WALLS	☐ NO	☐ YES	(SEE SHEET S8.0A @ WOOD STUDS, SEE SHEET S9.0A @ STEEL STUDS)
LIQUEFIABLE SOILS	☐ NO	☐ YES (SEE GENERAL NOTE #10 THIS SHEET)	refer to Geotechnical / Geohazard report
MAPPED GEOHAZARD ZONE	☒ NO	☐ YES (AS DEFINED BY PC-6 SECTION 1.8)	
GEOHAZARD REPORT	☐ NO	☒ YES	
IF YES	GEOTECHNICAL FIRM: Universal Engineering Sciences - UES		
	REPORT #: 4630.2300036.0016	REPORT DATE:	
GEOTECHNICAL REPORT*	☐ NO	☒ YES	* REQUIRED IF BUILDING AREA > 4,000 SF
IF YES	GEOTECHNICAL FIRM: Universal Engineering Sciences - UES		
	REPORT #: 4630.2300036.0016	REPORT DATE: May 4, 2023	
	DEEPER FOOTINGS REQUIRED? ☐ NO	☐ YES - REQUIRED DEPTH:	
	WIDER FOOTINGS REQUIRED? ☐ NO	☐ YES - REQUIRED WIDTH:	
BELOW GRADE CONCRETE MIX DESIGN	☒ DEFAULT CONCRETE MIX DESIGN FOR BELOW GRADE CONCRETE PER SHEET N1.0A.		
	☐ OPTIONAL SITE-SPECIFIC CONCRETE MIX DESIGN FOR BELOW GRADE CONCRETE PER SHEET N1.0A.		

Revised per Addendum #1

DOCUMENT 00 41 13

BID FORM

To: Governing Board of Franklin Elementary School District ("District" or "Owner")

From: _____
(Legal Name of Bidder)

The Bidder declares that the Contract Documents including, without limitation, the Notice to Bidders, the Instructions to Bidders, and the Special Conditions have been read, and agrees and proposes to furnish all necessary labor, materials, and equipment to perform and furnish all Work in accordance with the terms and conditions of the Contract Documents, including, without limitation, the Drawings and Specifications of Project No. **23-01-01**

PROJECT: **TK & KINDER BUILDING ADDITIONS**

("Project" or "Contract") and will accept in full payment for that Work the following total lump sum amount, all taxes included:

Modular Building Option 1 (JL Modular 02-118808 PC)

_____ **Dollars** **$** _____
BASE BID – Increment #1 & #2 – Modular Building Option 1

Modular Building Option 2 (AMS 02-118326 PC)

_____ **Dollars** **$** _____
BASE BID – Increment #1 & #2 Modular Building Option 2

Modular Building Option 3 (Meehleis 02-119872 PC)

_____ **Dollars** **$** _____
BASE BID – Increment #1 & #2 Modular Building Option 3

Revised per Addendum #1

Bid Alternates

_____ **Dollars**	**$** _____
Bid Alternate #1 – Playground fill surface – pour-in-place high density rubber surfacing in lieu of Synthetic turf Base Bid	

_____ **Dollars**	**$** _____
Bid Alternate #2 – Playground fill surface – 9" of loose fill wood mulch safety surfacing in lieu of Synthetic turf Base Bid	

1. **Contract Review.** The Bidder has reviewed the Work outlined in the Contract Documents and fully understands the scope of Work required in this Bid, understands the construction and project management function(s) described in the Contract Documents, and that if Bidder is awarded a contract, Bidder shall be in fact a prime contractor, not a subcontractor, to the District, and agrees that its Bid, if accepted by the District, will be the basis for the Bidder to enter into a contract with the District in accordance with the intent of the Contract Documents.

2. **Requests for Clarification.** The Bidder has notified the District in writing of any discrepancies or omissions or of any doubt, questions, or ambiguities about the meaning of any of the Contract Documents, and has contacted the Construction Manager before bid date to verify the issuance of any clarifying Addenda.

3. **Contract Time.** The Bidder agrees to commence Work under this Contract on the date established in the Contract Documents and to complete all Work within the time specified in the Contract Documents.

4. **Contractual Provisions.** The Bidder hereby acknowledges and agrees to be bound by the following provisions and all provisions in the Contract Documents:

   - The liquidated damages clause of the General Conditions and Agreement.
   - The "Changes in the Work" provisions in the General Conditions that limit the permitted charges and mark-ups on change orders and on the amount of home office overhead that the successful bidder can receive from the District.
   - The "Claims" provisions in the General Conditions that delineate the required process to submit and process Claims.

5. **Bid Open for 90 Days.** It is understood that the District reserves the right to reject this Bid and that the Bid shall remain open to acceptance and is irrevocable for a period of ninety (90) days.

6. **Attachments.** The following documents are attached hereto:

   - The Bid Bond on the District's form or other security.
   - The Designated Subcontractors List.
   - The Noncollusion Declaration.
   - Certification: Iran Contracting Act.

Revised per Addendum #1

7. **Addenda Acknowledgement.** Receipt and acceptance of the following addenda is hereby acknowledged:

No.____, Dated _____	No.____, Dated _____
No.____, Dated _____	No.____, Dated _____
No.____, Dated _____	No.____, Dated _____
No.____, Dated _____	No.____, Dated _____
☐ Or check here if **no** addenda were issued.	

8. **Bidder's License.**

- The Bidder acknowledges that the license required for performance of the Work is as stated in the Invitation to Bid.

- The Bidder certifies that it is, at the time of bidding, and shall remain throughout the period of the Contract, licensed by the State of California to do the type of work required under the terms of the Contract Documents. The Bidder further certifies that it is regularly engaged in the general class and type of work called for in the Contract Documents.

9. **Labor Harmony.** The Bidder certifies that it is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

10. **DIR Registration.** The Bidder shall ensure that it and its Subcontractors comply with the registration and compliance monitoring provisions of Labor Code section 1771.4, including furnishing its CPRs to the Labor Commissioner, and are registered pursuant to Labor Code section 1725.5.

11. **General Acknowledgement.** The Bidder represents that it is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the Work to be performed. The Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work that may create, during the Work, unusual or peculiar unsafe conditions hazardous to persons and property. The Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the Work with respect to such hazards.

12. **False Claims Act.** The Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the District will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the Bidder may be subject to criminal prosecution.

Revised per Addendum #1

Furthermore, the Bidder hereby certifies to the District that all representations, certifications, and statements made by the Bidder, as set forth in this bid form, are true and correct and are made under penalty of perjury.

Dated this _____ day of _____ 20 _____

Name of Bidder _____

Type of Organization _____

Signed by _____

Title of Signer _____

Address of Bidder _____

Taxpayer's Identification No. of Bidder _____

Telephone Number _____

Fax Number _____

E-mail _____ Web page _____

Bidder's DIR Registration No.: No.:_____

Contractor's License No(s): No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

If Bidder is a corporation, provide the following:

Name of Corporation: _____

President: _____

Secretary: _____

Treasurer: _____

Manager: _____

END OF DOCUMENT

SECTION 32 84 00

LANDSCAPE IRRIGATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. System design, trenching, laying of pipes and control wires, installation of valves, sprinkler heads, backfill, testing, adjustment and be complete, ready for operation.

1.2 RELATED SECTIONS

A. Section 32 90 00 – Landscape Planting

1.3 REFERENCES

A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Section 01 42 00 for definitions, acronyms, and abbreviations.

B. Referenced Standards, Manuals and Codes:
   1. ASTM D1785 – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80 and 120.
   2. ASTM D2241 – Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series).
   3. ASTM D2466 – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40.

1.4 INTENT OF SPECIFICATIONS

A. It is the intention of these specifications to design and install a sprinkler system free from defects in materials and workmanship.

1.5 ORDINANCES AND REGULATIONS

A. All local, municipal, and state laws, rule and regulations governing any portion of this work shall be made a part of these specifications and their provisions carried out.

1.6 EXAMINATION OF DRAWINGS AND SITE

A. Before submitting a bid, each bidder shall carefully examine the site and note all existing conditions and limitations applying to the work including “patch and repair” considerations to the existing irrigation system and the surrounding landscape and include in his bid a sum sufficient to cover the cost of all items.

1.7 PROTECTION

A. The Contractor shall be responsible for covering all pipe openings, valves, etc., before and after being set in place to prevent obstructions in the pipe and valves.

1.8 DAMAGE TO PROPERTY

A. The Contractor shall restore it to its original condition, without change, any damage due to the negligence of any of the Contractor's employees, agents or subcontractors.

B. Any existing buildings, equipment, piping, pipe coverings, sewers, sidewalks, landscaping, etc., damaged during his work shall be replaced or repaired in a manner satisfactory to the Architect and at the Contractor's own expense and before final payment will be made.

1.9 DAMAGE BY LEAKS

A. The Contractor shall be responsible for damage to the grounds, walks, roads, building, piping systems, electrical systems and their equipment and contents caused by leaks being installed or having been installed. He shall repair at his expense all damage so caused. All repair work shall be done in a manner satisfactory to the Architect.

PART 2 PRODUCTS

2.1 LIST OF MATERIALS FOR APPROVAL

A. Within 20 days after the Award of Contract, the Contractor shall submit to the Architect for review five copies of a complete materials list, together with manufacturer's name numbers covering all material to be furnished under this contract. The contract shall also furnish five copies of descriptive literature on all items listed on the material list. No work shall be commenced before receipt of approved material list and descriptive material. List shall cover items listed below if specified or indicated on drawings:

Shut-off valves

Valve boxes

Backflow prevention device

Master valve

Flow sensor

Copper pipe and fittings

Remote control valves

Remote control valve ID tags

Automatic controller

Control wire and connectors

Check valves

Sprinkler heads

Drip irrigation equipment

2.2 SHUT-OFF VALVES

A. (Except when a part of the backflow prevention device), 1/2" through 2" shall be 150 lbs. WOG bronze gate valves non-rising stem and wheel. Gate valves shall be Nibco T-29 or Hammond #4687. 3” and larger shall be AWWA resilient wedge gate valve. The body shall be epoxy coated inside and out, with "0" push-on ends for PVC via rubber rings. Gate valves shall be

Stockham, Mueller, Kennedy or approved equal. All gate valves shall be domestically manufactured.

2.3 VALVE BOXES FOR SHUT-OFF VALVES

A. 10" round plastic valve box with bolt down cover, extensions as required. Carson #910-12B or approved equal.

2.4 COPPER WATER TUBING

A. Hard drawn government type "K" water tube. Use type where indicated on drawings.

2.5 FITTINGS – NON-FERROUS METAL (for copper water tubing)

A. Wrought copper and/or cast red brass for solder and/or screw connections with name and manufacturer thereon.

2.6 SOLDER

A. Solder for copper water tube shall be 95-5, tin-antimony.

2.7 RED BRASS PIPE

A. Federal specification No. WW=P-351 medium weight, IPS, with threads to conform to ASA Specifications B2.

2.8 DI-ELECTRIC ISOLATION

A. Provide between all connections joining ferrous and non-ferrous metals or old (existing) ferrous and new ferrous metals. Submit for approval, type "intended for use”.

2.9 PVC PIPE

A. All PVC pipes shall be permanently and continuously marked with manufacturer's name, pipe size (IPS), class or schedule SDR number (class pipe only), ASTM (D-2241 for class pipe and D-1785 for schedule pipe), manufacturer's lot number and NSF approval. Pipe with dents, wrinkles, die, or heat marks is not acceptable. Pipe shall be delivered to the site in 20’ lengths.

2.10 THREADED PVC NIPPLE

A. SCH 80, type 1, 4” minimum length, except where detailed otherwise in drawings.

2.11 PVC MAINLINE

A. 1120/1220 normal impact, SCH 40 and Class 315, solvent weld; size as noted in drawing.

2.12 PVC LATERALS (NON-PRESSURE PIPING)

A. 1120/1220 normal impact, SCH 40, solvent weld type PVC; size as noted in drawing.

B. As indicated in the drawings.

2.13 FITTINGS – PVC

A. PVC fittings for make-up shall be of the same chemical compound as the pipe on which it is installed. Use ASTM D2466 Type 1 or I/II SCH 40 Polyvinyl Chloride fittings.

2.14 PIPE COMPOUND FOR PVC

A. Best grade Teflon tape on all threaded connections.

2.15 PRIMER AND SOLVENT

A. As recommended by the manufacturer of the PVC pipe, chemically compatible with the pipe, fittings and solvent.

2.16 REMOTE CONTROL VALVES

A. Refer to drawings.

2.17 WIRING TO REMOTE CONTROL VALVES (24 VOLT), MASTER VALVE AND FLOW SENSOR

A. Electrical requirements from controller to remote control valves shall be U.F. type, UL approved, AWG #14 solid strand copper wire with minimum 4/64" PVC coating, 600-volt, 75°C. All control wires from the valve to the controller shall be of one color. Common wire shall be white. Master valve and flow sensor color must be different than control valve color.

2.18 WIRE CONNECTIONS FOR DIRECT BURIAL WIRE

A. Connector shall be 600-volt, 60°C, AWG-UF type, waterproof, epoxy or PVC compound filled containers, 3M seal packs or approved equal.

2.19 SPRINKLERS HEADS

A. Refer to drawings.

PART 3 EXECUTION

3.1 GENERAL

A. Comply with all governing construction for all work under this section.

B. All work shall be assembled to conform to notes on the drawings, whether mentioned in this section of the specifications.

C. Observe installed work of other trades and verify that it is complete to the point where irrigation work may properly commence.

D. Provide at least one qualified person who shall be present always during execution of the work. This person shall be familiar with the type of materials being installed and the material manufacturer's recommended methods of installation and direct all work performed under this Section.

3.2 VERIFICATION OF DIMENSIONS

A. Verify all horizontal and vertical site dimensions prior to staking of heads.

3.3 LAYOUT OF HEADS AND STAKING

A. Sprinkler heads shall be staked and installed in the locations shown on the shop drawings. Discrepancies between drawings and site shall be brought to the attention of the Architect prior to trenching. Do not exceed maximum spacings shown on drawings or exceed the GPM of the pipe sizes shown. If spacing demands additional or less materials, notify Architect before commencing work.

3.4 TRENCHING

A. Check all grades so that work may proceed, keeping materials at specified depth.

B. Do all excavation for installation of work included in contract. Mechanical trenching machines shall be of approved type to cut trenches with straight sides. Trenches shall be only wide enough to lay the pipe and control wires. Perform minor adjustments to avoid existing utilities as directed without additional cost. "Pulling" of piping and/or control wires will not be permitted.

C. Trenches shall be deep enough to provide minimum cover from finish grade as follows:
   1. 18” minimum cover over supply lines to remote control valves which go under concrete or porous pavement system.
   2. 18” minimum cover over control wires from controller to valves.
   3. 12” minimum cover over lateral lines to sprinkler heads.

D. Hand trench within the drip line of all trees with a caliper greater than 8”.

E. Use all possible care to protect existing trees and plants, during trenching. Roots 2" or larger in diameter shall be tunneled under and wrapped with wet burlap to prevent scarring or drying. When roots 1” and larger are cut, they shall be painted with two coats of approved sealer manufactured for this purpose. Cover all trenches in root areas (only while open) with wet burlap and backfill within 24 hours after opening the trench.

F. If the pipe must be laid after paving is in place, it shall be done by jacking, boring or hydraulic driving. Boring is unacceptable under AC pavement. If cutting or breaking any paving is necessary, it shall be done and replaced with like material at the expense of the Contractor after obtaining approval of the Architect.

G. All pipes under concrete shall be sleeved inside of larger pipe and have 1/2" clearance.

3.5 BACKFILLING

A. The trenches shall not be backfilled until all required tasks and testing are performed and reviewed by the Architect. Trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, or other approved materials, free from large clods of earth or sharp stones.

B. Backfilling for pressure piping shall be compacted and tamped as follows:
   1. Install backfill material and cover over piping. Add 6” lifts of backfill soil and mechanically tamp.

C. After the system is working, run sprinklers for a minimum of one hour and retamp as needed. NO WHEEL ROLLING WILL BE ALLOWED.

D. Backfill for any trench shall be compacted to dry density equal to 90% and conform to the adjacent grades without dips, sunken areas, humps, or other irregularities.

E. All rocks uncovered and debris must be disposed of by Irrigation Contractor off-site at his cost.

3.6 ASSEMBLY

A. Copper pipe
   1. Cut ends square; remove all burrs inside and out.
   2. Clean tube and pocket or fittings to bright finish using #00 steel wood or sand cloth.
   3. Coat tubing and inside of fitting with a paste-type non-corrosive solder flux and assemble.
   4. Apply heat and solder. Do not use oxygen gas.
   5. Remove residual solder and flux with rag or brush and allow joint to cool.
   6. Fill pipe with water and pressure test.

B. PVC Plastic Pipe
   1. Handle with care when loading, unloading, transporting, and storing material to avoid damage. Store pipe and fittings under cover before using. Transport in vehicle with bed or sufficient length to carry pipe flat and fully supported. Store pipe in same manner.
   2. Solvent welding: Use non-synthetic brush to spread primer and solvent using no larger than pint-sized cans. Clean and refill cans each day. Cut pipe square, ream, chamfer outside end. Clean and dry pipe end with prime, prime inside socket again. Immediately apply solvent to pipe end and to socket, then again to pipe end. Bottom the pipe in socket and turn 90°. Hold joint together 30 seconds. Wipe off excess solvent. To set 30 minutes before moving. Centerload pipe with small amount of backfill to prevent arching and whipping under pressure, leave joints exposed.
   3. Threaded connections: Use Teflon tape on plastic threaded joints. Screw hand tight and another half turn by wrench. On PVC to metal pipe, work the metal connection first.

3.7 LAYING OF LINES

A. All lines set in place under paving shall extend 12" minimum beyond such paving edges and be capped hand tight. No fittings, including couplings, will be permitted under surfaces to be paved except where the length of the line under the paving exceeds 20’ or where shown in drawings, i.e., parking lots, etc.

B. All piping shall be installed by conventional trenching. The width of the trenches for the irrigation system shall not be greater than necessary to permit satisfactory jointing and other installation procedures, such as tamping of bedding material under and around the pipe. The bedding surface shall provide a firm foundation of uniform density through the entire length of the pipe. Snake PVC plastic pipe side to side in trench bottom keeping 4" horizontal clearance between two pipes in same trench. Do not lay pipe in trench containing water or at less than 32°F. Center load immediately, leaving joints exposed.

C. Make trenches wide enough to allow minimum of six inches (6”) between parallel pipe lines and three inches (3”0 between side of pipe and side of trench. Do not allow stacking of pipe within trench.

D. Allow a minimum clearance of twelve inches (12”) in any direction from parallel pipes of other trades.

3.8 LAYING OF CONTROL WIRES (24 VOLTS)

A. Lay wires in common trench with mainline wherever possible. Splicing as allowed with 24" expansion loop only in concrete electrical junction box with bolt down lid. Common wire and control wires are to be tagged with 1/4" wide embossed plastic labeling tape, showing controller and station number designation. Use plastic electrical tape and bind all control wires in bundles at 10' intervals. All splices shall be waterproof.

3.9 FLUSHING OF LINES

A. Mainlines shall be flushed before attaching remote control valves with pipe centerloaded. All water being discharged shall be temporarily piped up and out of the trenches. Trenches are to be kept dry for pressure tests to follow. Install all valves after flushing procedures.

B. Laterals shall be flushed before sprinkler heads are installed. Cap all risers, apply pressure, remove caps in sequence starting at the nearest control valve. Replace caps before removing caps to follow. Continue to end each lateral. Flush until all foreign matter and mud is cleared out of the system. Contractor to provide all materials needed for flushing operations.

3.10 PRESSURE TESTS

A. Prior to Backfilling, perform all hydrostatic tests in presence of the IOR after flushing lines. Maintain maximum pressure on main lines and lateral lines, after welded plastic joints have cured at least twenty-four hours and with the risers capped, without any pressure drop with all air expelled at 125 PSI on mainline for four hours and 100 PSI on lateral lines for one hour. All leaks shall be corrected in a mechanical manner without use of epoxy filler compounds.

3.11 DRAWINGS OF RECORD

A. Maintain a complete and accurate set of project record drawings. These drawings shall be kept up to date with the progress of the work.

B. The contractor shall provide adequate measurements and field notes as directed by the City Inspector and/or Architect for preparation of accurate "Project Record" drawings. Show either actual locations or dimensions form two permanent points of reference such as building corners, curbs, sidewalk, intersections, etc. (but not from irrigation equipment) locations of the following.

1. Connections to existing water sources.
2. Water meters.
3. Routing of main lines.
4. Control valves.
5. Quick couplers.
6. Backflow prevention devices.
7. Gate valves.
8. Routing of control wiring.
9. Controllers.

3.12 LOWERING HEADS, VALVE BOXES, QUICK COUPLER VALVES, ETC.

A. All the above and any other equipment that may be damaged by mowing shall be set flush to finished grade or as called out on the drawings, prior to final acceptance. Replace any

equipment damaged by mowing during the Owner's first 60 days of maintenance after the conclusion of the Contractor's maintenance period at no cost.

3.13 ADJUSTING SYSTEM

A. Adjust entire system prior to coverage test and again at conclusion of maintenance period.
   1. Set all shut-off valves in the system to fully open positions.
   2. Adjust all stationary heads to uniform coverage on each system using adjusting screws in each sprinkler head and by control of the throttle device on each remote-control valve.
   3. Adjust all rotary head systems using pitot tube with pressure gauge attached by regulating the remote-control valve. Adjust all radii to fit requirements on drawings if heads are equipped with such a device. Follow the same procedures for impact heads.
   4. Adjust arcs of all heads to prevent overspray on areas to be kept dry. These changes or adjustments shall be made without additional cost.

3.14 COVERAGE TEST

A. When installation of the sprinkler system is completed, perform a coverage test in the presence of the Architect to determine that coverage for planting and turf areas is complete and adequate. This test shall be accomplished before any turf is planted. Where inadequate coverage occurs, the Contractor shall provide necessary material and perform work to correct all inadequacies.

3.15 CONTROLLER CHARTS

A. Project record drawings shall be prepared by the Contractor before the charts are prepared.

B. Provide one controller chart for each controller supplied.

C. The chart shall show the area controlled by an automatic controller and shall be the maximum size controller door will allow.

D. The chart is to be reduced drawing of the installed system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that will be readable when reduced.

E. Chart shall be black line print and a different color shall be used to show area of coverage for each station. Provide one digital copy of the colored chart to the Owner along with the record drawings.

F. The chart shall be mounted using Velcro, or an approved equal type of comparable quality.

G. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mil. thick.

H. These charts shall be completed and approved prior to final inspection of the irrigation system.

3.16 ITEMS FURNISHED

A. At time of final acceptance, Contractor shall deliver to the Owner:
   1. Two tools for disassembly and assembly or adjustment, for each type of sprinkler equipment used in this installation requiring such special tools.

2. Two sets of operation instructions and parts lists, as printed by each manufacturer of each type of equipment installed, in three-ring binder. Refer to "Materials" section of the specifications and legend on drawings.
3. Two sets of a list of equipment with names and addresses of manufacturers' representatives, in three-ring binder.

3.17 FINAL ACCEPTANCE

A. All equipment shall be checked and adjusted in height locations, performance and appearance at the time of final acceptance.

B. All damaged portions shall be replaced with new materials of like-kind.

[END OF SECTION 32 84 00]

SECTION 32 90 00

LANDSCAPE PLANTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Landscape finish grading

B. Soil preparation

C. Concrete Headers

D. Tree supports

E. Planting, including lawn

F. Watering

G. Observation schedule

H. Clean-up

1.2 RELATED SECTIONS

A. Section 32 84 00 – Landscape Irrigation

1.3 QUALITY ASSURANCE

A. Qualifications of Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Approvals: Sprinkler work shall be inspected, tested, and approved before the start of any work of this Section. Before covering and backfilling subsurface drains and any surface drain lines, inspect and be responsible for performance thereof.

C. Legal Requirements: Give adequate and required legal notices to Owner, utility organization and governing authorities prior to commencing.

D. Source Quality Control
   1. Plants shall be subject to inspection and approval at place of growth or upon delivery for conformity to specifications. Such approval shall not impair the right inspection and rejection during progress of the work.

1.4 DELIVERY, STORAGE AND HANDLING

A. Delivery
   1. Deliver fertilizer to site in original unopened containers bearing manufacturer's guaranteed chemical analysis, name, trademark, and conformance to State Law.
   2. Deliver plants with legible identification labels.
      a. Label trees, evergreens, bundles of containers of like shrubs or groundcover plants.

b. State correct plant name and size indicated on plant list.
c. Use durable waterproof labels with water-resistant ink which will remain legible for at least 60 days.

3. Protect plant material during delivery to prevent damage to root balls or desiccation of leaves.
4. The Contractor shall notify the Architect 48 hours in advance of delivery of all plant materials and shall submit an itemized list of the plants in each delivery.

B. Storage:
1. Store plant material away from construction activity areas.
2. Maintain and protect plant material.

C. Handling:
1. Do not drop plant materials.
2. Do not pick up container plant material by stems or trunks.

1.5 CERTIFICATION

A. Prior to start of work, submit written certification (purchase order receipts), to Owner and Architect for following items:
1. Quantity of commercial fertilizer and organic fertilizer.
2. Quantity of all specified soil amendments and bark mulch.
3. Quantity of seed (or sod).
4. Quantity of all rooted cuttings, liners, or pots of groundcover plants.

1.6 JOB AND ENVIRONMENTAL CONDITIONS

A. Verification of Existing Conditions: Examine site and determine and verify existing conditions including subsurface conditions. Written dimensions take precedence over scaled dimensions; verify and be responsible for dimensions and conditions. Notify Architect in writing of any variations from dimensions and conditions shown; submit to Architect for signed approval before proceeding with landscaping.

B. Planting: Perform actual planting only when weather and soil conditions are suitable in accordance with locally accepted practice.

C. Scheduling: Install trees, shrubs and liner stock plant material before lawn areas are installed.

1.7 COORDINATION

A. Coordinate operation with other trades, utility firms, street tree department and other affected public departments to assure continuity of access and service in conformance with applicable requirements specified.

1.8 PLANT MATERIAL

A. Locate and secure plant material within 15 days of Award of Contract to avoid last minute plant substitutions.

B. Landscape Architect reserves the right to deny substitutions if evidence of this effort has not been made prior.

1.9 SAMPLES AND TESTS

A. Architects reserve the right to take and analyze samples of materials for conformity to specifications at any time. Contractor shall furnish samples upon request by Architect. Rejected materials shall be immediately removed from the site at Contractor's expense. The cost of testing of materials not meeting specifications shall be paid by Contractor.

B. Following completion of rough grading and topsoiling, a soil test shall be performed by the landscape contractor to determine agricultural suitability of the existing soils.
   1. Take one (1) sample for every 5,000 s.f. of landscape area up to a maximum of six (6) samples.
      a. Provide analysis of soil samples for PH, salinity, ammonia, phosphate, potassium, calcium, magnesium, boron, and sodium levels. Provide appraisal of chemical properties, including particle size determination, and recommendations for types and quantities of amendments and fertilizers.
      b. Instruct the lab to include a minimum recommendation of two (2) cubic yards per 1,000 square feet of landscape area.

1.10 GUARANTEE AND REPLACEMENTS

A. Guarantee: All plant material installed under the Contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for a period of 90 days. Guarantee period to start at the end of the contract maintenance period and acceptance of work. Any plant found to be dead or in poor condition due to faulty materials or workmanship, as determined by the Architect, shall be replaced by the Contractor at his expense.

B. Replacements: Any materials found to be dead, missing or in poor condition during the contract maintenance period shall be replaced immediately. The Architect shall be the sole judge as to the condition of material. Material to be replaced within the guarantee period shall be replaced by the Contractor within 15 days of written notification by the Owner.

C. Contractor will not be held responsible under the above guarantee for damage arising from acts of God, vandalism, theft, negligence, or inadequate maintenance following the 90-day maintenance period.

PART 2 PRODUCTS

2.1 GENERAL

A. The following organic and soil amendments and fertilizer are to be used for bidding price basis only. Specific amendments and fertilizer specifications will be made after grading operations are complete and samples are tested by the Contractor.

B. All materials shall be of standard, approved and first-grade quality and shall be in prime condition when installed and accepted. Any commercially processed or packaged material shall be delivered to the site in the original unopened container bearing the manufacturer's guaranteed analysis. Contractor shall supply Architect with a sample of all supplied materials accompanied by analytical data from an approved laboratory source illustrating compliance or bearing the manufacturer's analysis.

2.2 ORGANIC AMENDMENT

A. Nitrogen Stabilized: 0.56 to 0.94 N based on dry weight for composted fir or pine bark fines.

B. Particle Size: 95% – 100% passing 6.35 mm standard sieve. 64% passing 2.33 mm standard sieve.

C. Salinity: The saturation extract conductivity shall not exceed 3.5 millimhos/centimeter at 25°C as determined by saturation extract method.

D. Iron Content: Minimum .06 silute acid soluble Fe on dry weight basis.

2.3 SOIL AMENDMENT (as required by soil test)

A. Soil Sulphur: Agricultural sulfur containing a minimum of 99% sulphur (expressed as elemental).

B. Iron Sulfate: 20% iron (expressed as metallic iron), derived from ferric and ferrous sulphate, 10% sulphur (expressed as elemental).

C. Calcium Carbonate: 95% lime as derived from oyster shells.

D. Gypsum: Agricultural grade product containing 98% minimum calcium sulphate.

E. Dolomite Lime: Agricultural grade mineral soil conditioner containing 35% minimum magnesium carbonate and 49% minimum calcium carbonate, 100% passing #65 Kaiser Dolomite 65 AG or approved equal.

F. Calcium Nitrate: Agricultural grade containing 15.5% nitrogen.

2.4 FERTILIZER

A. Backfill fertilizer: Shall be Osmocote Controlled Release Formula (19-6-12, 4-month formula).

B. Soil Prep. Fertilizer: Shall be Simplot 6-20-20 MN Planting & Growing Food and shall consist of the following percents by weight:

6% nitrogen

20% phosphoric acid

20% potash

2.5 IMPORT SOIL

A. Fertile, friable, natural top loam, free of alkali, noxious week seed, admixtures of clay, subsoil rocks larger than 1-1/2" diameter, sticks, debris, detrimental to healthy plant growth, pH reading of not less than 6.5 or more than 7.5. Import when required, shall be obtained from source approved by Architect.

2.6 PLANT MATERIAL

A. Plants shall be in accordance with the California State Department of Agriculture's regulations for nursery inspections, rules, and rating. All plants shall have a normal habit of growth and shall be sound, healthy, vigorous, and free of insect infestations, plant diseases, sun scalds, fresh abrasions of the bark, excessive abrasions, or other objectionable disfigurements. Tree

trunks shall be sturdy and well "hardened" off. All plants shall normally have well-developed branch systems and vigorous and fibrous root systems which are not root- or pot-bound. In the event of disagreement as to the condition of the root system, the root conditions of the plants furnished by the Contractor in containers will be determined by removal of earth from the roots of not less than two plants of each species or variety. Where container-grown plants are from several sources, the roots of not less than two plants of each species or variety from each source will be inspected. In case the sample plants inspected are found to be defective, the Architect is the sole judge as to acceptability. Any plants rendered unsuitable for planting because of this inspection will be considered as samples and will be provided at the expense of the Contractor.

B. The size of the plants will correspond with that normally expected for species and variety of commercially available nursery stock or as specified in the drawings. The minimum acceptable size of all plants, measured before pruning with the branches in normal position, shall conform with the measurements, if any, specified on the drawings in the list of plants to be furnished. Plants larger in size than specified may be used with approval of the Architect, but the use of larger plants will make no change in Contract price. If the use of larger plants is approved, the ball of earth or spread of roots for each plant will be increased proportionately.

C. All plants not conforming to the requirements herein specified, shall be considered defective and such plants, whether in place or not, shall be marked as rejected and immediately removed from the site of the work replaced with new plants at the Contractor's expense. The plants shall be of the species, variety, size, and condition specified herein or as shown on the drawings. Under no conditions will there be any substitution of plant or sizes listed on the accompanying plans, except with the expressed written consent of the Architect.

D. At no time shall trees or plant materials be pruned, trimmed, or topped prior to delivery and any alteration of the shape shall be conducted only with the approval and when in the presence of the Architect and as noted on the Planting Specifications.

E. Nursery Grown and Collected Stock:
   1. Grown under climatic conditions like those in locality of project when possible.
   2. Container-grown stock in vigorous, healthy condition, not root-bound or with root system hardened off.
   3. Use only liner stock plant material which is well established in removable containers or formed homogenous soil sections.

F. Sod
   1. Install sod as specified in the planting legend on the planting plan.

2.7 TREE STAKING MATERIAL

A. Stakes for tree support shall be wood stakes; lodge pole pine stakes full-length treated with copper naphthanate. Minimum nominal size: 2" in diameter x 8’ long and pointed at one end (adjust length to fit tree). Stakes shall be free from knots, checks, splits, or disfigurements.

B. Ties: "Tie-it super" tree tie by Arthur Enterprises, available at Normac.

2.8 BARK MULCH

A. Shredded Cedar bark mulch by Redi Gro or approved equal.
   1. The mulch shall consist of fibrous, woody bark mixture of varied particle sizes.

2.9 PRE-EMERGENT WEED CONTROL

A. Oxadiazon, “Treeflan”, “Ronstar 2G”, “Surflan” (Elano Products Company), or approved equal.

2.10 ROOT BARIERS

A. NDS EP series root barrier panel, or equal.
   1. EP-2450 24” L x 24” W

2.11 JUTE NETTING

A. Biodegradable jute fabric.

2.12 OTHER MATERIALS

A. Materials not specifically described but required for the complete and proper installation of the Work of this Section shall be as selected by the Contractor subject to the approval of the Architect.

PART 3 EXECUTION

3.1 GENERAL

A. Install materials in accordance with all the methods, techniques and specifications published by each representative manufacturer. All pertinent descriptive literature issued by any of these manufacturers forms a part of these specifications after approval.

3.2 WEED CONTROL

A. Irrigate the site normally for two weeks to germinate weeds. Apply contact herbicide per manufacturer recommendation. Repeat process if required by Architect.
   1. If bermudagrass or crabgrass is present or there is a possibility that it is latent in the soil, this process must be repeated a minimum of three times prior to disturbance of soil. If irrigation is not present, this process must be conducted after installation of the irrigation system and before planting.
   2. Eradication of crab grass and bermudagrass must be performed between the months of May and September unless authorized otherwise by the landscape architect.

3.3 LANDSCAPING GRADING

A. Backfill, Fill Soil: Prior to installation of any imported soil or backfill, gravel fill or sub-base, inspect integrity of waterproofing and dampproofing membranes and for satisfactory correction of any defects which might affect the performance of the above membranes prior to proceeding.

B. Rip subgrade in two directions to a depth of 12” prior to placement of topsoil.

C. Import Soil: Import additional topsoil only as required to bring planting areas up to finish grade, of quality specified herein. Spread and cultivate topsoil so no settling takes place at any time.

D. Landscape Fine Grading: Resieve previously prepared areas rough graded to within about 1/10’ of finish grade unless otherwise instructed. Bring areas to finish grades indicated, anticipating soil conditioners and amendments. Grades not specifically indicated to be as follows:
   1. 2" below adjacent paving, curbs, and mowing strips for sod lawn.

2. 1" below adjacent paving, curbs, and mowing strips for hydroseed lawn.
3. 2" below adjacent paving, curbs and mowing strips for shrubs and groundcover beds.

E. Jute Netting – Jute netting shall be installed on all slopes exceeding 2 ½:1. Netting shall be laid perpendicular to the contours, overlapping min. 6” and secured with staples @ 4’ o.c.

3.4 INSPECTION

A. Verify that final rough grades (=.2 of finish grade) have been established prior to beginning planting operations. Inspect trees, shrubs and liner stock plant material for injury, insect infestation and trees and shrubs for improper pruning. Do not begin planting trees until deficiencies are corrected or plants replaced.

3.5 PREPARATION

A. The irrigation system shall be operational and approved prior to planting.

3.6 INSTALLATION

A. Preparation of Planting Areas
   1. After the approximate finished grades have been established, soil shall be conditioned and fertilized in the following manner. Nitrogen stabilized organic amendment and Planting & Growing Food shall be uniformly spread and cultivated thoroughly by means of mechanical tiller into the top 6" of soil.
   2. The following organic, soil amendments and fertilizer rates and quantities are to be used for bidding basis only. Specific planting specifications will be made following rough grading operations are complete and soil samples are tested by Contractor.
      a. Application Rates:
         1) Nitrogen stabilized organic amendment - 6 cu. yds. per 1,000 sq. ft.
            a) If the lab recommends less than 6 cu. yds. Per 1,000 sq. ft., the excess bid amount shall be applied to the cost of any additional soil improvements or returned to the Owner as a credit.
         2) Simplot 6-20-20 MN Planting & Growing Food -30 lbs. per 1,000 sq. ft. for shrub and ground cover areas, 20 lbs. per 1,000 sq. ft. for lawn areas.
   3. NOTE: Contractor shall ensure that iron sulfate does not contact walks, walls, or other landscape surfaces. All stains on these surfaces, because of iron sulfate overthrow, will be the responsibility of the Contractor.
   4. All soil areas shall be compacted and settled by application of heavy irrigation to a minimum depth of 12”.
   5. At the time of planting, the top 2” of all areas to be planted or seeded shall be free of stones, stumps or other deleterious matter 1" in diameter or larger and shall be free from all wire, plaster or similar objects that would be a hindrance to planting or maintenance.

B. Final Grades:
   1. After the foregoing specified deep watering, minor modifications to grade may be required to establish the final grade. These areas shall not be worked until the moisture content has been reduced to a point where working it will not destroy soil structure.
   2. Finish grading shall ensure proper drainage of landscape areas. All surface drainage shall be away from all building foundations.

C. Disposal of Excess Soil: Dispose of unacceptable or unused excess soil.

3.7 PLANTING INSTALLATION

A. General
1. Actual planting shall be performed during those periods when weather and soil conditions are suitable and in accordance with locally accepted practice, as approved by the Architect.
2. Only as many plants as can be planted and watered on that same day shall be distributed in the planting area.
3. Containers shall be opened, and plants shall be removed in such a manner that the ball of earth surrounding the roots is not broken and they shall be planted and watered as herein specified immediately after removal from the containers. Containers shall not be opened prior to placing the plants in the planting area.

B. Excavation for Planting
1. Shape:
   a. Vertical sides and flat bottom.
   b. Plant pits to be square for box material, circular for canned material.
2. Size: All trees shall have planting pits dug twice the diameter of the root ball. The depth of the planting pits shall be equal to the depth of the root ball. Backfill around the root ball with prepared backfill mix.
3. Protect all areas from excessive truck or equipment compaction when offloading plants or other material directly in the planting areas.
4. Can Removal:
   a. Cut cans on two sides with an acceptable can cutter.
   b. Do not injure the root ball.
   c. Do not cut cans with spade or ax.
   d. Carefully remove plants without injury or damage to the root ball.
   e. After removing the plant, superficially cut the edge roots with knife on three sides.
5. Box Removal:
   a. Remove the bottom of plant boxes before planting.
   b. Remove sides of box without damage to root ball after positioning plant and partially backfilling.
6. Setting Plants:
   a. Center plant in pit or trench.
   b. Face plants with fullest growth into prevailing wind, (or as otherwise directed by Architect).
   c. Set plant plumb and hold rigidly in position until soil has been tamped firmly around ball or roots. Crown of rootball shall be set 1-1/2" higher than adjacent finish grade.
7. Backfilling
   a. Container plants shall be backfilled with:
      1) Six parts by volume Native soil
      2) Four parts by volume soil amendment
      3) Osmocote Controlled Release per manufacturer's recommendations.
   b. All plants which settle deeper than specified above shall be raised to the correct level. After the plant has been placed, additional backfill shall be added to the hole to cover approximately one-half of the height of the root ball. Water thoroughly to saturate root ball and adjacent soil.
   c. Add remaining backfill to bring up to grade, foot tamp and water thoroughly to remove all air pockets.
   d. The preceding is for bid basis only and specific backfill specifications will be made after rough grading operations are complete and soil samples are tested by the Contractor.
8. Watering basins:

a. After backfilling, an earthen basin shall be constructed around each plant. Each basin shall be of a depth sufficient to hold at least 2” of water. Basins shall be of a size suitable for the individual plant. In no case shall the basin for a fifteen-gallon plant be less than 4’ in diameter, five-gallon plants less than 3’ in diameter and a one-gallon plant less than 2’ in diameter. The basins shall be constructed of amended backfill material.

9. Pruning:
   a. Pruning shall be limited to the minimum necessary to remove injured twigs and branches to compensate for loss of roots during transplanting, but never to exceed one-third of the branching structure. Upon approval of the Architect, pruning may be done before delivery of plant, but not before plants have been inspected and approved.
10. Staking:
    a. Staking of all trees shall conform to tree staking details.

C. Planting of Groundcovers:

1. Groundcover plants shall be grown in one-gallon containers, flats, peat pots or taken as cuttings, as indicated on the plans. Flat grown plants (rooted cuttings) shall remain in those flats until transplanting. The flat's soil shall contain sufficient moisture so that it will not fall apart when lifting the plants. If plants from peat pots are used, the pots shall be always protected prior to planting to prevent unnecessary drying of the root ball.
2. Groundcover shall be planted in straight rows and evenly triangularly spaced, unless otherwise noted and at intervals called out in the drawing.
3. Each rooted plant shall be planted with its proportionate amount of flat soil or in a peat pot, in a manner that will ensure minimum disturbance of the root system, but in no case shall this depth be less than two nodes. To avoid drying out, plantings shall be immediately irrigated after planting until the entire area is soaked to the full depth of each hole, unless otherwise noted in the drawings.
4. Care shall be exercised always to protect the plants after planting. Any damage to plants by trampling or other operations of this Contract shall be repaired immediately.

D. PRE-EMERGENT

1. After soil preparation, planting and finish grade, Contractor shall apply a pre-emergent herbicide at manufacturer's recommended rate prior to placement of bark mulch in shrub and ground cover areas only.

E. BARK MULCH

1. Top Dressing (Ground Cover Areas): Apply 3" layer (9 yds. per 1,000 sq. ft.) of Shredded Cedar bark mulch in all planting areas. Do not apply bark top dressing on slopes if 2-1/2:1 or greater.

F. Sod Planting

1. Planting Soil: Remove rocks, weeds, debris from area to be sodded. Work up soil to a depth of 6” and break up all clods. Soil prep all areas as noted elsewhere in specifications. Apply and rototill soil amendment and fertilizer as specified in Section 3.8, A.1 and 2.
2. Grading and Rolling: Carefully smooth all surfaces to be sodded. Roll area to exposed soil depressions or surface irregularities. Regrade as required.

3. Laying Sod: Lay first strip of sod slabs along a straight line (use a string in irregular areas). Butt joints tightly, do not overlap edges. On the second strip, stagger joints much as in laying bricks. Use a sharp knife to cut sod to fit curves, edges, sprinkler heads.
4. Watering: Do not lay the whole lawn before watering. When a conveniently large area has been sodded, water lightly to prevent drying. Continue to lay sod and water.
5. Rolling Sod: After laying all sod, roll lightly to eliminate irregularities and to form good contact between sod and soil. Avoid a very heavy roller or excessive initial watering which may cause roller marks.
6. Irrigation: Water thoroughly the completed lawn surface. Soil should be moistened at least 8” deep. Repeat sprinkling at regular intervals to always keep sod moist until rooted. After sod is established, decrease frequency, and increase amount of water per application as necessary.
7. Replacement: Replace all dead or dying sod with equal material as directed by Architect.
8. Maintain a minimum distance of 18” between the edge of lawn and trunk of trees.

3.8 ROOT BARRIER INSTALLATION

A. Install root barriers where trees are planted within 48 inches (48”) of paving or other hardscape elements such as walls, curbs, and walkways.

B. Align root barrier adjacent to the paving or other hardscape element to protect from invasive roots.

C. Install barrier continuously for 8’ in each direction from the tree trunk for an overall distance of 16’. If the trees are spaced closer, use a single continuous piece of root barrier.
   1. Position root barrier 2” below finish grade.
   2. Do not distort or bend root barrier during construction activities.
   3. Do not install root barrier surrounding the root ball of the tree.

3.9 CLEAN UP

A. After all planting operations have been completed, remove all trash, excess soil, empty plant containers or rubbish from the property. All scars, ruts or other marks in the ground caused by this work shall be repaired and the ground left in a neat and orderly condition throughout the site. Clean-up contractor shall pick up all trash resulting from this work no less frequently than each Friday before leaving the site, once a week and/or the last working day each week. All trash shall be removed completely from the site. The Contractor shall leave the site area broom clean and shall wash down all paved areas within the Contract area, leaving the premises in a clean condition. Condition acceptable to Owner and Architect.

3.10 OBSERVATION SCHEDULE

A. Normal progress inspection shall be requested by the Contractor from the Architect at least 48 hours in advance of an anticipated site visit according to the indicated required observation schedule as follows:
   1. Final grade review, plant inspection – 48 hours
   2. Pre-maintenance – seven days
   3. Final walk-through – seven days

B. No site visits shall commence without all items noted in previous Observation Reports either completed or remedied unless such compliance has been waived by the Owner. Failure to accomplish punch list tasks or prepare adequately for desired inspections shall make the Contractor responsible for reimbursing the Architect at his current billing rates per hour (plus

transportation costs). No further inspections shall be scheduled until this charge has been paid and received.

3.11 START OF LANDSCAPE MAINTENANCE PERIOD

A. The landscape Maintenance Period does not start until all work is installed as determined by the Architect, in writing.

B. An on-site inspection by the Architect, Project Inspector and Owner is required to determine the date of the start of the Landscape Maintenance Period. The contractor must request date and time of this on-site meeting 48 hours in advance. The contractor must also be in attendance.

C. Work requiring corrective action or replacement, in the judgement of the Architect, shall be performed within ten days after final inspection. Corrective work shall be done at no additional cost to the Owner.

3.12 DURATION OF LANDSCAPE MAINTENANCE PERIOD

A. The Landscape Maintenance Period shall continue for a minimum of 90 calendar days. During this time, the Contractor shall continuously maintain all areas involved in this Contract until final acceptance of the work by the Owner. Improper maintenance or possible poor condition of any planting at the termination of the scheduled maintenance period may cause postponement of the completion date of the Contract. Maintenance shall be continued by the Contractor until all work is acceptable. To carry out the plant maintenance work, the Contractor shall furnish sufficient men and adequate equipment to perform the work during the maintenance period.

B. All planting areas shall be weeded. All planting and seeding shall be kept in a healthy growing condition by watering, weeding, cultivation, pruning, mowing, edging, spraying, fertilizing and by performing any other necessary operation of Maintenance. Failure to comply will result in an extension of the Landscape Maintenance Period, as determined by the Architect.

3.13 MAINTENANCE – SPRINKLER IRRIGATION SYSTEM

A. The contractor shall check all systems weekly for proper operation. Lateral lines shall be flushed out after removing the last sprinkler head or two at each end of the lateral. All heads are to be adjusted as necessary for unimpeded coverage.

B. Set and program automatic controllers for seasonal water requirements. Give Owner's Representative a key to controllers and instructions on how to turn off system in case of emergency.

C. Repair all damage to sprinkler irrigation system at Contractor's expense. Repairs shall be made within one watering period or one week, whichever is the shortest time.

3.14 MAINTENANCE – TURF AREAS

A. Mowing of turf will commence when the grass has reached a height of 3”. The height of cut will be 2”. Mowing will be at least weekly after the first cut. Turf must be well-established and free of bare spots and weeds to the satisfaction of the Architect prior to final acceptance.

B. All grass clippings shall be picked up and removed from the site and premises.

C. Edges shall be trimmed at least twice monthly or as needed for a neat appearance. Clippings shall either be vacuumed or blown off walks.

D. Lawns shall be watered at such frequency as weather conditions require replenishing soil moisture below root zone without drying out. Normally, a total of 1-1/2” of water is needed weekly in hot weather.

E. Fertilize the lawn areas at the start of the Landscape Maintenance Period and every 30 days thereafter, with 16-6-8, at the rate of 6 lbs. per 1,000 sq. ft., unless otherwise directed.

3.15 MAINTENANCE – TREES AND SHRUBS

A. Water enough that moisture penetrates throughout root zone and only as frequently as necessary to maintain healthy growth.

B. Maintain and reconstruct water basins around plants as necessary.

C. Do not prune unless directed to by Architect.

D. Re-stake and re-tie trees as needed and as directed by the Architect.

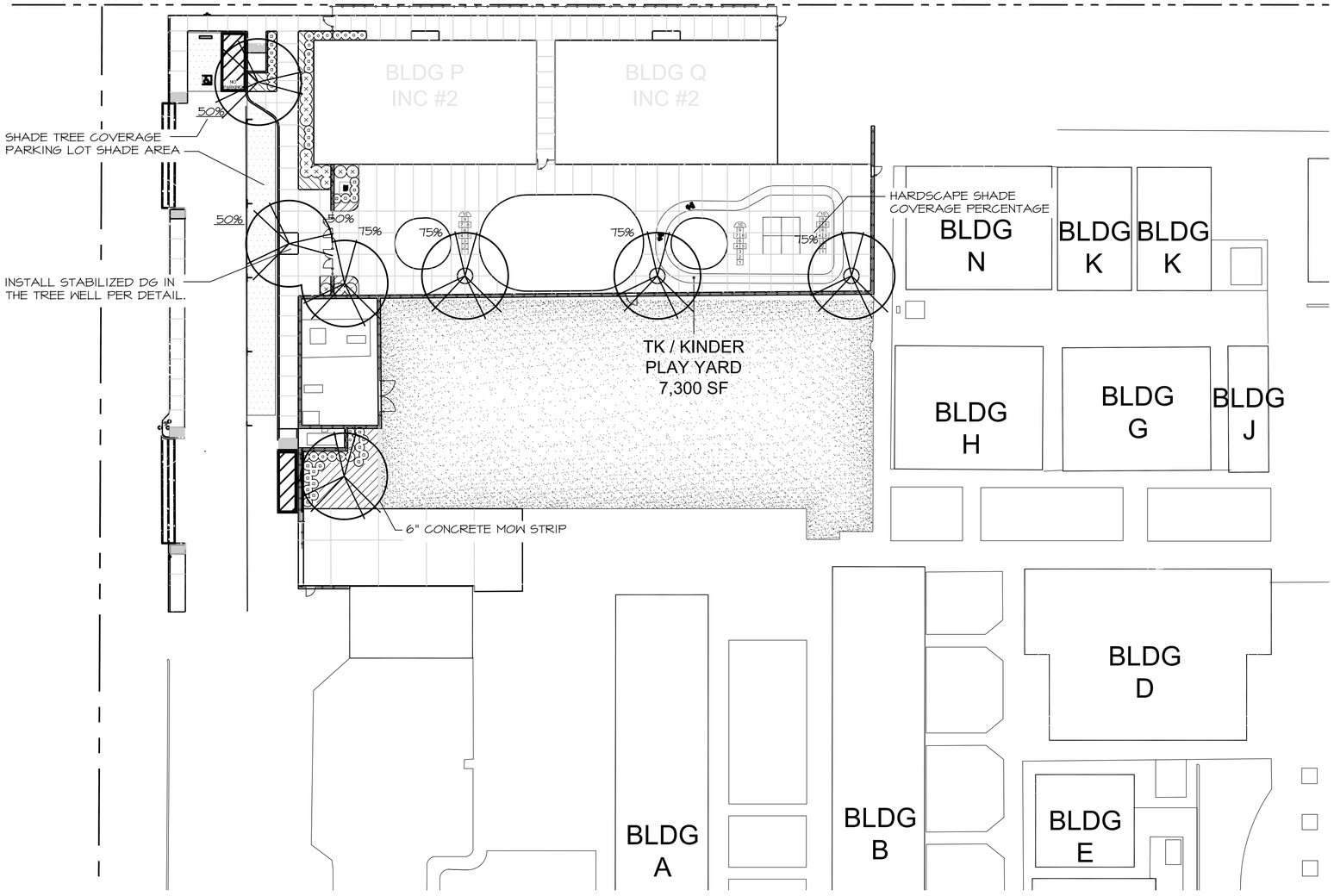
E. Replace any dead, dying, or vandalized plant material on a weekly basis throughout the maintenance period.

3.16 MAINTENANCE – INSECT AND HERBICIDE APPLICATION

A. If needed, control weeds with selective herbicides and sprays. In areas where crabgrass has infested the lawn, apply pre-emergent herbicides such as Dacthal, Balan or Betasan for control prior to crabgrass germination. Control insect pests if necessary.

B. Material, timing, rate of application and application shall be by a licensed Pest Control Operator.

[END OF SECTION 32 90 00]



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	PIS KEI	7	Pistacia chinensis 'Keith Davey' / Keith Davey Chinese Pistache	24" box
SHRUBS	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**
⊗	CAL LIT	16	Callistemon viminalis 'Little John' / Little John Weeping Bottlebrush	5 gal
▫	CIS MIC	31	Cistus x hybridus 'Mickie' / Mickie Rockrose	5 gal
○	NAN COM	17	Nandina domestica 'Compacta' / Dwarf Heavenly Bamboo	5 gal

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING
	ARC ECP	58	Arctostaphylos x 'Emerald Carpet' / Emerald Carpet Manzanita	1 gal	36" o.c.

LAWN	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING
	BOL FES	10,950 sf	Bolero Plus Fescue / Avail. from Delta Bluegrass	sod	

PARKING LOT SHADE CALCULATIONS
CALGreen SECTION 5.106.12.1

TREE SYMBOL		100%	75%	50%	25%
PIS	CHI			2 (481) = 962	

PARKING STALL AREA	1,264 s.f.
SHADE REQUIRED (50%)	632 s.f.
TOTAL SHADE	**962 s.f.**
PERCENT SHADE	**76%**

LANDSCAPE SHADE CALCULATIONS
CALGreen SECTION 5.106.12.2

LANDSCAPE AREA (NIC PLAY FIELD)	1,042 s.f.
SHADE REQUIRED (20%)	208 s.f.
TOTAL SHADE	**515 s.f.**
PERCENT SHADE	**49%**

HARDSCAPE SHADE CALCULATIONS
CALGreen SECTION 5.106.12.3

TREE SYMBOL		100%	75%	50%	25%
PIS	CHI		5 (722) = 3,610		

HARDSCAPE AREA	5,452 s.f.
SHADE REQUIRED (20%)	3,610 s.f.
TOTAL SHADE	**2,888 s.f.**
PERCENT SHADE	**66%**

0' 20' 40' 80'
SCALE: 1"=20'-0"

NORTH

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LICENSED LANDSCAPE ARCHITECT
JEFFREY M. AMBROSIA 4057
Signed 12/24
Renewal Date
Date
STATE OF CALIFORNIA

CONSULTANT

FRANKLIN ELEMENTARY SCHOOL DISTRICT
OWNER

TK & KINDER BUILDING ADDITIONS
INCREMENT NO. 2

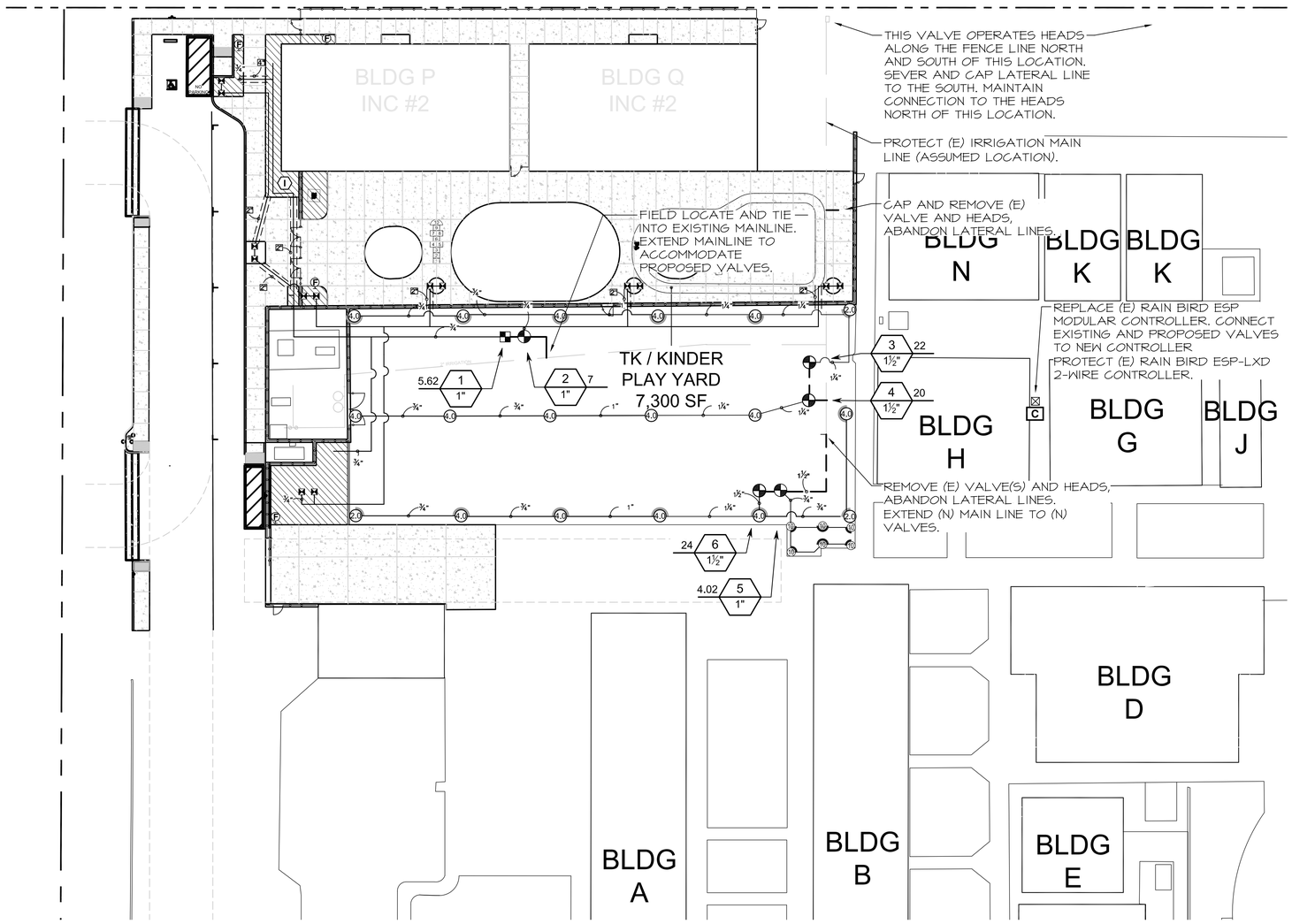
FRANKLIN ELEMENTARY SCHOOL
332 NORTH TOWNSHIP ROAD
YUBA CITY, CA 95993

DATE August 1, 2023

PLANTING PLAN

L1.1

JOB NO. 2117.10



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
Q T H F	Hunter PROS-06-PRS40-CV-F 10 Series Turf Spray, 40psi regulated 6in. Pop-Up with factory installed Drain Check Valve & Floguard. Co-molded wiper seal with UV Resistant Material.	40
25 50 10 20	Hunter PCB Flood Bubbler, 1/2in. FIPT.	25

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
2.0	Hunter I-20-06-SS 2.0 Turf Rotor, 6in. Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle.	45	2	31'
4.0	Hunter I-20-06-SS 4.0 Turf Rotor, 6in. Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle.	45	4	36'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Hunter ICZ-101-40 Drip Control Zone Kit. 1in. ICV Globe Valve with 1in. HY100 filter system. Pressure Regulation: 40psi. Flow Range: 2 GPM to 20 GPM. 150 mesh stainless steel screen.
F	Netafim TLFV-1 Automatic Flush Valve, with Insert Inlet
I	Hunter ECO-ID-12 ECO-ID: 1/2in. FPT connection with 15 psi - 100 psi operating pressure. Specify with Hunter SJ swing joint.
	Area to Receive Dripline Hunter HDL-06-18-CV HDL-06-18-CV: Hunter Dripline w/ 0.6 GPH emitters at 18" O.C. Check valve, dark brown tubing with gray striping. Dripline laterals spaced at 18" apart, with emitters offset for triangular pattern. Install with Hunter PLD barbed or PLD-LOC fittings.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Hunter ICV-G 1in., 1-1/2in., 2in., and 3in. Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use.
C	Rain Bird ESP-LXME 8 Station, Traditionally-Wired, Commercial Controller. ESPLXME 8-Station, Indoor/Outdoor, Plastic Wall-Mount Enclosure w/ (1) ESPLXMSMI2 - 12-Station Expansion Module.

Irrigation Lateral Line: PVC Schedule 40

Irrigation Mainline: PVC Schedule 40

Pipe Sleeve: PVC Schedule 40

Valve Callout
- # — Valve Number
- # — Valve Flow
- # — Valve Size

Sleeving Schedule

ALL PIPE SLEEVES TO BE SCHEDULE 40 PVC. ALL PLASTIC LINES SHALL BE INSTALLED IN SLEEVES UNDER PAVED AREAS. SLEEVES SHALL EXTEND AT LEAST 12 INCHES BEYOND THE EDGES OF THE PAVEMENT. SIZE OF SLEEVES SHALL BE AS FOLLOWS:

PIPE OR WIRE SIZE	REQUIRED SLEEVE
3/4", 1" PIPE	1-2" PVC SLEEVE
1-1/4", 1-1/2", 2", 2-1/2" PIPE	1-4" PVC SLEEVE
3", 4" PIPE	1-6" PVC SLEEVE
6" PIPE	1-8" PVC SLEEVE
1-25 CONTROL WIRES	1-2" PVC SLEEVE
26-55 CONTROL WIRES	2-2" PVC SLEEVES

Main and Lateral Line Pipe Sizing Schedule

PIPE SIZE	SCH 40 (GPM)	CL 315 (GPM)	CL 200 (GPM)
3/4"	5-8	-	-
1 INCH	9-13	-	-
1-1/4"	14-23	-	-
1-1/2"	24-32	-	-
2 INCHES	33-53	-	-
2-1/2"	-	50-74	-
3 INCHES	-	75-109	-
4 INCHES	-	-	126-200
6 INCHES	-	-	200-425

1. ALL PIPE 1" - 2" SHALL BE SCH 40. ALL MAINLINE PIPE SHALL BE MINIMUM 1" OR LARGER.
2. ALL PIPE 2 1/2" - 4" SHALL BE CLASS 315.
3. ALL PIPE 5" - 6" AND GREATER SHALL BE CLASS 200.

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI
1	Hunter ICZ-101-40	1"	Area for Dripline	1.89	43.6
2	Hunter ICV-G	1"	Bubbler	4	27.7
3	Hunter ICV-G	1-1/2"	Turf Rotor	28	52.5
4	Hunter ICV-G	1-1/2"	Turf Rotor	20	51.2
5	Hunter ICV-G	1"	Turf Spray	4.02	42.7
6	Hunter ICV-G	1-1/2"	Turf Rotor	28	50.0

0' 40'
20' 80'
SCALE: 1"=20'-0"
NORTH

JOB NO. 2207.03

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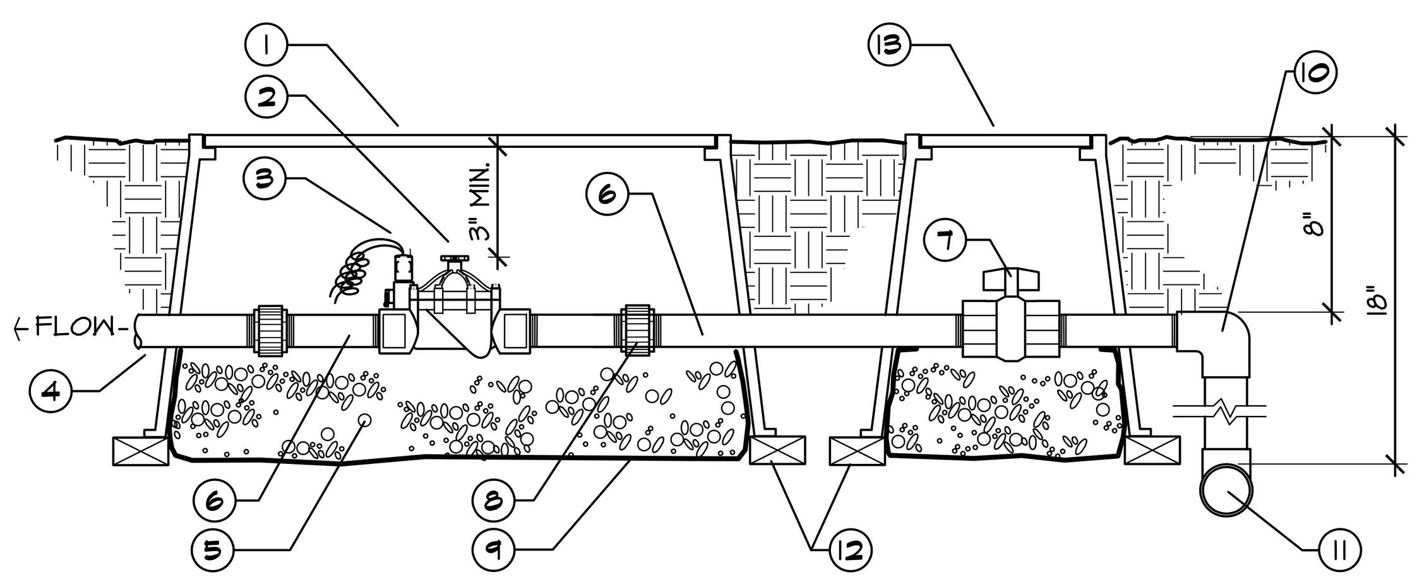
TK & KINDER BUILDING ADDITIONS
INCREMENT NO. 2

FRANKLIN ELEMENTARY SCHOOL
332 NORTH TOWNSHIP ROAD
YUBA CITY, CA 95993

DATE August 1, 2023

IRRIGATION PLAN

L2.1



LEGEND

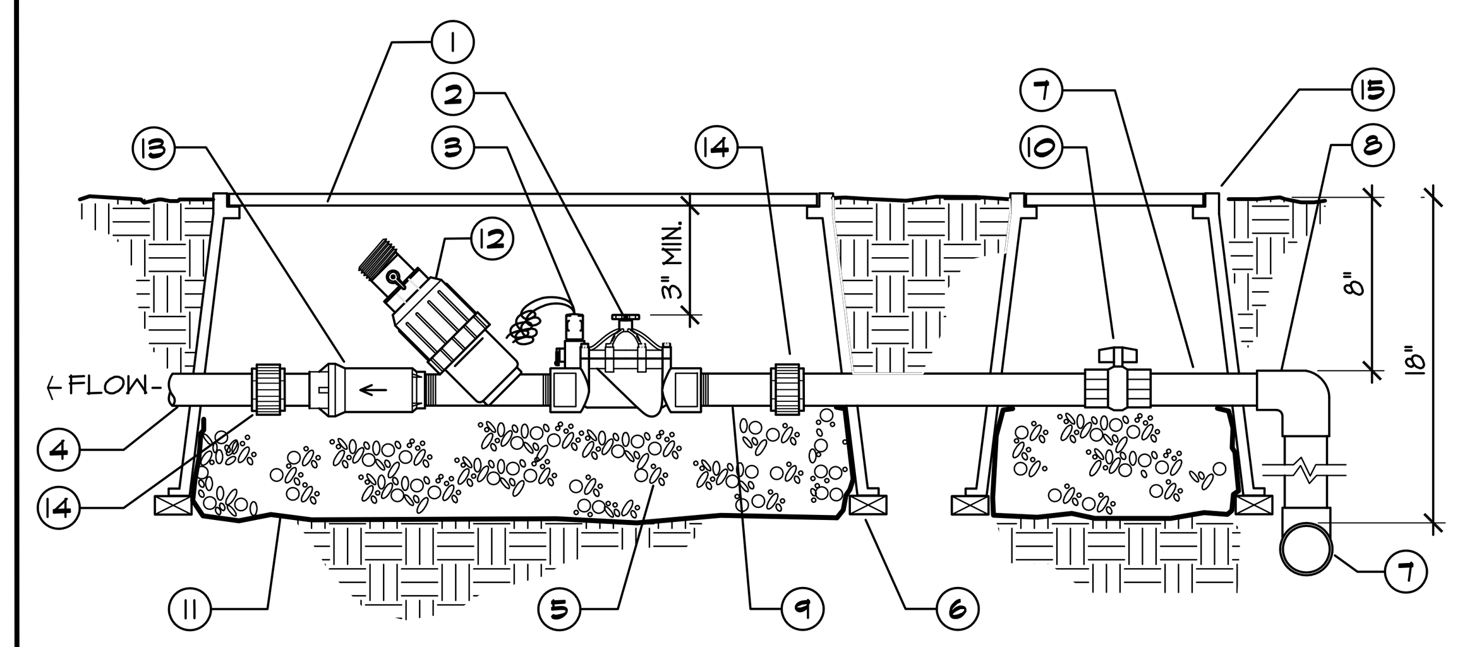
1. JUMBO RECTANGULAR VALVE BOX (15"x21")
2. REMOTE CONTROL VALVE
3. SOLENOID
4. PVC LATERAL
5. 6" PEA GRAVEL SUMP
6. PVC SCH 80 NIPPLE, TYP.
7. PVC BALL VALVE
8. PVC UNION (THREADED)
9. FILTER FABRIC
10. SCH. 80 ST ELL
11. PVC MAIN LINE
12. STANDARD BRICK (3 5/8"x2 1/4"x8")
13. 10" ROUND VALVE BOX

NOTES:

- Use Teflon Tape on all threaded manifold components
- Use a PVC Ball Valve with every valve or manifold of valves.
- Line sump with filter fabric and leave exposed above gravel 2" min.

REMOTE CONTROL VALVE (A)

VLV-RMT-2 SCALE: N.T.S.



LEGEND

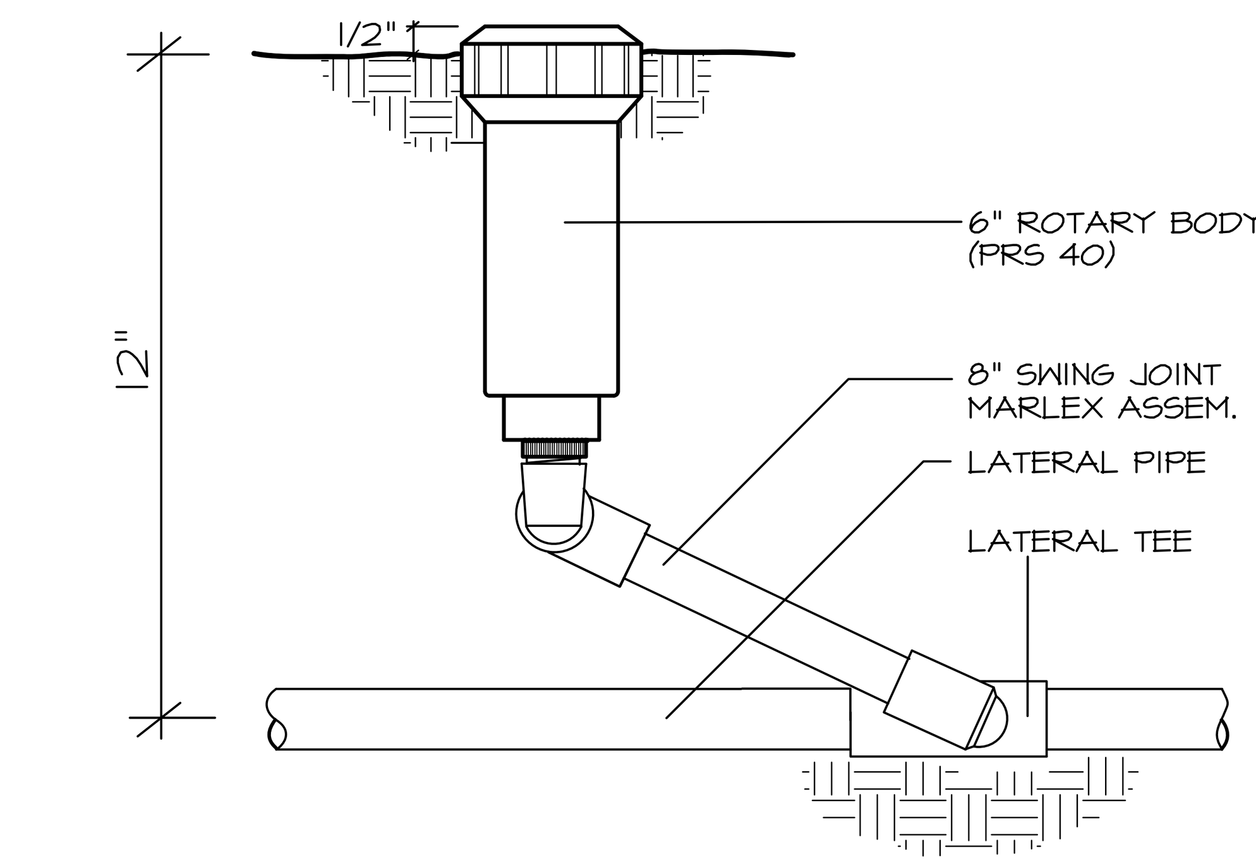
1. RECTANGULAR JUMBO VALVE BOX (15"x21")
2. REMOTE CONTROL VALVE
3. SOLENOID
4. PVC LATERAL
5. 6" PEA GRAVEL SUMP
6. STANDARD BRICK (3 5/8"x2 1/4"x8")
7. PVC MAINLINE
8. PVC ELL
9. SCH. 80 PVC TOE NIPPLE
10. PVC BALL VALVE
11. FILTER FABRIC
12. FILTER
13. PRESSURE REGULATOR
14. UNION
15. 10" ROUND VALVE BOX

NOTES:

- Use Teflon Tape on all threaded manifold components
- Use a PVC Ball Valve with every valve
- Line sump with filter fabric and leave exposed over gravel 2" min.

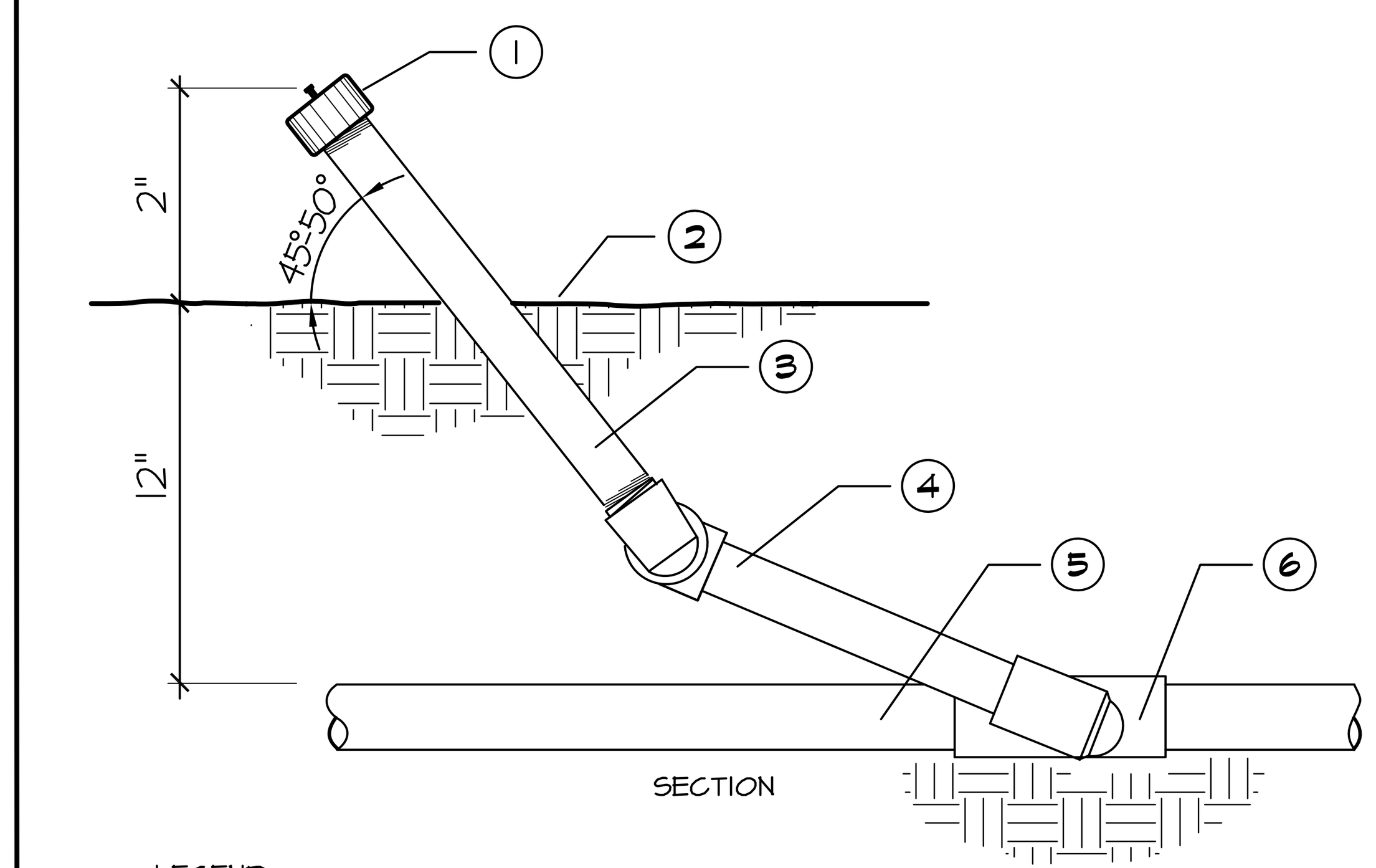
REMOTE CONTROL VALVE FOR DRIP (B)

VLV-PRVF-2 SCALE: N.T.S.



6" POP-UP ROTARY NOZZLE (C)

HDS-0.5 SCALE: N.T.S.

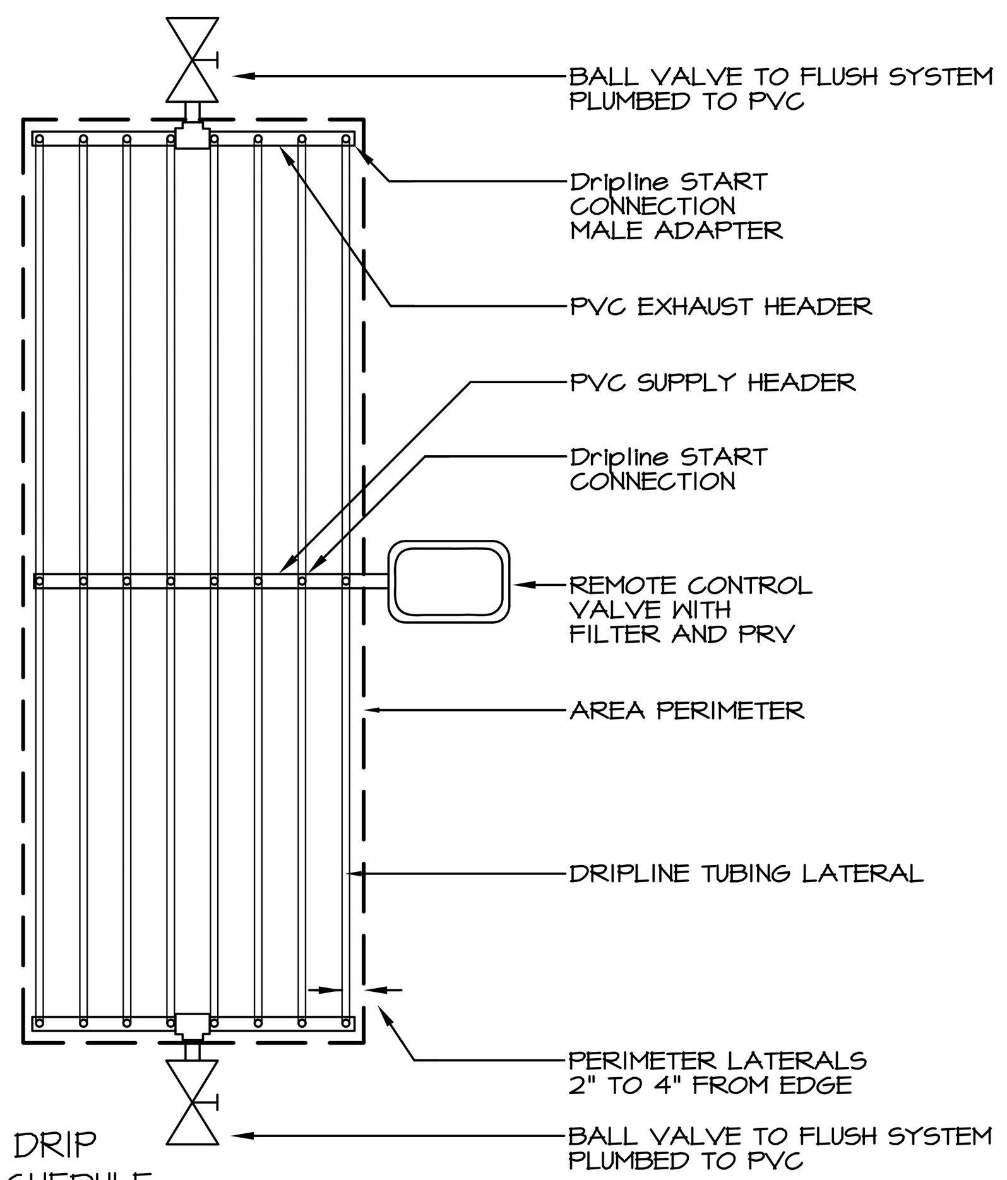


LEGEND

1. ADJUSTABLE FLOOD BUBBLER - INSTALLED AT AN ANGLE (45 DEGREES - 50 DEGREES)
2. FINISHED GRADE
3. SCH 80 RISER
4. 12" SWING JOINT MARLEX ASSEMBLY
5. LATERAL PIPE
6. LATERAL TEE

TREE BUBBLER (D)

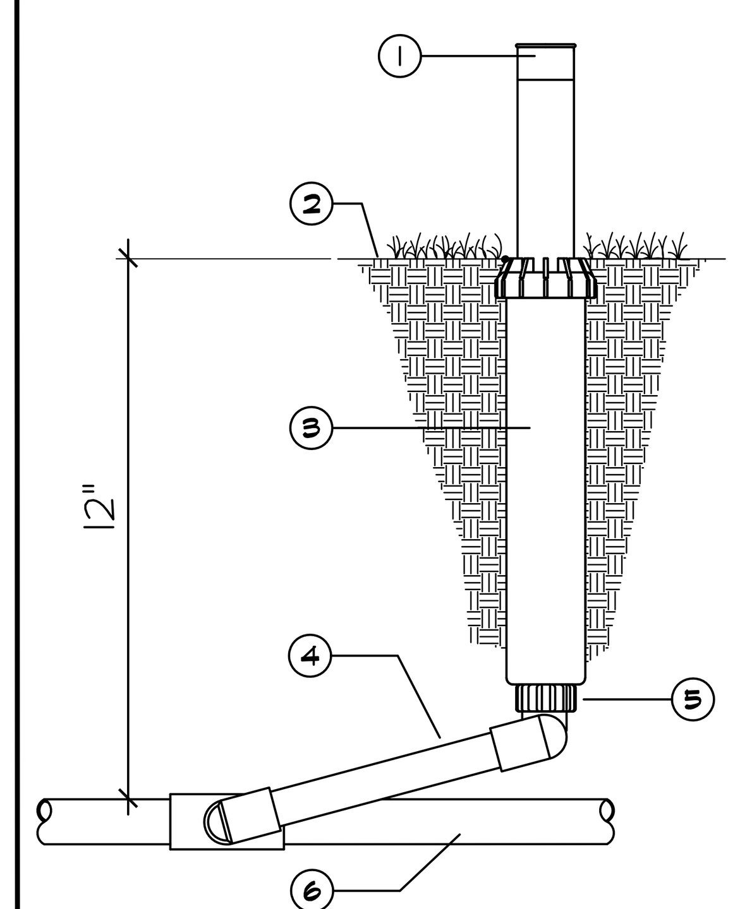
BBLR-1 at angle SCALE: N.T.S.



NOTE: SPACE DRIP TUBING PER SCHEDULE

DRIPLINE LAYOUT - CENTER FEED (E)

DRP-MID LAY SCALE: N.T.S.



LEGEND

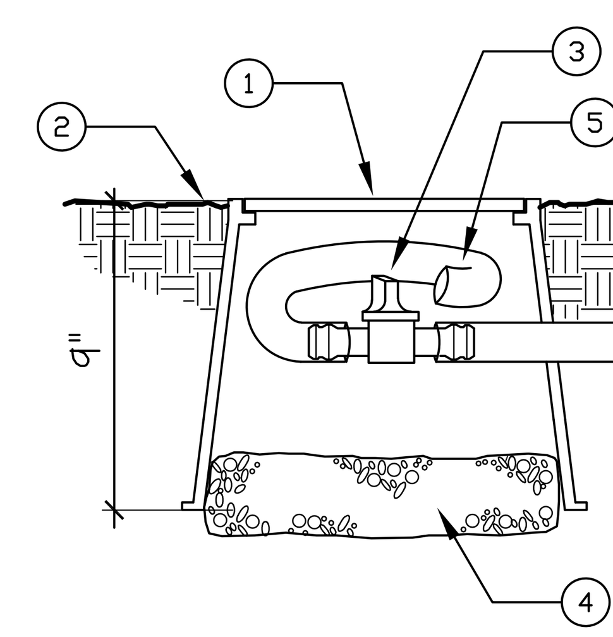
1. CAP GLUED TO STEM
2. GRADE
3. 12" POP-UP SPRAY BODY
4. SWING JOINT
5. TEFLON TAPE FOR ALL THREADED CONNECTIONS.
6. IRRIGATION SUPPLY PIPE OR DRIP LINE.

NOTES:

- INSTALL IN MULCH BED.
- TO BE PLACED AT THE FARTHEST POINT ON EACH ZONE. IF A ZONE SPLITS PLACE ONE ON EACH SPLIT.
- DO NOT INSTALL WITHIN 5' OF A CURB.

OPERATION MONITOR (F)

OPR-MON SCALE: N.T.S.



LEGEND

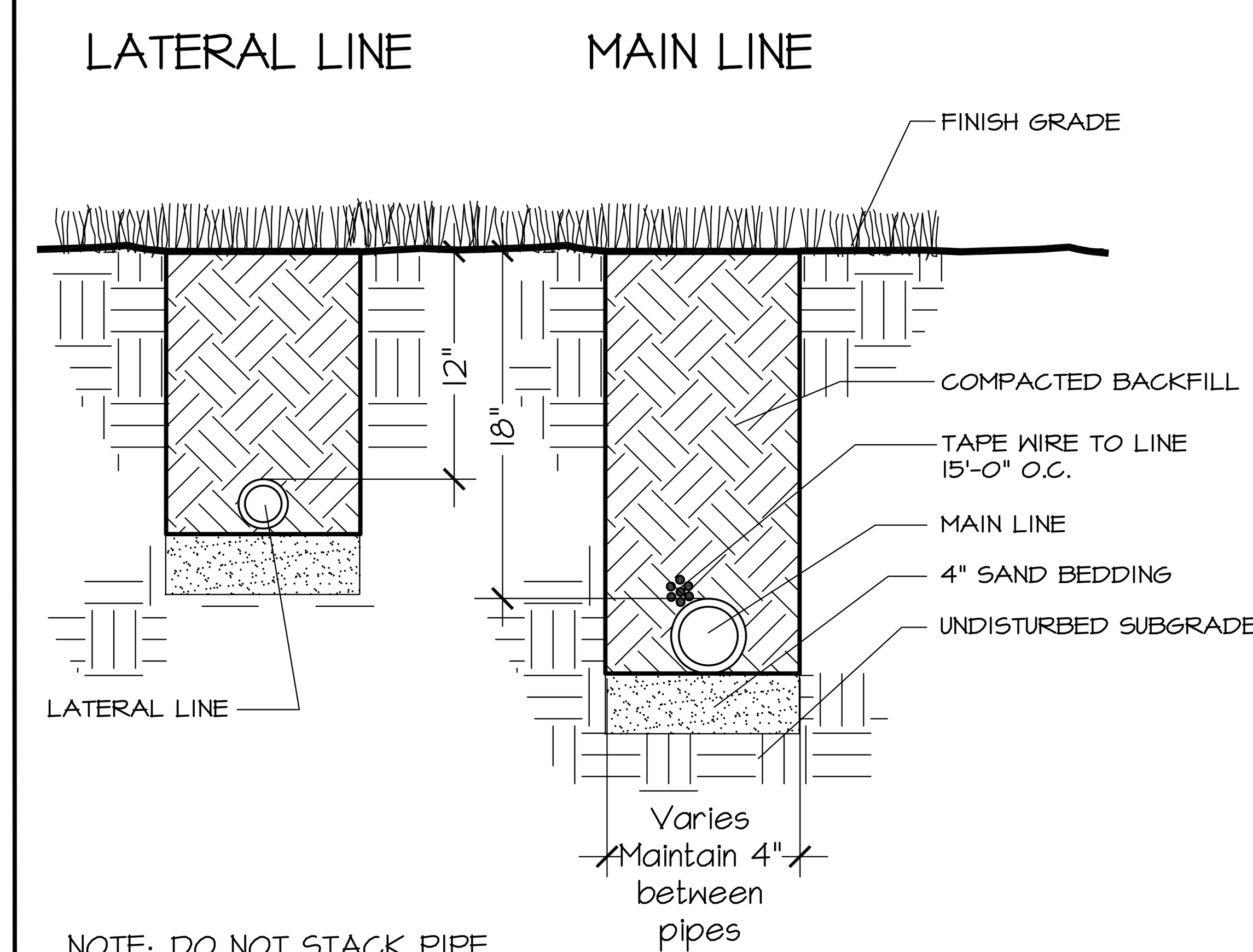
1. 6" ROUND VALVE BOX
2. FINISH GRADE
3. MANUAL LINE FLUSHING VALVE
4. 4" DEEP PEA GRAVEL SUMP
5. 18" OF BLANK DRIP TUBING

NOTES:

- Use Teflon Tape on all threaded manifold components
- Line sump with filter fabric and leave exposed over gravel 2" min.

FLUSH VALVE (G)

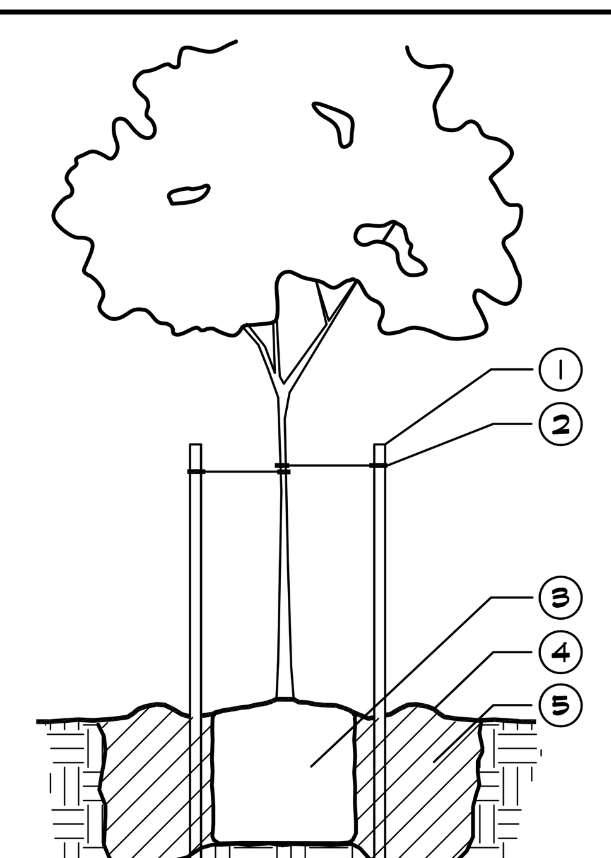
VLV-FLSH-MAN SCALE: NTS



NOTE: DO NOT STACK PIPE ON TOP OF OTHER PIPE.

IRRIGATION TRENCH (H)

TRNCH1 SCALE: N.T.S.



LEGEND

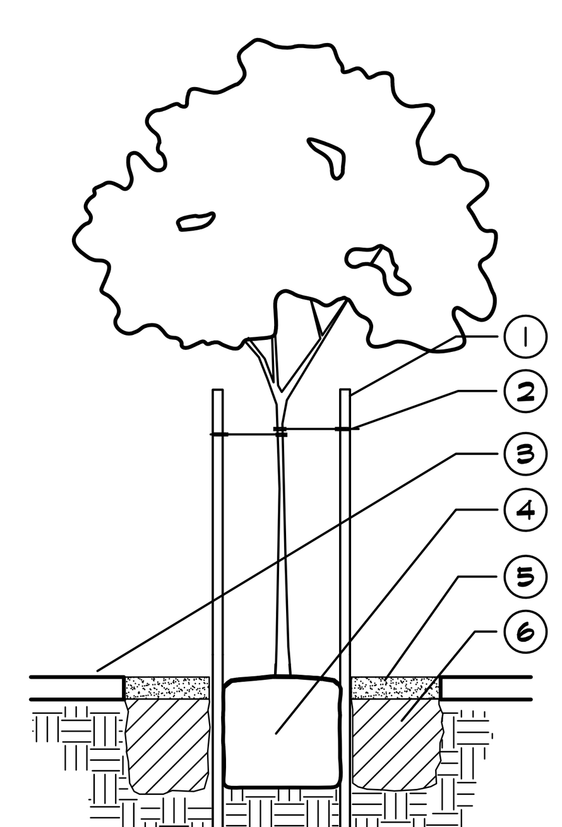
1. TREE STAKE
2. TREE TIE
3. ROOTBALL
4. SOIL RING
5. AMENDED BACKFILL

NOTES:

- WIDTH OF HOLE SHALL BE 3 TIMES THE WIDTH OF THE ROOTBALL
- DEPTH OF THE HOLE SHALL BE HEIGHT OF THE ROOTBALL WITH 1 1/2" OF TOP OF ROOTBALL HIGHER THAN SURROUNDING FINISH GRADE
- CUT TREE STAKES WITHIN 2" OF TIES
- WATER BACKFILL HEAVILY TO REDUCE AIR POCKETS
- REMOVE NURSERY STAKE PRIOR TO THE END OF THE MAINTENANCE PERIOD
- MAINTAIN A MINIMUM DISTANCE OF 18" BETWEEN EDGE OF LAWN AND TRUNK OF TREE(S)

TREE PLANTING AND STAKING (I)

PLT-TREE1 SCALE: N.T.S.



LEGEND

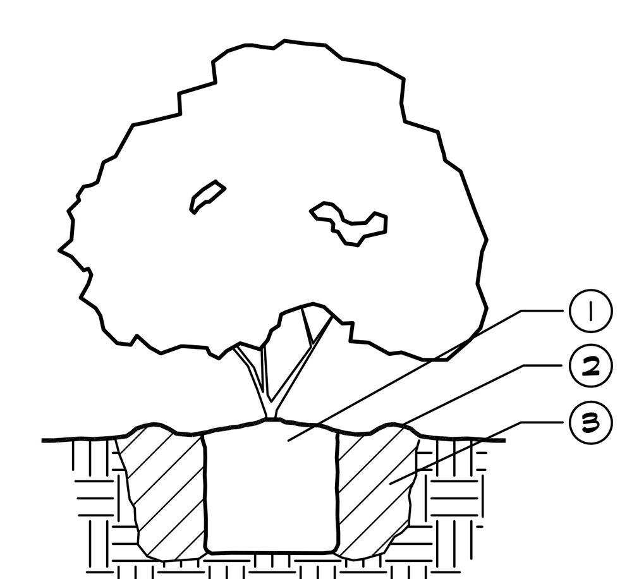
1. TREE STAKE
2. TREE TIE
3. FINISHED SURFACE
4. ROOTBALL, TOP OF ROOTBALL TO BE FLUSH W/DECOMPOSED GRANITE
5. STABILIZED DECOMPOSED GRANITE, 3" DEEP, GRADE 1/2" BELOW ADJ. FINISHED SURFACE
6. AMENDED BACKFILL

NOTES:

- WIDTH OF HOLE SHALL BE 3 TIMES THE WIDTH OF THE ROOTBALL
- DEPTH OF THE HOLE SHALL BE HEIGHT OF THE ROOTBALL WITH 1 1/2" OF TOP OF ROOTBALL HIGHER THAN SURROUNDING FINISH GRADE AND 2" BELOW BOTTOM OF GRADE FOR GROUNDCOVER PLANTS
- CUT TREE STAKES WITHIN 2" OF TIES
- WATER BACKFILL HEAVILY TO REDUCE AIR POCKETS
- REMOVE NURSERY STAKE PRIOR TO THE END OF THE MAINTENANCE PERIOD
- STABILIZER BY STABILIZER SOLUTIONS - PETER HERRERA 408-540-0015

TREE WELL W/ DECOMPOSED GRANITE (J)

PLT-TREE7 SCALE: N.T.S.



LEGEND

1. ROOTBALL
2. SOIL RING
3. AMENDED BACKFILL

NOTES:

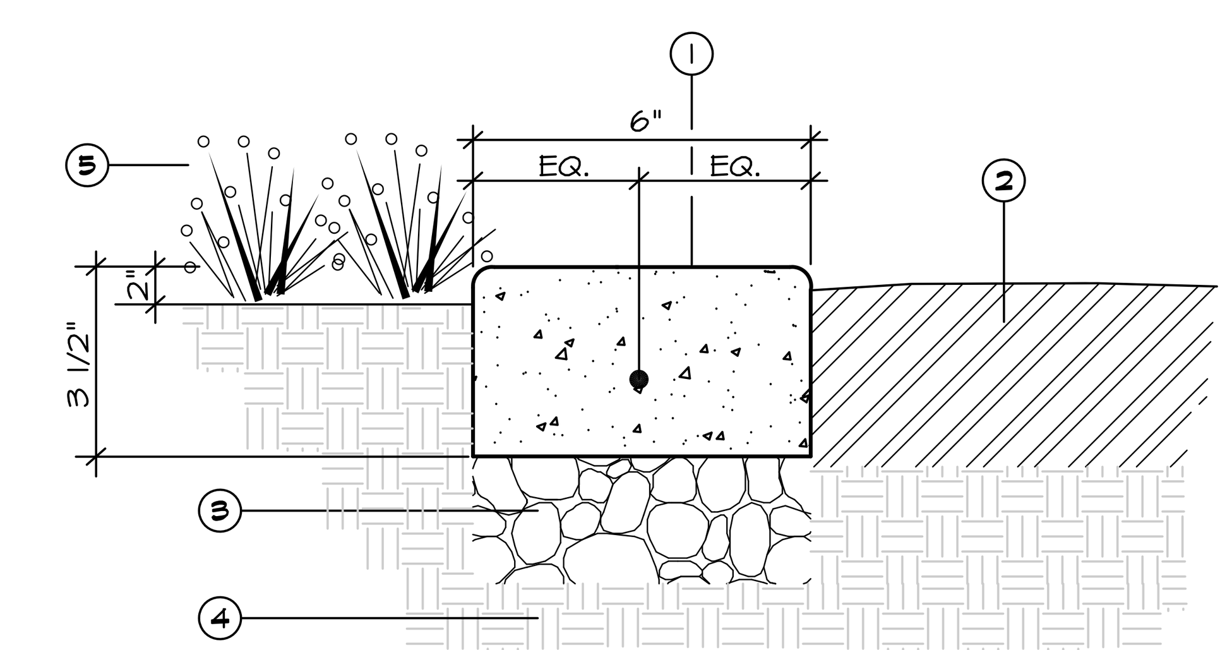
- WIDTH OF HOLE SHALL BE 3 TIMES THE WIDTH OF THE ROOTBALL
- DEPTH OF THE HOLE SHALL BE DEPTH OF THE ROOTBALL WITH 1 1/2" OF TOP OF ROOTBALL HIGHER THAN SURROUNDING FINISH GRADE
- WATER BACKFILL HEAVILY TO REDUCE AIR POCKETS

SHRUB PLANTING (K)

PLT-SHRB1 SCALE: N.T.S.

LEGEND

1. 6" x 3 1/2" CONCRETE MOWSTRIP WITH 1/2" RADIUS AND #3 REBAR CENTERED
2. ADJACENT SYNTHETIC TURF
3. 2" CLASS II AGGREGRATE BASE ROCK 95% RELATIVE COMPACTION
4. (E) SUBGRADE 90% COMPACTION
5. ADJACENT PLANTING AREA



CONCRETE HEADER (L)

6-CONC-HDR-TURF SCALE: N.T.S.

HARRINGTON DESIGN ASSOCIATES
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ARCHITECT

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1223 HIGH STREET, AUBURN, CA 95603
(530) 885-0040
FAX (530) 885-0042

LICENSED LANDSCAPE ARCHITECT JEFFREY M. AMBROSIA 4057 Signature 12/24 Renewal Date Date STATE OF CALIFORNIA

CONSULTANT

FRANKLIN ELEMENTARY SCHOOL DISTRICT

OWNER

TK & KINDER BUILDING ADDITIONS INCREMENT NO. 2

FRANKLIN ELEMENTARY SCHOOL
332 NORTH TOWNSHIP ROAD
YUBA CITY, CA 95993

DATE

LANDSCAPE DETAILS

L3.1

JOB NO.