

HOMESTEAD ROAD

EL SERENO AVENUE

FOOTHILL EXPWY

TO PULL BOX ACROSS HOMESTEAD ROAD

EXISTING 3" C TO REMAIN WITH CONDUCTORS/CABLES FOR FOOTHILL EXPWY/HOMESTEAD ROAD INTERSECTION.

EXISTING 2" C TO REMAIN WITH CONDUCTORS/CABLES FOR FOOTHILL EXPWY/HOMESTEAD ROAD INTERSECTION.

EXISTING 3" C TO REMAIN WITH CONDUCTORS/CABLES FOR FOOTHILL EXPWY/HOMESTEAD ROAD INTERSECTION.

EXISTING 2-3" C, WITH:

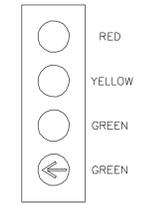
- 45 #14 CONDUCTORS
- 3 #12 CONDUCTORS
- 1 #10 CONDUCTOR
- 15 DLC CABLES
- 3 SAMPLER LOOP DLC'S
- 2 SIGNAL INTERCONNECT (SIC) CABLES

INSTALL:

- 1 SIGNAL INTERCONNECT (SIC) CABLE
- 1 CAT6 COMMUNICATION CABLE

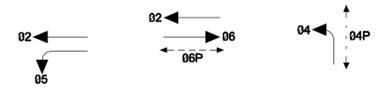
PROJECT NOTES

- FURNISH AND INSTALL TYPE III-AF SERVICE EQUIPMENT ENCLOSURE AND PROVIDE ITEMS (1) THROUGH (4), (6) THROUGH (8), AND (15) THROUGH (17) PER SERVICE WIRING DIAGRAM ON CALTRANS REVISED STANDARD PLAN RSP ES-20. FRONT DOOR OF CABINET SHALL FACE NORTH.
- CONTRACTOR SHALL FURNISH AND INSTALL A NEW TYPE 90 CONTROLLER ASSEMBLY IN A TS-2 TYPE 2 TYPE P-44/R CABINET WITH A NAZTEC 981 ATC CONTROLLER. CONTROLLER UNIT SHALL BE COMPATIBLE WITH THE EXISTING CONTROLLER AT THE FOOTHILL/HOMESTEAD INTERSECTION AND ABLE TO COMMUNICATE WITH THE COUNTY TRAFFIC MANAGEMENT SYSTEM (NAZTEC ATMS NOW). CONTROLLER CABINET SHALL HAVE ACTELIS ML624 ETHERNET OVER COPPER SWITCH FOR PURPOSES OF COMMUNICATING WITH COUNTY SIGNAL.
- AT POLE LOCATION (E), THE CONTRACTOR SHALL FURNISH AND INSTALL A 42 SIGNAL HEAD WITH FULL CIRCLE VISORS INCORPORATING VERTICALLY ORIENTED GEOMETRICALLY PROGRAMMED LOUVERS AS REQUIRED TO LIMIT THE VISIBILITY OF SIGNAL INDICATIONS AS SHOWN ON THE PLAN. THE GEOMETRICALLY PROGRAMMED LOUVERS SHALL BE GL-1000 SERIES AS MANUFACTURED BY PELOO PRODUCTS, INC. OR APPROVED EQUAL AND SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL CAREFULLY INSTALL NEW SIGNAL INTERCONNECT (SIC) OVER EXISTING CONDUCTORS AND CABLES AND SHALL PROTECT EXISTING CONDUCTORS AND CABLES FROM DAMAGE. IF DAMAGED, CABLES AND CONDUCTORS SHALL BE REPLACED IN KIND. ALL CABLES SHALL NOT BE SPLICED. HAND PULL SIC, NO MECHANICAL ASSIST PERMITTED.
- APPLICANT IS RESPONSIBLE TO ENSURE TREENING AND SUBSTRUCTURE INSTALLATION MEET PG&E GREENBOOK STANDARDS.
- THE TOTAL NUMBER OF SWEEPS INSTALLED IN SERVICE CONDUIT RUN SHALL NOT EXCEED 330 DEGREES INCLUDING THE SWEEP AT FEED IN LOCATION.
- CONDUIT ELBOW ENTERING SERVICE CABINET FOUNDATION SHALL BE A 2" - 90 DEGREE MANUFACTURED SWEEP WITH A 24" RADIUS.
- INSTALL EMTRAC EMERGENCY VEHICLE PREEMPT ANTENNA ON SIGNAL POLE SHAFT.



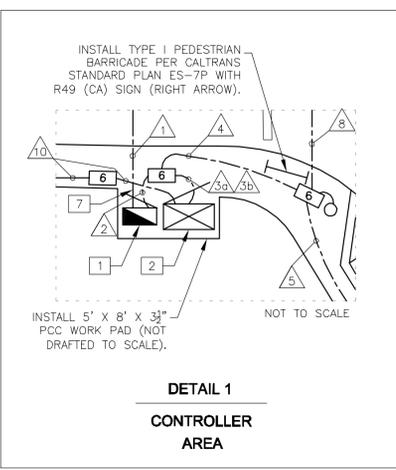
DETAIL 2
4-SECTION SIGNAL HEAD

PROPOSED PHASE DIAGRAM



EMERGENCY VEHICLE PRE-EMPTION PHASING

CHANNEL A = 02 + 05
CHANNEL B = 06
CHANNEL C = 04



DETAIL 1
CONTROLLER AREA

INSTALL TYPE I PEDESTRIAN BARRICADE PER CALTRANS STANDARD PLAN ES-7P WITH R49 (CA) SIGN (LEFT ARROW).

SEE DETAIL 1 FOR DETAIL OF CONTROLLER AREA.

INSTALL 5' X 8' X 31" PCC WORK PAD (NOT DRAFTED TO SCALE).

INSTALL TYPE I PEDESTRIAN BARRICADE PER CALTRANS STANDARD PLAN ES-7P WITH R49 (CA) SIGN (RIGHT ARROW).
INSTALL VIDEO DETECTION CAMERA ON POLE SHAFT NEAR TOP OF POLE.

CONTRACTOR SHALL INSTALL TYPE 2 PG&E PULL BOX (17'X30'X26" INT SERVICE SPLICE BOX) AT BASE OF UTILITY POLE.

INSTALL 2" SCH. 80 PVC SERVICE RISER A MINIMUM OF 12" ABOVE GRADE ON THE POLE QUADRANT ASSIGNED BY PG&E. INSTALL MT SCHEDULE 80 PVC 2" CONDUIT BETWEEN PULL BOX AND UTILITY POLE RISER.

SERVICE PT. (120/240V)
RISER TO BE INSTALLED BY OTHERS.

LOUVERED SIGNAL HEAD AIMING POINT

VERTICAL PLANE

LOUVERED INDICATIONS NOT VISIBLE
LOUVERED INDICATIONS VISIBLE

HOMESTEAD ROAD

FOOTHILL CROSSING

VEHICLE DETECTION LEGEND

- [Symbol] = VIDEO DETECTION CAMERA (MULTI-APPROACH)
- [Symbol] = VIDEO DETECTION ZONE (VIDEO COVERAGE AREA - EXACT LOCATION AND DIMENSIONS TO BE PROGRAMMED DURING CONSTRUCTION)
- [Symbol] = EMERGENCY VEHICLE DETECTOR

GRAPHIC SCALE



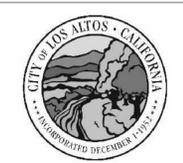
• THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
• SEE SHEET E-2 FOR NOTES AND SCHEDULES

| | | |
|------------------------------|---------------------------------|--------------------------|
| DRAWN Ralph Garcia | DESIGNED Ralph Garcia | SCALE 1" = 20' |
| CHECKED Jeff Elia | DATE 11/9/12 | |
| APPROVED | | |
| ENGINEER | DATE | CONTRACT NO. |



PREPARED BY:
Hexagon Transportation Consultants, Inc.
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| REVISIONS | | | | | |
|-----------|---------|----|------------------------|-------|------|
| NO. | DATE | BY | DESCRIPTION | APPR. | DATE |
| 1 | 7/2012 | | REVISED 100% SUBMITTAL | | |
| 2 | 11/2012 | | REVISED 100% SUBMITTAL | | |
| 3 | 1/2013 | | ADDENDUM NO. 1 | | |



CITY OF LOS ALTOS
HOMESTEAD ROAD SAFETY IMPROVEMENTS
PROJECT 12-19
HOMESTEAD RD. & FOOTHILL CROSSING
TRAFFIC SIGNAL INSTALLATION
PREPARED FOR: CITY OF LOS ALTOS

| |
|--------------|
| DRAWING NO. |
| 16 |
| SHT 16 OF 25 |

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GENERAL NOTES

- ALL WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE MAY 2006 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD PLANS AND THE PROJECT'S SPECIAL PROVISIONS.
- PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
- NEW SIGNAL POLES SHALL BE LOCATED IN THE PRESENCE OF THE ENGINEER. LOCATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO EXCAVATION. POLES SHALL BE LOCATED A MINIMUM OF 30" FROM THE FACE OF CURB, AND SHALL PROVIDE A MINIMUM OF 48" SIDEWALK CLEARANCE FOR WHEELCHAIR ACCESS AND PEDESTRIAN TRAFFIC. EXCAVATION FOR FOUNDATIONS SHALL BE BY HAND DIGGING OR SHALL BE POT-HOLED PRIOR TO DRILLING.
- ALL CONDUIT INSTALLATION SHALL BE BY TRENCHING IN PAVEMENT OR DIRECTIONAL DRILLING METHODS UNLESS OTHERWISE NOTED.
- LOCATION OF POLES, PULL BOXES, AND EQUIPMENT ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE BEGINNING ANY CONSTRUCTION OPERATION, THE CONTRACTOR SHALL CHECK FOR CONFLICTS WITH UNDERGROUND UTILITIES, OVERHEAD UTILITIES, OR OTHER OBSTACLES. IF EQUIPMENT OR POLES MUST BE RELOCATED, THE ENGINEER MUST APPROVE THE NEW LOCATION PRIOR TO INSTALLATION.
- NEW ROADSIDE SIGNS SHALL CONFORM TO THE LATEST PROVISIONS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE 2006 STANDARD PLANS. THE CONTRACTOR SHALL SUPPLY ALL MATERIALS FOR NEW SIGNS AND POSTS.
- UNLESS OTHERWISE NOTED, ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF SUCH ITEMS.
- CONTRACTOR SHALL FURNISH AND INSTALL RED, YELLOW, AND GREEN (CIRCULAR AND/OR ARROW) LIGHT-EMITTING DIODE (LED) MODULES IN EACH NEW VEHICLE SIGNAL HEAD AND A COMBINATION PORTLAND ORANGE "UPRAISED HAND"/WHITE "WALKING PERSON" LED MODULE WITH TWO-DIGIT COUNTDOWN DISPLAY IN EACH NEW PEDESTRIAN SIGNAL HEAD. THE LED SIGNAL MODULES SHALL CONFORM TO CURRENT STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
- ALL NEW SIGNAL FACES SHALL BE PROVIDED WITH 12" SECTIONS. ALL SIGNAL HEADS SHALL HAVE METAL BACKPLATES.
- THE CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT NUMBER OF CONDUCTORS REQUIRED FOR THE INTENDED OPERATION.
- ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE MOUNTED AT A HEIGHT OF 40" ABOVE FINISHED GRADE.
- TRAFFIC CONTROL MUST BE PERFORMED IN ACCORDANCE WITH THE CALIFORNIA MUTCD AND THE 2006 CALTRANS STANDARD PLANS. CONTRACTOR SHALL HAVE A CITY APPROVED TRAFFIC CONTROL PLAN PRIOR TO THE START OF WORK.
- EXISTING UTILITY POLES AND LINES SHALL NOT BE DISTURBED AND SHALL REMAIN OPERATIONAL. IF DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES AT NO COST TO THE CITY.

POLE AND EQUIPMENT SCHEDULE

| LOCATION | STANDARD | | | VEHICLE SIGNAL MOUNTING | | PED SIGNAL MOUNTING | PPB | | HPS LUMINAIRE (WATTS) | SPECIAL REQUIREMENTS* |
|----------|----------|-----------------|--------------------|-------------------------|------------------|---------------------|-----|-------|------------------------------|-----------------------|
| | TYPE | SIGNAL MAST ARM | LUMINAIRE MAST ARM | MAST ARM | POLE | | Ø | ARROW | | |
| (A) | 15TS | | 12' | | | | 6 ← | 150 | SEE FOOTNOTE 1. | |
| (B) | 15TS | | | | SV-2-TA | SP-1-T | | | SEE FOOTNOTE 1, 2, 3, 4, & 5 | |
| (C) | 19-4-100 | 30' | 15' | MAT MAS | SV-2-TB | | | 150 | SEE FOOTNOTE 1. | |
| (D) | 17-3-100 | 15' | 12' | MAS | SV-2-TA | SP-1-T | 4 ← | 150 | SEE FOOTNOTE 1, 2, & 3 | |
| (E) | 17-3-100 | 15' | 15' | MAS | SV-1-T SV-1-T | SP-1-T | 4 ← | 150 | SEE FOOTNOTE 1, 2, & 3 | |
| (F) | 1-A | | | | TV-1-T | SP-1-T | 6 → | | SEE FOOTNOTE 1. | |

*OTHER REQUIREMENTS ARE COVERED BY NOTES, LEGEND, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS. FOR TYPE OF STANDARD, VEHICLE AND PEDESTRIAN MOUNTINGS, SEE CALTRANS STANDARD PLANS, MAY 2006 AND APPLICABLE REVISED STANDARD PLAN SHEETS.

FOOTNOTES

- FURNISH AND INSTALL POLE AND EQUIPMENT. ALL NEW SIGNAL POLES AND MAST ARMS SHALL BE FINISHED WITH TNEPEC BLACK PAINT, PER CITY OF LOS ALTOS SPECIFICATIONS.
- INSTALL #2 SV-1-T SIGNAL HEAD AT 17' ELEVATION.
- INSTALL 2-DIRECTION/2-CHANNEL EMERGENCY VEHICLE DETECTOR ON TOP OF SIGNAL MAST ARM AT APPROXIMATE LOCATION SHOWN ON PLAN. INSTALL EMTRAC EMERGENCY VEHICLE PREEMPTION ANTENNA ON SIGNAL POLE SHAFT, PER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL 2-DIRECTION/1-CHANNEL EMERGENCY VEHICLE DETECTOR ON TOP OF SIGNAL MAST ARM AT APPROXIMATE LOCATION SHOWN ON PLAN.
- OMIT LUMINAIRE ARM.
- INSTALL VIDEO DETECTION CAMERA AT THIS LOCATION PER MANUFACTURER'S RECOMMENDATIONS.

CONDUCTOR SCHEDULE

| AWG OR CABLE | CIRCUIT | NUMBER OF CONDUCTORS/CABLES | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | RUN NUMBER | | | | | | | | | | | | | | | | | | |
| | | 1 | 2 | 3a | 3b | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | |
| NO. 14 | Ø2 | | 6 | | 6 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | |
| | Ø4 | | 6 | | 6 | 3 | 3 | | | 3 | 3 | | | | | | | | | |
| | Ø5 | | 3 | | 3 | | | | | | 3 | | | | | | | | | |
| | Ø6 | | 3 | | 3 | 3 | 3 | 3 | | | | | | | | | | | | |
| | Ø4P | | 4 | | 4 | 2 | 2 | | | 2 | 2 | | | | | | | | | |
| | Ø6P | | 2 | | 2 | 2 | 2 | 2 | | | | | | | | | | | | |
| | Ø4PPB | | 2 | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| | Ø6PPB | | 1 | | 1 | 1 | 1 | | | | | | | | | | | | | |
| | PPB COMMON | | 2 | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| | SPARES | | 3 | 3 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | |
| | TOTAL NO. 14 | | 32 | 3 | 35 | 19 | 19 | 13 | 16 | 13 | | | | | | | | | | |
| NO. 10 | SIGNAL NEUTRAL | | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | |
| NO. 8 | SAFETY LIGHTING (240V) | | 4 | | 4 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | |
| | EQUIPMENT GROUND (BARE COPPER) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | |
| | TOTAL NO. 8 | | 5 | 1 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | |
| NO. 6 | CONTROLLER SERVICE (120V) | | 2 | | | | | | | | | | | | | | | | | |
| NO. 2 | SERVICE (120V/240V) | | 3 | | | | | | | | | | | | | | | | | |
| EMERGENCY VEHICLE PREEMPT CABLES | EVA-EVP COAX | | | | 1 | 1 | X | X | X | | | | | | | | | | | |
| | EVB | | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | |
| | EVG | | | | 1 | 1 | | | | | 1 | 1 | | | | | | | | |
| TOTAL EVP CABLES | | | | 1 | 1 | X | X | X | 2 | 2 | 2 | 1 | 1 | | | | | | | |
| VIDEO DET. SIC CABLE | POWER-OVER-ETHERNET (PoE) | | | | X | 1 | 1 | | | | | | | | | | | | | |
| | SIGNAL INTERCONNECT (6-PAIR) | | | | | | | | | | | | | | | | | | 1 | |
| | CAT6 COMMUNICATION CABLE | | | | | | | | | | | | | | | | | | 1 | |
| | NEW (N) OR EXISTING (E) | | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | |
| | CONDUIT SIZE | | 2" | 2" | 3" | 3" | 3" | 3" | 3" | 2" | 3" | 2" | 2" | | | | | | | |
| | FOOTNOTES REFERENCE | | (A) | |

CONDUCTOR SCHEDULE FOOTNOTES:

- (A) FURNISH AND INSTALL NEW CONDUIT AND CONDUCTORS/CABLES.

| | | |
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| DRAWN Ralph Garcia | DESIGNED Ralph Garcia | SCALE N/A |
| CHECKED Jeff Elia | DATE 11/9/12 | |
| APPROVED | | |
| ENGINEER | DATE | CONTRACT NO. |



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CITY OF LOS ALTOS
 HOMESTEAD ROAD SAFETY IMPROVEMENTS
 PROJECT 12-19
HOMESTEAD RD. & FOOTHILL CROSSING
TRAFFIC SIGNAL NOTES & SCHEDULES
 PREPARED FOR: CITY OF LOS ALTOS

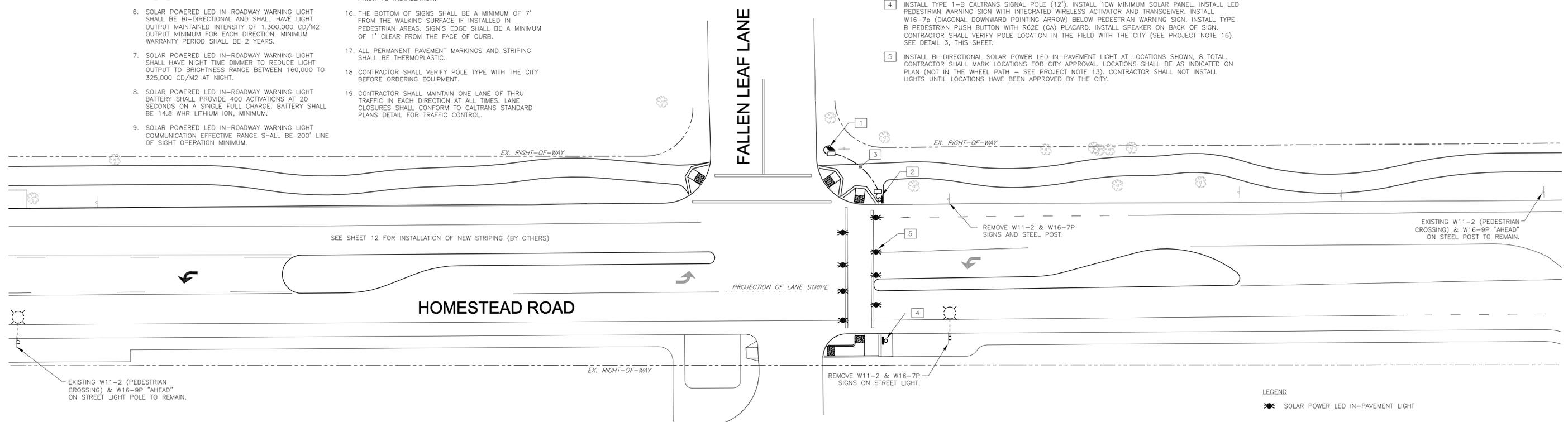
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PROJECT NOTES

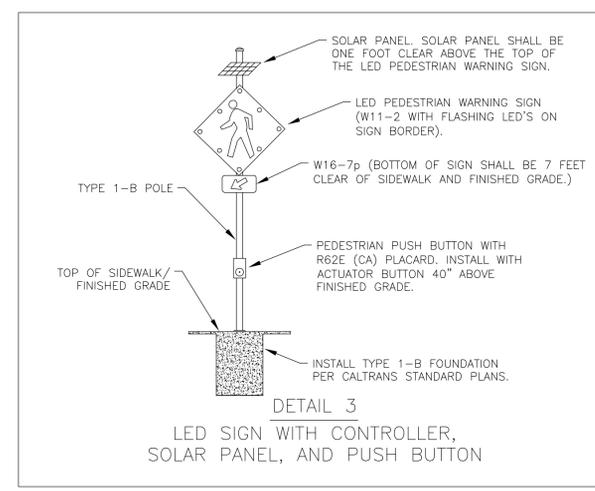
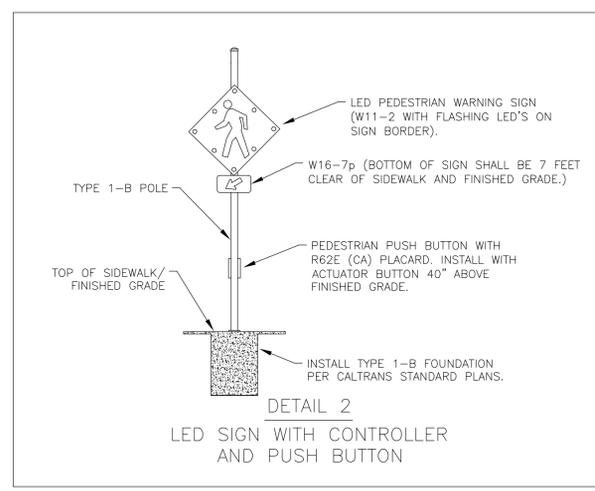
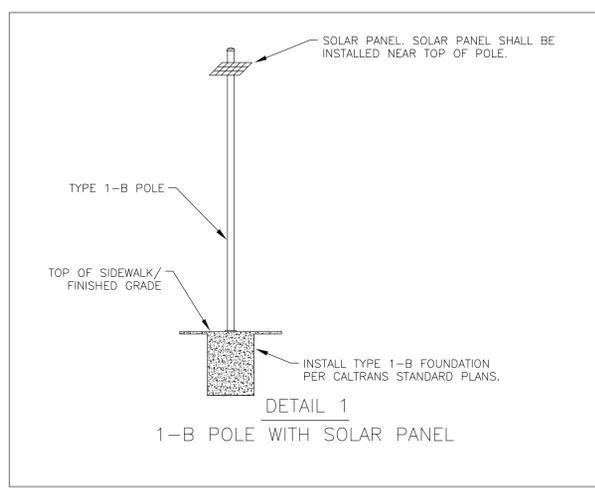
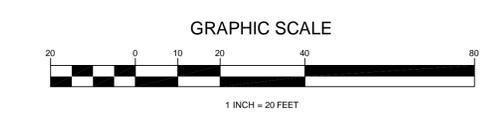
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS AND SPECIFICATIONS AND CITY OF LOS ALTOS STANDARDS.
- CONTRACTOR SHALL INSTALL A SOLAR POWERED, RADIO-CONTROLLED LED IN-ROADWAY WARNING LIGHT SYSTEM AT THE CROSSWALK, INCLUDING ALL ACCESSORIES REQUIRED FOR A COMPLETE SYSTEM. THE LED IN-ROADWAY WARNING LIGHT SYSTEM SHALL BE MANUFACTURED BY SILICON CONSTELLATIONS, INC., OR APPROVED EQUAL. ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHTS SHALL CONFORM TO CALIFORNIA MUTCD AND CALTRANS STANDARDS.
- SIGNING AND STRIPING SHALL CONFORM TO THE APPLICABLE DETAILS OF THE LATEST EDITION OF THE CALTRANS STANDARD PLANS AND SPECIFICATIONS AND THE CALIFORNIA MUTCD.
- EXISTING FACILITIES DISTURBED BY THE CONTRACTOR INCLUDING STRIPING, MARKINGS PAVEMENT MARKERS, LANDSCAPE, IRRIGATION, CURB SIDEWALK, ETC., SHALL BE REPLACED IN KIND, UNLESS OTHERWISE SHOWN ON THE PLAN.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHT SHALL BE BI-DIRECTIONAL AND SHALL HAVE LIGHT OUTPUT MAINTAINED INTENSITY OF 1,300,000 CD/M2 OUTPUT MINIMUM FOR EACH DIRECTION. MINIMUM WARRANTY PERIOD SHALL BE 2 YEARS.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHT SHALL HAVE NIGHT TIME DIMMER TO REDUCE LIGHT OUTPUT TO BRIGHTNESS RANGE BETWEEN 160,000 TO 325,000 CD/M2 AT NIGHT.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHT BATTERY SHALL PROVIDE 400 ACTIVATIONS AT 20 SECONDS ON A SINGLE FULL CHARGE. BATTERY SHALL BE 14.8 WHR LITHIUM ION, MINIMUM.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHT COMMUNICATION EFFECTIVE RANGE SHALL BE 200' LINE OF SIGHT OPERATION MINIMUM.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHT OPERATING TEMPERATURE RANGE SHALL BE -10F TO +140F.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHT HOUSING MATERIAL AND ANCHOR SHALL BE CAST IRON OR MACHINED AIRCRAFT GRADE CORROSION PROOF ALUMINUM. THE ELECTRONICS HOUSING SHALL BE VAPOR TIGHT CORROSION RESISTANT ALUMINUM CASING.
- BATTERY FOR THE CONTROLLER SHALL BE 12 AHR LEAD ACID, MINIMUM.
- CONTRACTOR SHALL INSTALL SOLAR POWERED LED IN-ROADWAY WARNING LIGHTS ON LANE LINES, PROJECTION OF LANE LINES, CENTERED IN LANES, OR 1' OFFSET FROM MEDIAN AS INDICATED ON THE PLAN. ALL IN-ROADWAY WARNING LIGHTS SHALL BE OFFSET 1' FROM EDGE OF CROSSWALK.
- SOLAR POWERED LED IN-ROADWAY WARNING LIGHTS AND LED'S ON SIGN BORDER OF W11-2 SIGN SHALL BE WIRELESSLY INTERCONNECTED AND FLASH IN UNISON WHEN ACTIVATED BY PUSH BUTTON.
- ALL STRIPING, SIGN POSITIONS, AND PAVEMENT MARKINGS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
- THE BOTTOM OF SIGNS SHALL BE A MINIMUM OF 7' FROM THE WALKING SURFACE IF INSTALLED IN PEDESTRIAN AREAS. SIGN'S EDGE SHALL BE A MINIMUM OF 1' CLEAR FROM THE FACE OF CURB.
- ALL PERMANENT PAVEMENT MARKINGS AND STRIPING SHALL BE THERMOPLASTIC.
- CONTRACTOR SHALL VERIFY POLE TYPE WITH THE CITY BEFORE ORDERING EQUIPMENT.
- CONTRACTOR SHALL MAINTAIN ONE LANE OF THRU TRAFFIC IN EACH DIRECTION AT ALL TIMES. LANE CLOSURES SHALL CONFORM TO CALTRANS STANDARD PLANS DETAIL FOR TRAFFIC CONTROL.

CONSTRUCTION NOTES

- INSTALL TYPE 1-B CALTRANS SIGNAL POLE (12") WITH 10W MINIMUM SOLAR PANEL. MANUFACTURER SHALL ASSIST IN DETERMINING EXACT LOCATION FOR SOLAR PANEL. SEE DETAIL 1 THIS SHEET.
- INSTALL TYPE 1-B CALTRANS SIGNAL POLE (12"). INSTALL LED PEDESTRIAN WARNING SIGN WITH INTEGRATED WIRELESS ACTIVATOR AND TRANSCIVER. INSTALL W16-7p (DIAGONAL DOWNWARD POINTING ARROW) BELOW PEDESTRIAN WARNING SIGN. INSTALL TYPE B PEDESTRIAN PUSH BUTTON WITH R62E (CA) PLACARD. INSTALL SPEAKER ON BACK OF SIGN. CONTRACTOR SHALL VERIFY POLE LOCATION IN THE FIELD WITH THE CITY (SEE PROJECT NOTE 16). SEE DETAIL 2 THIS SHEET.
- INSTALL 2" CONDUIT WITH POWER CONDUCTORS FOR EQUIPMENT ON LED SIGN POLE. CONDUCTOR TYPES AND SIZES SHALL BE PROVIDED BY MANUFACTURER.
- INSTALL TYPE 1-B CALTRANS SIGNAL POLE (12"). INSTALL 10W MINIMUM SOLAR PANEL. INSTALL LED PEDESTRIAN WARNING SIGN WITH INTEGRATED WIRELESS ACTIVATOR AND TRANSCIVER. INSTALL W16-7p (DIAGONAL DOWNWARD POINTING ARROW) BELOW PEDESTRIAN WARNING SIGN. INSTALL TYPE B PEDESTRIAN PUSH BUTTON WITH R62E (CA) PLACARD. INSTALL SPEAKER ON BACK OF SIGN. CONTRACTOR SHALL VERIFY POLE LOCATION IN THE FIELD WITH THE CITY (SEE PROJECT NOTE 16). SEE DETAIL 3, THIS SHEET.
- INSTALL BI-DIRECTIONAL SOLAR POWER LED IN-PAVEMENT LIGHT AT LOCATIONS SHOWN, 8 TOTAL. CONTRACTOR SHALL MARK LOCATIONS FOR CITY APPROVAL. LOCATIONS SHALL BE AS INDICATED ON PLAN (NOT IN THE WHEEL PATH - SEE PROJECT NOTE 13). CONTRACTOR SHALL NOT INSTALL LIGHTS UNTIL LOCATIONS HAVE BEEN APPROVED BY THE CITY.



- LEGEND**
- SOLAR POWER LED IN-PAVEMENT LIGHT
 - SOLAR POWER LED PEDESTRIAN WARNING SIGN (OTHER EQUIPMENT AS NOTED)
 - POLE WITH SOLAR PANEL
 - EXISTING SIGN
 - EXISTING TREE
 - EXISTING STREET LIGHT



BID ALTERNATE NO. 3



• THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

| | | |
|------------------------------|---------------------------------|--------------------------|
| DRAWN Ralph Garcia | DESIGNED Ralph Garcia | SCALE 1" = 20' |
| CHECKED Jeff Elia | DATE 11/28/12 | |
| APPROVED | | |
| ENGINEER | DATE | CONTRACT NO. |



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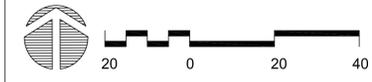
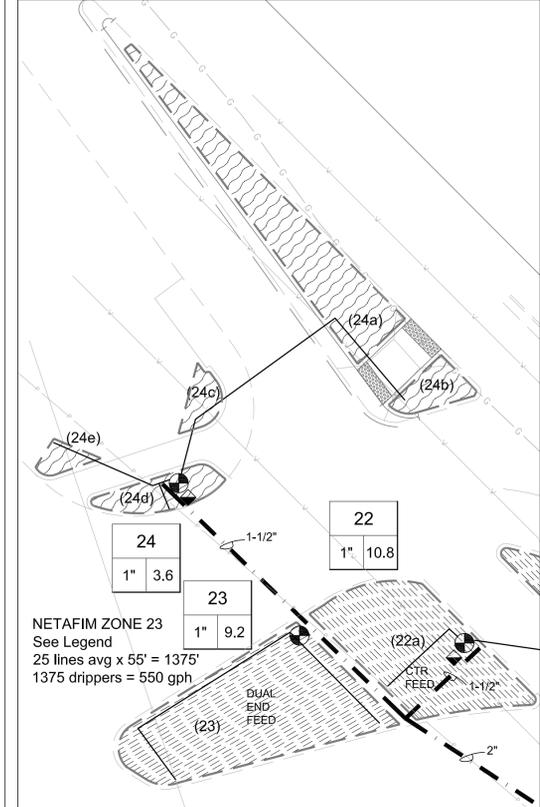
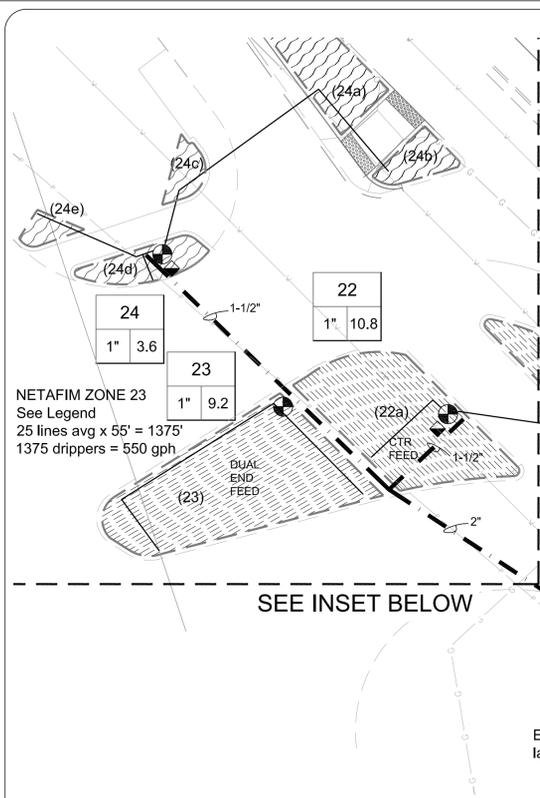
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CITY OF LOS ALTOS
HOMESTEAD ROAD SAFETY IMPROVEMENTS
PROJECT 12-19
IN-ROADWAY WARNING LIGHTS
HOMESTEAD RD. AT FALLEN LEAF LN.
PREPARED FOR: CITY OF LOS ALTOS

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| DRAWING NO. | 18 |
| SHT | 18 OF 25 |

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| DRAWN MKB/HJS | DESIGNED AP | HORIZONTAL SCALE AS SHOWN |
| CHECKED LF | DATE CHECKED 11-28-2012 | VERTICAL SCALE |
| APPROVED | | CONTRACT NO. |
| ENGINEER | DATE | |

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| 1 | 7/12 | AP | REVISED 100% SUBMITTAL | | |
| 2 | 11/28 | AP | REVISED 100% SUBMITTAL | | |



CITY OF LOS ALTOS
HOMESTEAD ROAD SAFETY IMPROVEMENTS
PROJECT 12-19
IRRIGATION PLAN - WESTERN END
PREPARED FOR: CITY OF LOS ALTOS

DRAWING NO.
19
SHT 19 OF 25

GENERAL NOTES

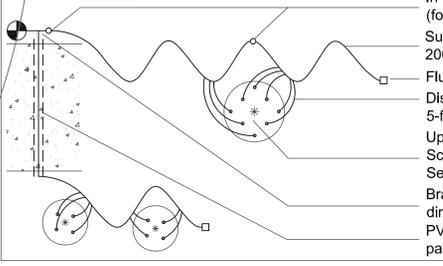
- 1. GUARANTEE:**
Guarantee the irrigation system for one year from date of acceptance.
- 2. VERIFICATION:**
System design is based on 50 P.S.I. and 30 G.P.M. available at discharge outlet of point of connection. Verify same and notify Engineer if such data adversely affects the operation of the system. Such notice shall be made in writing and prior to commencing any irrigation work.
- 3. UTILITIES:**
Verify location of all on-site utilities. Restoration of damaged utilities shall be made to the satisfaction of the Engineer, and at no additional cost to the Owner.
- 4. SCHEMATIC:**
System features are shown schematically for graphic clarity. Install all piping and valves in common trenches where feasible and inside planting areas adjacent to walkways and inside medians whenever possible.
- 5. SPECIFICATIONS:**
See irrigation specifications for additional information.
- 6. CODES:**
Irrigation system shall be installed in accordance with all local codes and manufacturer's specifications. Notify Engineer by telephone and in writing of any conflicts prior to installation.
- 7. QUICK COUPLING VALVES:**
Install on double swing joint. Locate 12" away from edge of walks, walls, curbs, and headerboards within planting areas. Provide one swivel, hose ell.
- 8. CHECK VALVES:**
Install check valves in heads on low ends of sprinkler system as required to minimize line drainage. Allow for additional 10 check valves in bid price for field changes.

DRIP IRRIGATION TYPE-1 TYPICAL SCHEMATIC DIAGRAM

See planting plan for plant sizes and locations. Supply pipe spacing per planting. Place distribution pipes + emitters along supply pipe per planting and per the Emitter Schedule. Locate emitters to allow for additional ports to each plant for future needs. Place emitters towards the uphill side of plants on slopes.

| EMITTER SCHEDULE | |
|------------------|---|
| 1 gal. | 1 |
| 5 gal. | 2 |
| 15 gal. | 4 |
| 24" box | 8 |

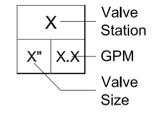
TYPICAL LAYOUT



In-line Check Valve: See Specs (for sloped areas)
Supply Pipe: Max length 200-ft. See Specs
Flush Port, Typ: See Details
Distribution Pipe: Max length 5-ft. See Specs. See Details
Up to (8) emitters per plant. See Schedule above. See Specs. See Irrigation Details.
Branch layout for different directions/areas as required PVC pipe and sleeve under paving areas.

**PIPE SIZING CHART - SCHEDULE 40
DRIP IRRIGATION SUPPLY LINES
NETAFIM SUPPLY / EXHAUST HEADER**

| Zone / Partial Zone Flow | Pipe Size |
|--------------------------|------------|
| 0-8 GPM | PVC 3/4" |
| 8.1-13 GPM | PVC 1" |
| 13.1-22 GPM | PVC 1-1/4" |
| 22.1-30 GPM | PVC 1-1/2" |
| 30.1-50 GPM | PVC 2" |
| 50.1-75 GPM | PVC 2-1/2" |



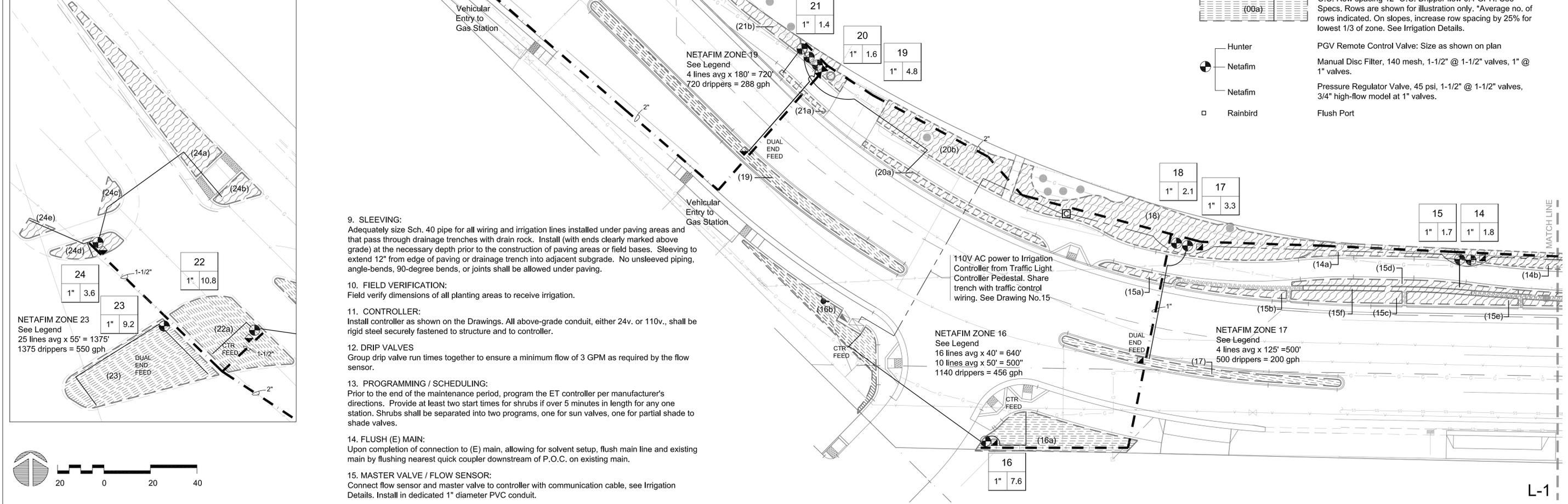
LEGEND

| SYMBOL | MANUFACTURER | DESCRIPTION |
|--------|--------------------------------------|---|
| ----- | | Main Line: 24" minimum cover. Sch. per Specs. See Plan for sizes. |
| ----- | | Lateral Line: 18" minimum cover, 24" under asphalt paving Sch. 40. See chart for size. |
| ▣ | Rainbird | 33-DLRC Quick Coupler (3/4") |
| ⊗ | King Brothers (kbi) | Full Port, True Union, PVC Ball Valve: Line Size. Lever-type |
| ⊞ | Febco | Water Meter 2": See Civil Drawings |
| ⊞ | Rainmaster | 2" Backflow Preventer 825YA w/ Bronze Wye Strainer |
| ⊞ | Superior (MV) / Data Industrial (FS) | Eagle Plus Series (I-Central Card) 24 Stations, Pedestal Mount, S.S. Security Enclosure, Top Open. Promax remote |
| ----- | | 1" Conduit: 24" Depth minimum. For Master Valve & Flow Sensor wire and dedicated common. Separate conduit for Controller power. |
| ----- | | POC Point of Connection |

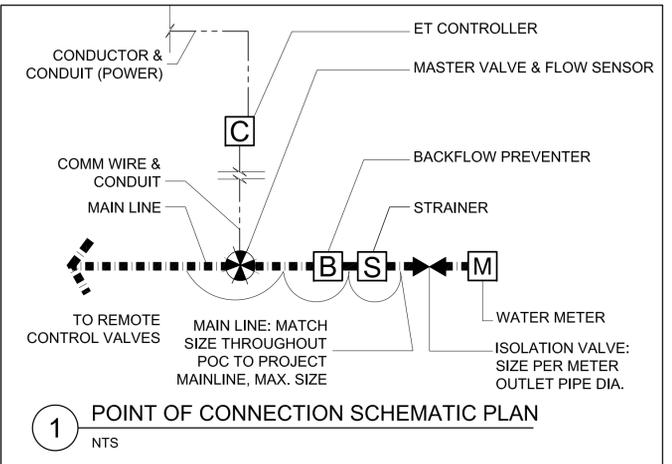
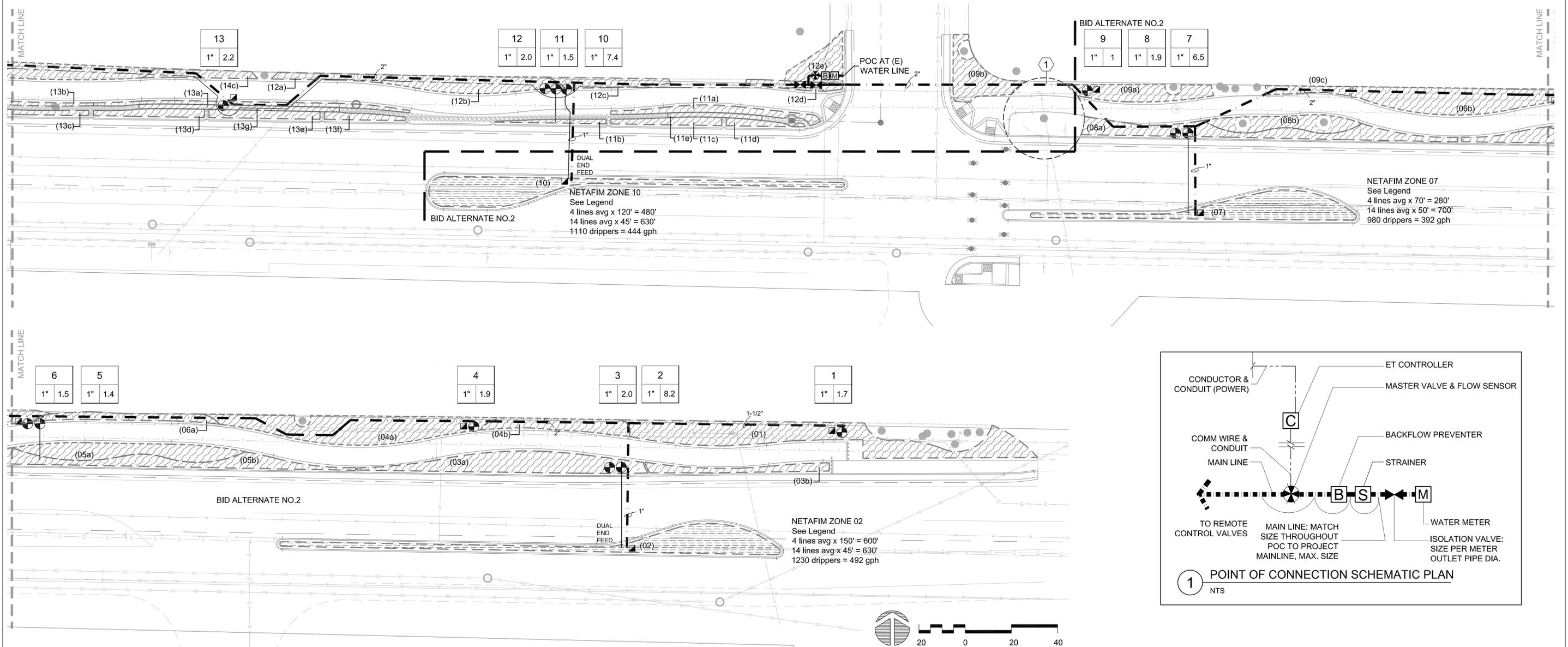
LEGEND - DRIP IRRIGATION

| SYMBOL | MANUFACTURER | DESCRIPTION |
|--------|--------------|--|
| ----- | | DRIP TYPE-1: 3/4" Supply pipe & 1/2" distribution pipe w/ SALCO Pro-Spec Emitters SLV-PST-CV-05 (1.0 gph) per Emitter Schedule, and Rainbird flush ports. See Drip Irrigation Typical Schematic Diagram. See Specs. See Irrigation Details. |
| ----- | | DRIP TYPE-2: Netafim Techline CV. Dripper interval 12" O.C. Row spacing 12" O.C. Dripper flow 0.4 GPH. See Specs. Rows are shown for illustration only. *Average no. of rows indicated. On slopes, increase row spacing by 25% for lowest 1/3 of zone. See Irrigation Details. |
| ⊞ | Hunter | PGV Remote Control Valve: Size as shown on plan |
| ⊞ | Netafim | Manual Disc Filter, 140 mesh, 1-1/2" @ 1-1/2" valves, 1" @ 1" valves. |
| ⊞ | Netafim | Pressure Regulator Valve, 45 psi, 1-1/2" @ 1-1/2" valves, 3/4" high-flow model at 1" valves. |
| ⊞ | Rainbird | Flush Port |

- 9. SLEEVING:**
Adequately size Sch. 40 pipe for all wiring and irrigation lines installed under paving areas and that pass through drainage trenches with drain rock. Install (with ends clearly marked above grade) at the necessary depth prior to the construction of paving areas or field bases. Sleeving to extend 12" from edge of paving or drainage trench into adjacent subgrade. No unsleeved piping, angle-bends, 90-degree bends, or joints shall be allowed under paving.
- 10. FIELD VERIFICATION:**
Field verify dimensions of all planting areas to receive irrigation.
- 11. CONTROLLER:**
Install controller as shown on the Drawings. All above-grade conduit, either 24v. or 110v., shall be rigid steel securely fastened to structure and to controller.
- 12. DRIP VALVES**
Group drip valve run times together to ensure a minimum flow of 3 GPM as required by the flow sensor.
- 13. PROGRAMMING / SCHEDULING:**
Prior to the end of the maintenance period, program the ET controller per manufacturer's directions. Provide at least two start times for shrubs if over 5 minutes in length for any one station. Shrubs shall be separated into two programs, one for sun valves, one for partial shade to shade valves.
- 14. FLUSH (E) MAIN:**
Upon completion of connection to (E) main, allowing for solvent setup, flush main line and existing main by flushing nearest quick coupler downstream of P.O.C. on existing main.
- 15. MASTER VALVE / FLOW SENSOR:**
Connect flow sensor and master valve to controller with communication cable, see Irrigation Details. Install in dedicated 1" diameter PVC conduit.



L-1

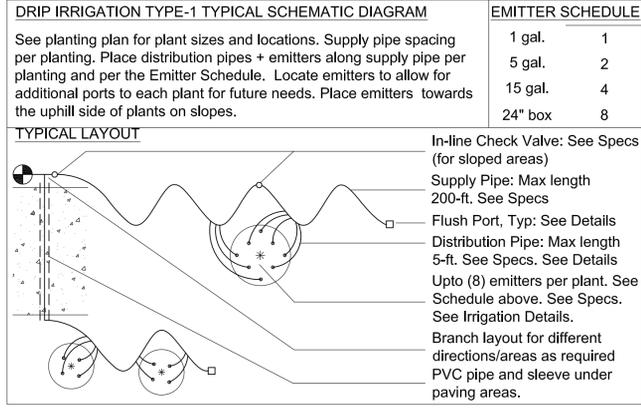


LEGEND

| SYMBOL | MANUFACTURER | DESCRIPTION |
|--------|--------------------------------------|---|
| ----- | | Main Line: 24" minimum cover. Sch. per Specs. See Plan for sizes. |
| ----- | | Lateral Line: 18" minimum cover, 24" under asphalt paving Sch. 40. See chart for size. |
| ▣ | Rainbird | 33-DLRC Quick Coupler (3/4") |
| ⊗ | King Brothers (kbi) | Full Port, True Union, PVC Ball Valve: Line Size. Lever-type |
| M | | Water Meter 2": See Civil Drawings |
| B | Febco | 2" Backflow Preventer 825YA w/ Bronze Wye Strainer |
| C | Rainmaster | Eagle Plus Series (I-Central Card) 24 Stations, Pedestal Mount, S.S. Security Enclosure, Top Open. Promax remote |
| ⊕ | Superior (MV) / Data Industrial (FS) | 2" - 3100 Normally Open Master Valve w/ FM-1.25B Flow Sensor. Connect to Controller. |
| --- | | 1" Conduit: 24" Depth minimum. For Master Valve & Flow Sensor wire and dedicated common. Separate conduit for Controller power. |
| POC | | Point of Connection |

LEGEND - DRIP IRRIGATION

| SYMBOL | MANUFACTURER | DESCRIPTION |
|--------|--------------|--|
| (00a) | | DRIP TYPE-1: 3/4" Supply pipe & 1/2" distribution pipe w/ SALCO Pro-Spec Emitters SLV-PST-CV-05 (1.0 gph) per Emmitter Schedule, and Rainbird flush ports. See Drip Irrigation Typical Schematic Diagram. See Specs. See Irrigation Details. |
| (00a) | | DRIP TYPE-2: Netafim Techline CV. Dropper interval 12" O.C. Row spacing 12" O.C. Dropper flow 0.4 GPH. See Specs. Rows are shown for illustration only. *Average no. of rows indicated. On slopes, increase row spacing by 25% for lowest 1/3 of zone. See Irrigation Details. |
| ○ | Hunter | PGV Remote Control Valve: Size as shown on plan |
| ⊕ | Netafim | Manual Disc Filter, 140 mesh, 1-1/2" @ 1-1/2" valves, 1" @ 1" valves. |
| ⊕ | Netafim | Pressure Regulator Valve, 45 psi, 1-1/2" @ 1-1/2" valves, 3/4" high-flow model at 1" valves. |
| □ | Rainbird | Flush Port |

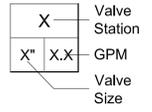


PIPE SIZING CHART - SCHEDULE 40

DRIP IRRIGATION SUPPLY LINES

NETAFIM SUPPLY / EXHAUST HEADER

| Zone / Partial Zone Flow | Pipe Size |
|--------------------------|------------|
| 0-8 GPM | PVC 3/4" |
| 8.1-13 GPM | PVC 1" |
| 13.1-22 GPM | PVC 1-1/4" |
| 22.1-30 GPM | PVC 1-1/2" |
| 30.1-50 GPM | PVC 2" |
| 50.1-75 GPM | PVC 2-1/2" |



REFERENCE NOTES

1 Minimize length of main-line run under drip-line of oak tree. Hand trench under drip-line. Do not cut any roots more than 2 inches in diameter and tunnel under these providing adequate protection to the roots. Contact the Engineer if conflicts arise that cannot be resolved with these instructions.

SEE SHEET L1 FOR GENERAL NOTES

| | | |
|------------------|----------------------------|------------------------------|
| DRAWN MKB/HJS | DESIGNED AP | HORIZONTAL SCALE AS SHOWN |
| CHECKED LF | DATE CHECKED 11-28-2012 | VERTICAL SCALE |
| APPROVED | | CONTRACT NO. |
| ENGINEER | DATE | |

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PREPARED BY:



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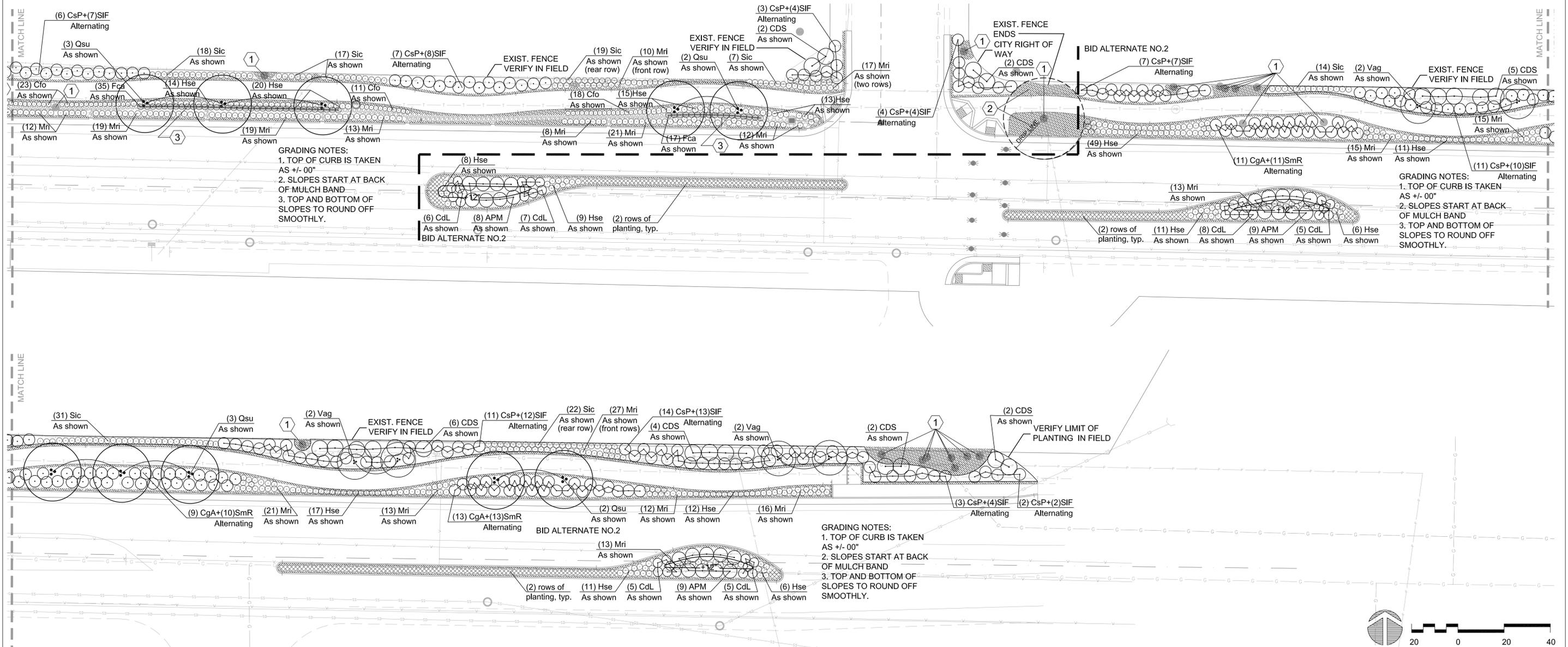
REVISIONS

| NO. | DATE | BY | DESCRIPTION | APPR. | DATE |
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| 1 | 7/12 | AP | REVISED 100% SUBMITTAL | | |
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CITY OF LOS ALTOS
HOMESTEAD ROAD SAFETY IMPROVEMENTS
PROJECT 12-19
IRRIGATION PLAN - EASTERN END
PREPARED FOR: CITY OF LOS ALTOS

| | |
|-------------|----------|
| DRAWING NO. | 20 |
| SHT | 20 OF 25 |



PLANT LEGEND

| *WUC CODE | BOTANICAL NAME | COMMON NAME | SIZE | SPACING |
|--------------------------------------|--|---|--------|----------|
| Shrubs, Groundcovers, Grasses | | | | |
| M | Hemerocallis 'Yellow' & 'Orange' See Note. No.8 | Yellow daylily / Orange daylily | 1 Gal. | 12" O.C. |
| M | Agapathus 'Peter Pan' & 'Rancho White'. Equal Qtys. Alternate colors | Dwarf Lily-of-the-Nile Dwarf white agapanthus | 1 Gal. | 12" O.C. |
| M | Carex flagellifera | Weeping brown sedge | 1 Gal. | 24" O.C. |
| M | Carex tumicola | Berkeley sedge | 1 Gal. | 18" O.C. |
| M | Sesleria autumnalis | Autumn Moor grass | 1 Gal. | 18" O.C. |
| L | Cfo Calamagrostis foliosa | Mendocino reed grass | 1 Gal. | 24" O.C. |
| L | Fca Festuca californica | California fescue | 1 Gal. | 30" O.C. |
| L | Hse Helictotrichon sempervirens | Blue oat grass | 1 Gal. | 30" O.C. |
| L | Mri Muhlenbergia rigens | Deer grass | 1 Gal. | 30" O.C. |
| L | Sic Stipa ichu | Peruvian Feather grass | 1 Gal. | 30" O.C. |
| L | APM Arctostaphylos Pacific Mist | Manzanita | 5 Gal. | |
| L | CDS Ceanothus 'Dark Star' | Wild lilac | 5 Gal. | 1 |
| L | CsP Cistus salvifolius prostratus | Sageleaf rockrose | 5 Gal. | |
| L | CgA Ceanothus gloriosus 'Anchor Bay' | Creeping blue blossom | 5 Gal. | |
| L | CdL Cotoneaster dammeri 'Lowfast' | Bearberry Cotoneaster | 5 Gal. | |
| L | SmR Salvia mellifera 'Repens' | Black sage | 5 Gal. | |
| L | SIF Salvia leucophylla 'Figuroa' | Purple Sage | 5 Gal. | |

PLANT LEGEND

| *WUC CODE | BOTANICAL NAME | COMMON NAME | SIZE |
|--------------|--------------------------|---------------|---------|
| Trees | | | |
| L | Qlo Quercus lobata | Valley oak | 24" box |
| L | Qsu Quercus suber | Cork Oak | 24" box |
| H | Sse Sequoia sempervirens | Coast Redwood | 24" box |
| L | Vag Vitex agnus-castus | Chaste Tree | 15 Gal. |

LEGEND

- River Rock area 2.0-ft wide x length as shown on Plan: See Specs. See Planting Details for depth.
- Mulch area only: See Specs. See General Note No.6
- Bio-retention Area: See Specs for Treatment Soil

REFERENCE NOTES

- 1 Existing Tree: Preserve & Protect
- 2 No planting or irrigation under drip-line of oak tree per Tree Survey Report
- 3 Bio-retention Area, 24" wide. See Civil Drawings for extent.

*** WATER USE CATEGORY (WUC) KEY**

WUCOLS Region Applicable to this Project: REGION 1

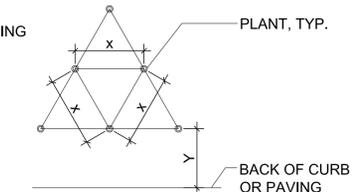
- H High
- M Moderate
- L Low
- VL Very Low
- NL Species Not Listed

* from: Water Use Classification of Landscape Species, A Guide to the Water Needs of Landscape Plants (WUCOLS) Revised August 2000, University of California Cooperative Extension, L.R. Costello, K.S. Jones

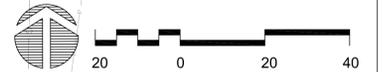
GENERAL NOTES

- All planting areas to receive pre-emergent herbicide. See Specifications.
- Prepare, amend, and fertilize existing soil per Specifications.
- Pre-mix amendments into soil before backfilling plant pits - do not mix inside pits. Break large clods into small pieces. See Specifications.
- Weed mat to be placed under river rock. See Details and Specifications
- Plant shrubs and groundcover per detail 8/L-7. See Spacing Diagram.
- Install mulch to all planting areas. See Specifications for thickness.
- See Specifications for Maintenance Period.
- Provide drought resistant low maintenance hybrids suitable for planting in public spaces. Submit plant data for review and approval.

- FOR SPACING 'X', SEE PLANTING PLAN LEGEND
- Y= 1/2X + 12" UON



GROUNDCOVER SPACING AND PLANTING SETBACK DIAGRAM

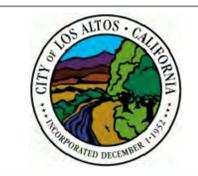


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| DRAWN MKB/HS | DESIGNED AP | HORIZONTAL SCALE AS SHOWN | 100% CONSTRUCTION DOCUMENTS |
| CHECKED LF | DATE CHECKED 2-6-2013 | VERTICAL SCALE | |
| APPROVED | | CONTRACT NO. | |
| ENGINEER | DATE | | |

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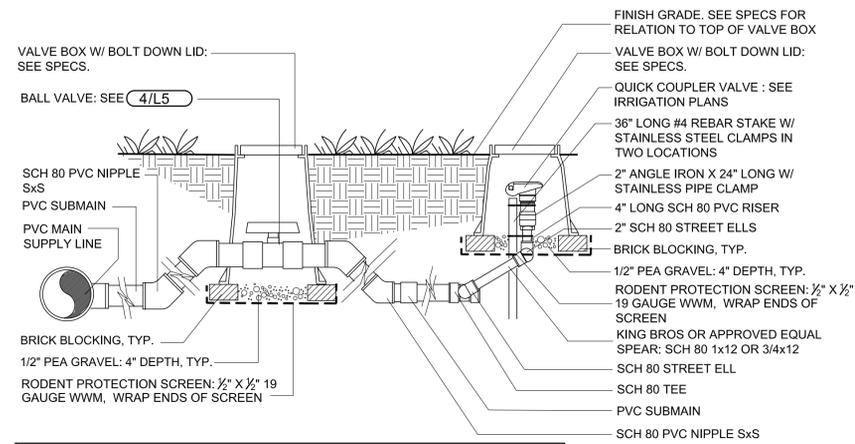
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| REVISIONS | | | | | |
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| 1 | 2/6 | AP | ADDENDUM #3 REVISIONS | | |



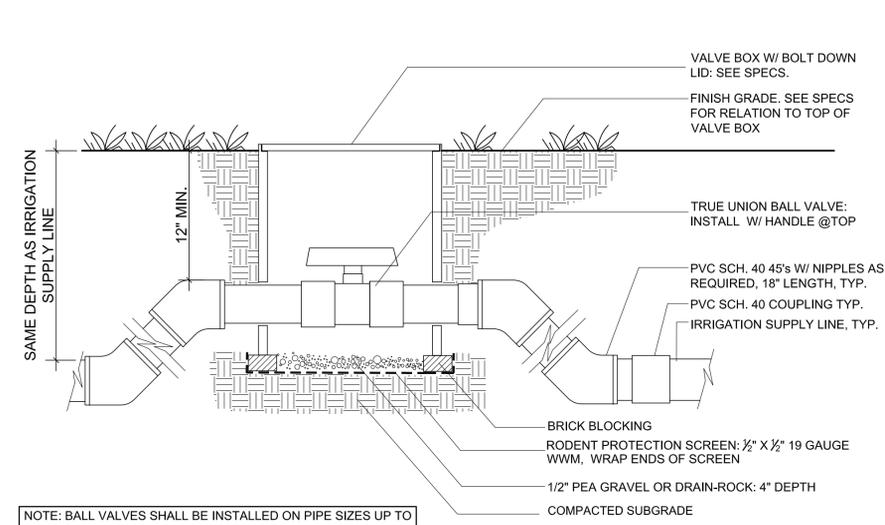
CITY OF LOS ALTOS
 HOMESTEAD ROAD SAFETY IMPROVEMENTS
 PROJECT 12-19
PLANTING PLAN - EASTERN END
 PREPARED FOR: CITY OF LOS ALTOS

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|--------------|-----------|
| DRAWING NO. | 22 |
| SHT 22 OF 25 | |



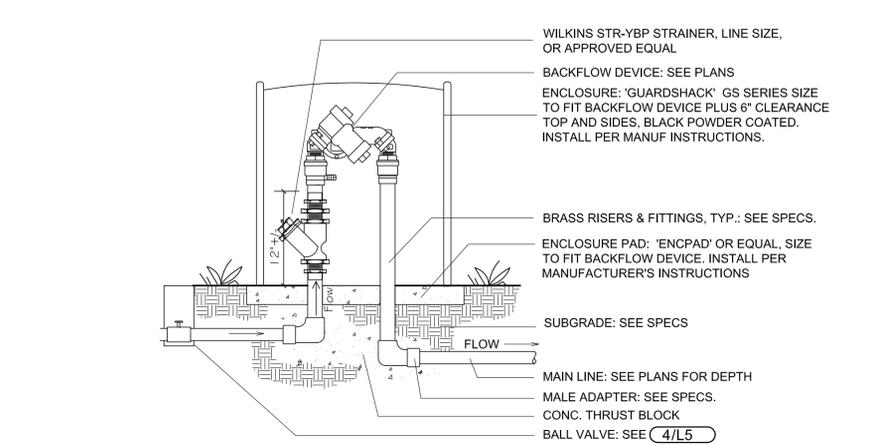
NOTE:
 1. GROUP QUICK COUPLER WITH VALVES FOR USE OF COMMON ISOLATION BALL VALVE.
 2. SCHEDULE 80 PRE-ASSEMBLED SWING MAY BE USED ONLY.
 3. DO NOT INSTALL DIRECTLY ON TOP OF LIVE WATER MAINS.
 4. BALL VALVE, MAY BE INSTALLED TO MAXIMUM OF 12" FROM FINAL GRADE WITH THE USE OF 45-DEGREE PIPE FITTINGS OR LEFT STRAIGHT IN LINE AT 18" DEEP

6 Quick Coupler
 NTS



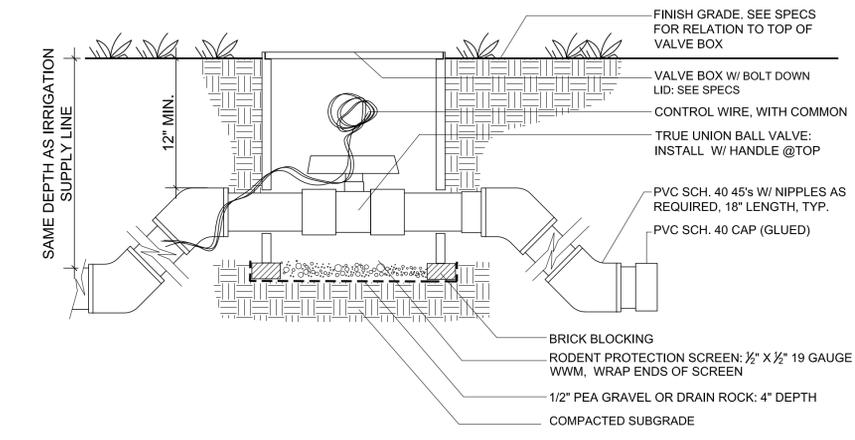
NOTE: BALL VALVES SHALL BE INSTALLED ON PIPE SIZES UP TO 3". RESILIENT SEATED VALVES ON PIPE OVER 3". THE HANDLE OF BALL VALVE SHALL BE PARALLEL TO THE SIDE OF PIPE.

4 Ball Valve
 NTS



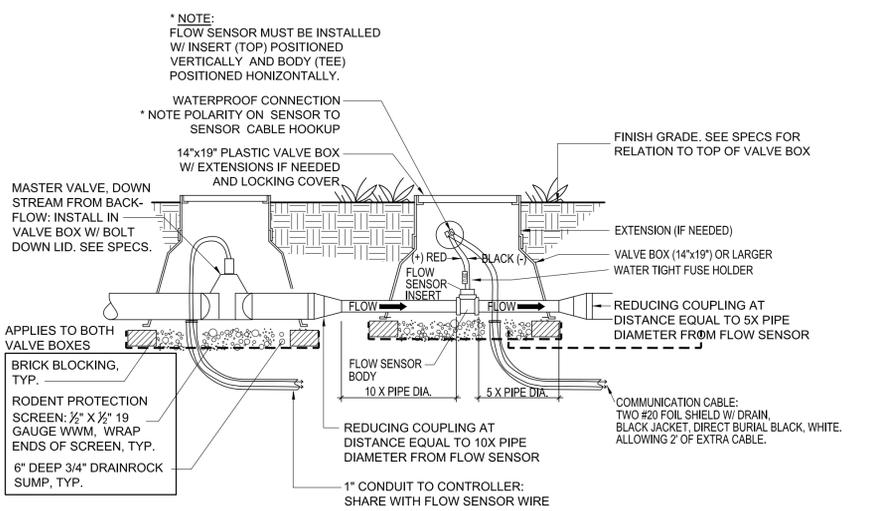
NOTES:
 1. SEE SPECS FOR BFP PIPE & FITTING MATERIALS.
 2. INSTALL COUPLING AND CONNECT PIPING AS SHOWN.
 3. ISOLATION VALVE ON WATER SUPPLIERS SIDE.
 4. INSTALL BALL TYPE TEST COCKS WITH COVERS TO ALLOW FOR STANDARD BACK-FLOW TESTER UNIT EQUIPMENT CONNECTION.

2 Backflow Device
 NTS

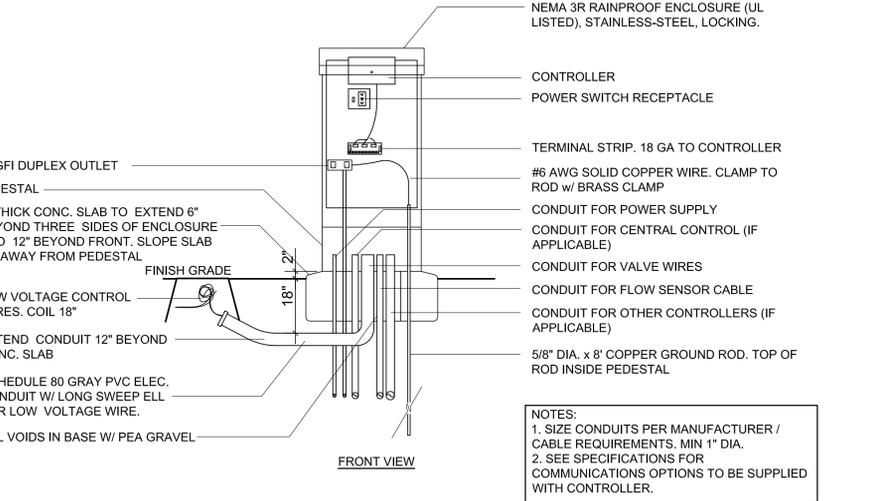


NOTE: BALL VALVES SHALL BE INSTALLED ON PIPE SIZES UP TO 3". RESILIENT SEATED VALVES ON PIPE OVER 3". THE HANDLE OF BALL VALVE SHALL BE PARALLEL TO THE SIDE OF PIPE.

5 Mainline Stubout
 NTS



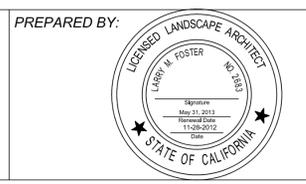
3 Master Valve / Flow sensor
 NTS



1 ET Controller Pedestal Mount Top Entry
 NTS

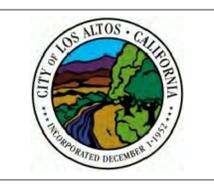
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| ENGINEER | DATE | CONTRACT NO. |

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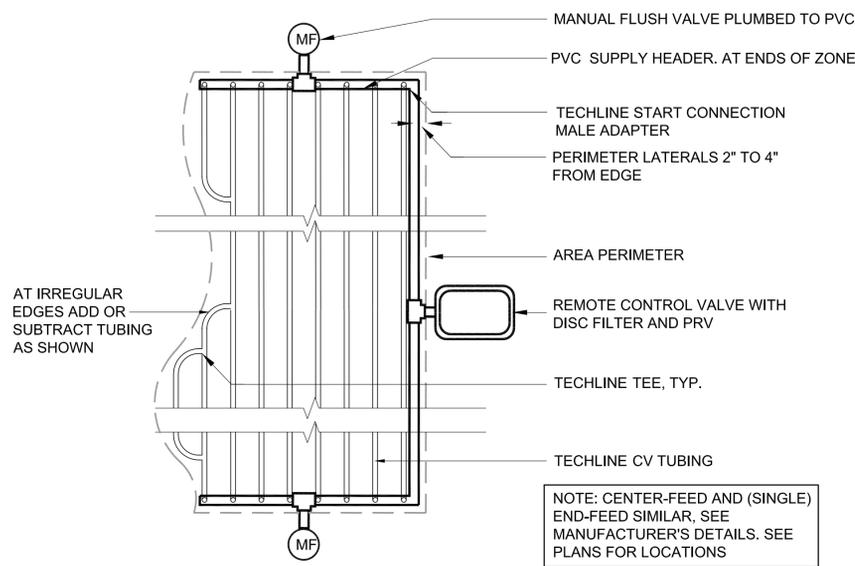
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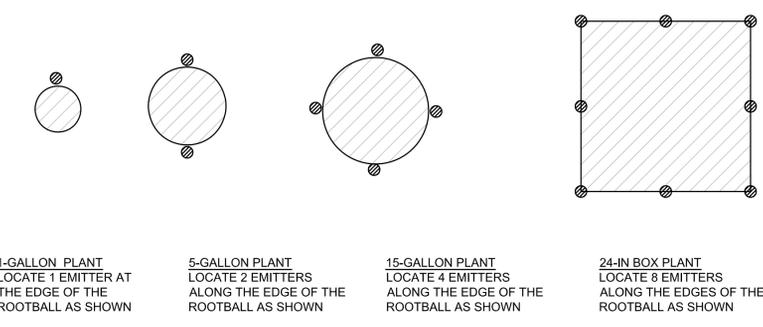


CITY OF LOS ALTOS
 HOMESTEAD ROAD SAFETY IMPROVEMENTS
 PROJECT 12-19
IRRIGATION DETAILS
 PREPARED FOR: CITY OF LOS ALTOS

DRAWING NO.
23
 SHT 23 OF 25

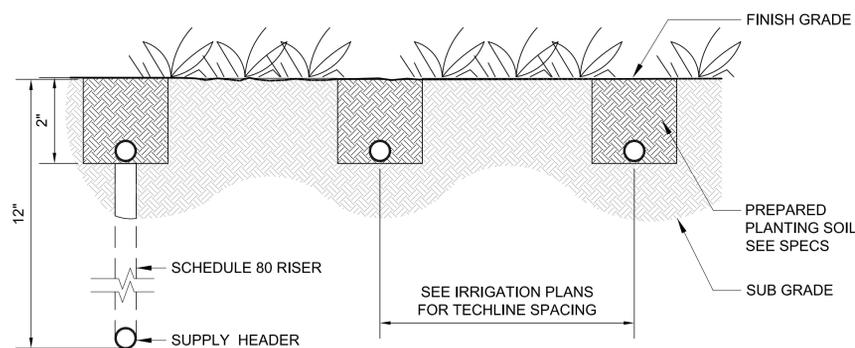


9 Tech Line CV : Dual-End Feed layout
NTS

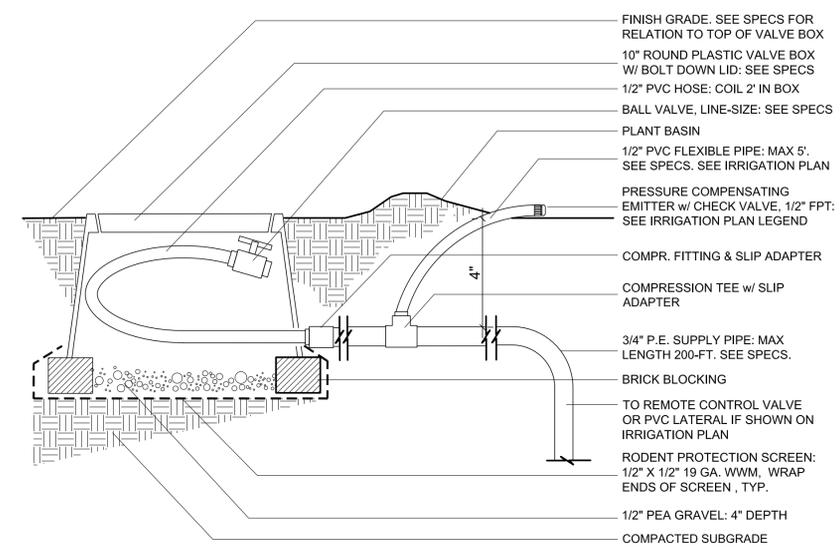


- NOTES:
- ON SLOPES, LOCATE THE EMITTERS TOWARDS THE UPHILL SIDE OF THE ROOTBALL
 - SEE IRRIGATION LEGEND FOR EMITTER GPH AND CONNECTION METHODS TO SUPPLY LINE
 - SEE SPECS FOR SUPPLY & DISTRIBUTION PIPE
 - IF USING SOAKER HOSE OR DRIPPER LINE PROVIDE EQUIVALENT NUMBER OF DRIPPERS IN SIMILAR PATTERN AROUND ROOTBALLS

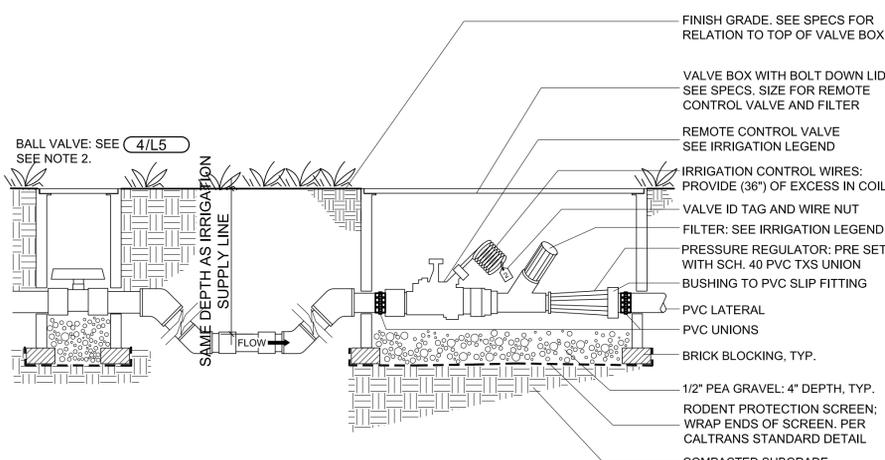
8 Drip Irrigation : Emitter Layout
NTS



7 Tech Line CV : Subgrade Installation
NTS

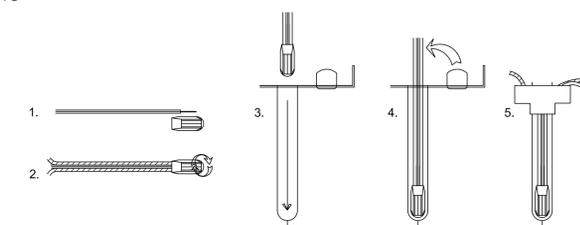


6 Drip Irrigation : Emitter / Flush Port
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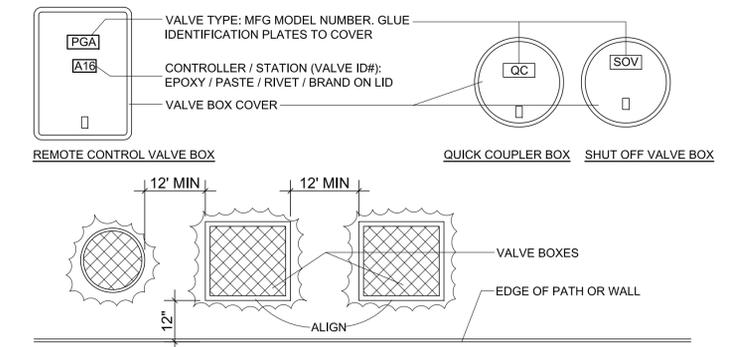
- NOTE:
- ONE REMOTE CONTROL VALVE, FILTER, AND REGULATOR PER BOX.
 - ONE SHUT-OFF VALVE PER VALVE MANIFOLD.
 - BOX SHALL NOT REST UPON OR TOUCH THE VALVE, FILTER OR ANY LATERAL AT ANY POINT.
 - 'TEFLON' TAPE REQUIRED ON ALL THREADED JOINTS.

5 Drip Irrigation : Valve Assembly
NTS



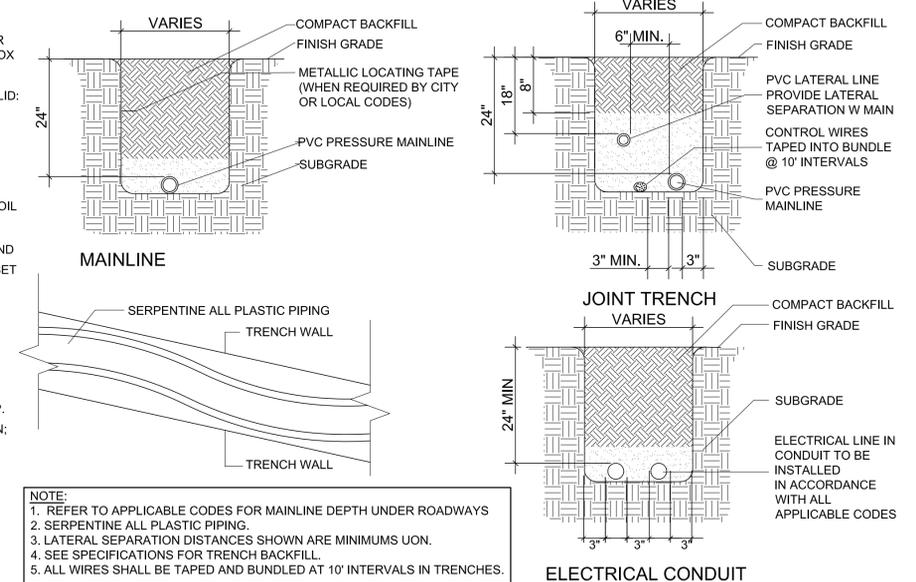
- INSTRUCTIONS:
- STRIP WIRES APPROXIMATELY 1/2" (12.7mm) TO EXPOSE WIRE.
 - TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
 - INSERT WIRE ASSEMBLY INTO PLASTIC TUBE UNTIL WIRE CONNECTOR SNAPS PAST LIP IN BOTTOM OF TUBE.
 - PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
 - INSPECT FINAL SPLICE ASSEMBLY TO BE SECURE AND FINISHED.

4 Weatherproof Splice Assembly
NTS



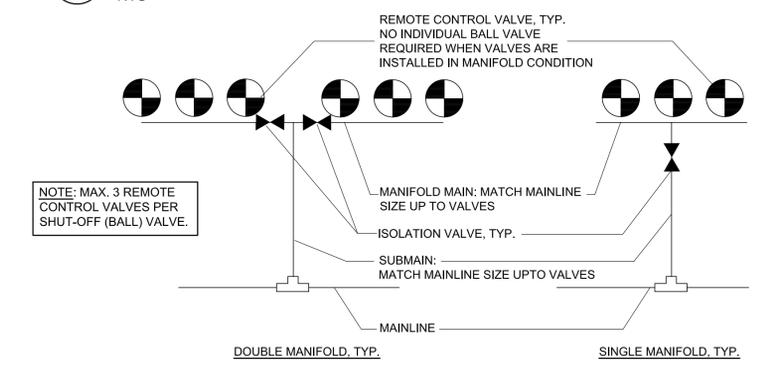
- NOTE:
- ALL VALVE BOXES NEED TO BE IDENTIFIED. EPOXY / PASTE / RIVET / BRAND VALVE ID # ON BOX.
 - VALVE BOXES SHALL HAVE 12" CLEARANCE FROM STRUCTURES AND ANY CONCRETE AREAS. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO CONCRETE, SOUND WALL, HEADERBOARD, ETC.
 - SET BOXES 1-1/2" ABOVE FINISHED GRADE IN MULCH-COVERED AREAS. SET BOXES 1/2" ABOVE GRADE IN TURF AREAS. BOXES TO BE PERPENDICULAR TO FINISH GRADE
 - SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER / SHRUB AND NOT IN SIDEWALK OR ROADWAY. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
 - INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS. ROUND VALVE BOXES SHALL HAVE 4 COMMON BRICKS INSTALLED UNDER EACH CORNER. THE BRICKS ARE ADDED FOR STABILITY. BRICKS SHALL NEVER BE PLACED OVER ANY PIPE OR ITEM THAT COULD FAIL DUE TO BRICK PLACEMENT.
 - AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.

3 Valve Box Installation
NTS



- NOTE:
- REFER TO APPLICABLE CODES FOR MAINLINE DEPTH UNDER ROADWAYS
 - SERPENTINE ALL PLASTIC PIPING.
 - LATERAL SEPARATION DISTANCES SHOWN ARE MINIMUMS UON.
 - SEE SPECIFICATIONS FOR TRENCH BACKFILL.
 - ALL WIRES SHALL BE TAPED AND BUNDLED AT 10' INTERVALS IN TRENCHES.

2 Trench & Pipe Installation
NTS



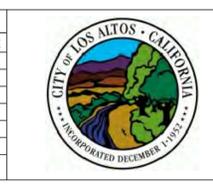
1 Typ. Valve Manifold
NTS

| | | | |
|---------------|----------------------------|------------------------------|-----------------------------------|
| DRAWN MKB | DESIGNED AP | HORIZONTAL SCALE AS SHOWN | 100% CONSTRUCTION DOCUMENTS |
| CHECKED LF | DATE CHECKED 11-28-2012 | VERTICAL SCALE | |
| APPROVED | | CONTRACT NO. | |
| ENGINEER | DATE | | |

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| REVISIONS | | | | | |
|-----------|-------|----|------------------------|-------|------|
| NO. | DATE | BY | DESCRIPTION | APPR. | DATE |
| 1 | 7/12 | AP | REVISED 100% SUBMITTAL | | |
| 2 | 11/28 | AP | REVISED 100% SUBMITTAL | | |



CITY OF LOS ALTOS
HOMESTEAD ROAD SAFETY IMPROVEMENTS
PROJECT 12-19

IRRIGATION DETAILS

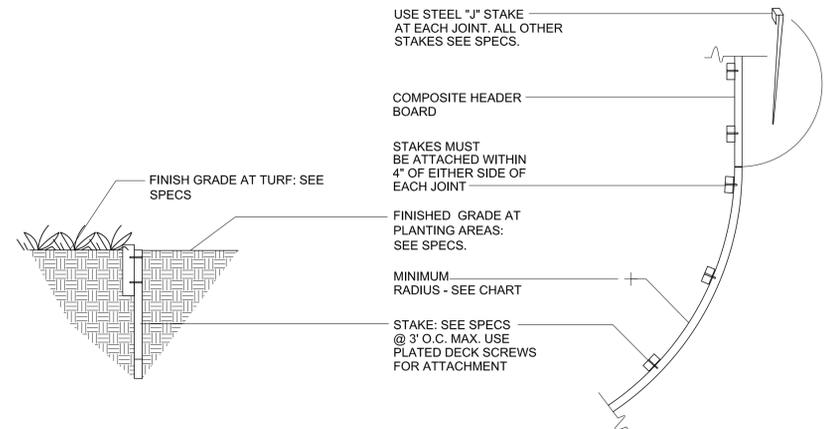
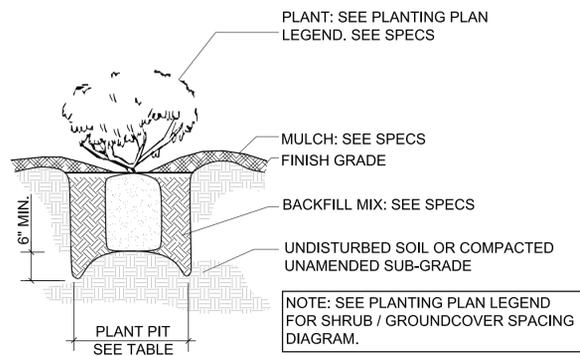
PREPARED FOR: CITY OF LOS ALTOS

DRAWING NO. **24**

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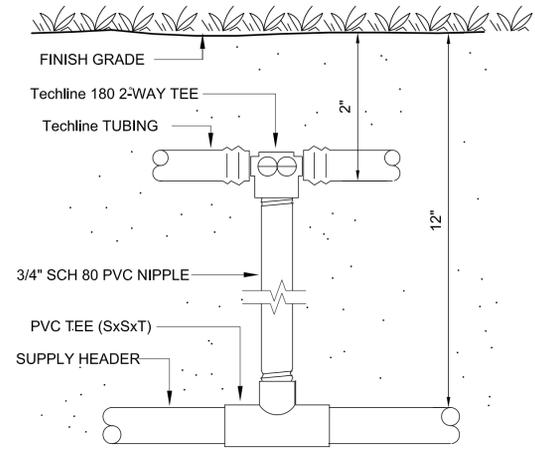
L-6

| PLANT PT SIZE TABLE | |
|---------------------|--------------------------|
| PLANT SIZE | PIT SIZE - ROOTBALL PLUS |
| 4" POT | 3" ALL AROUND |
| 1 GAL | 6" ALL AROUND |
| 5 GAL | 8" ALL AROUND |
| 15 GAL | 10" ALL AROUND |



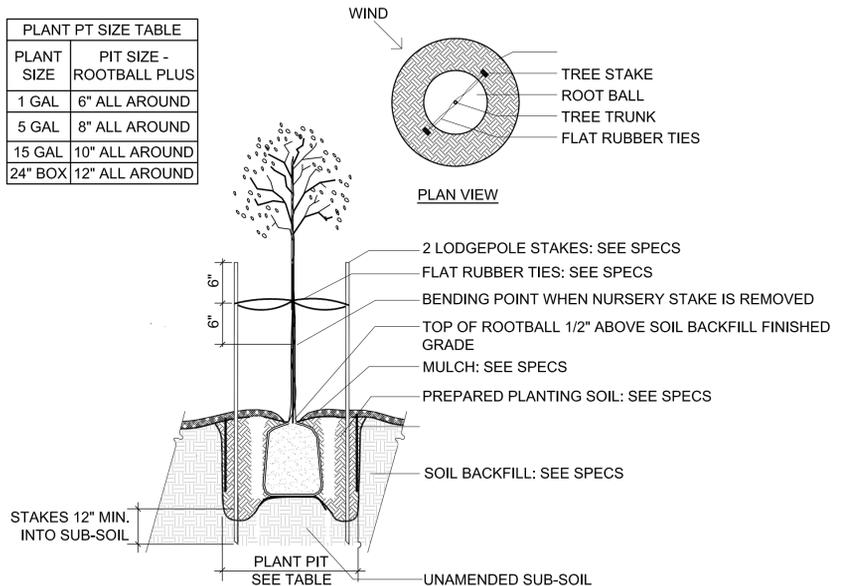
| COMPOSITE HEADERBOARD CHART | | | |
|-----------------------------|-----------|-----------------------|-------------------------|
| PRODUCT | NOM. SIZE | ACTUAL DIMENSIONS | MINIMUM RADIUS POSSIBLE |
| BELLA BOARD | 5/4 X 6 | 5 1/2" x 15/16" x 20' | 120" |

NOTE: 1. USE COARSE WOOD WORKING TOOLS FOR CUTTING & DRILLING

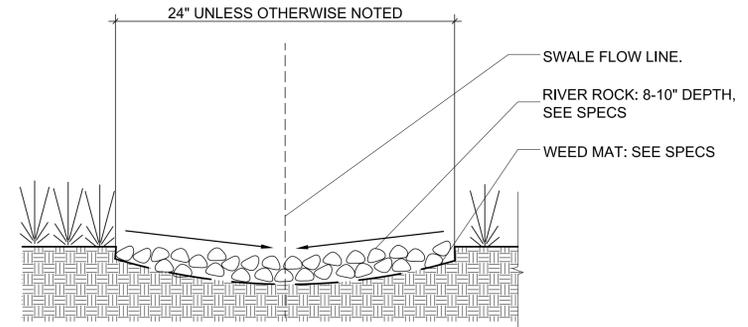


8 Shrub / Groundcover Planting
NTS

| PLANT PT SIZE TABLE | |
|---------------------|--------------------------|
| PLANT SIZE | PIT SIZE - ROOTBALL PLUS |
| 1 GAL | 6" ALL AROUND |
| 5 GAL | 8" ALL AROUND |
| 15 GAL | 10" ALL AROUND |
| 24" BOX | 12" ALL AROUND |

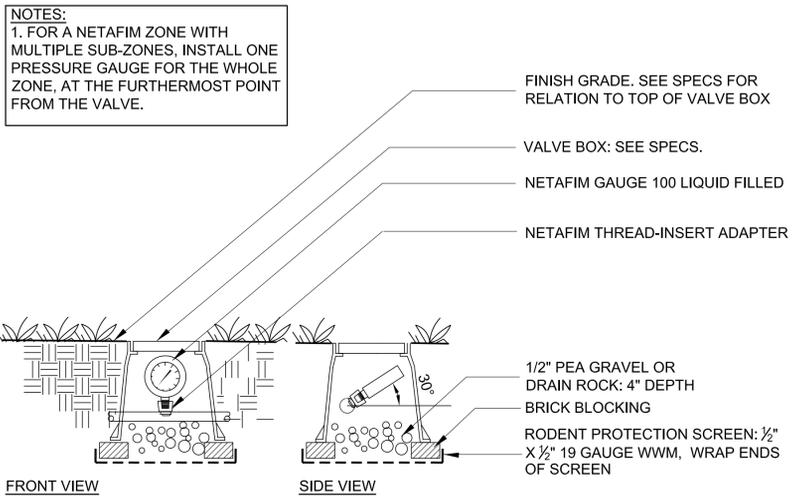


7 Tree Planting
NTS



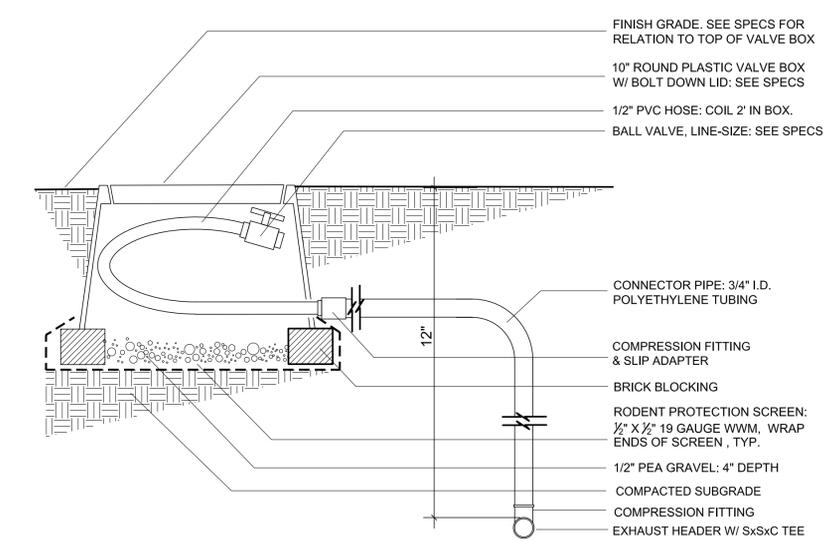
6 River Rock Swale
NTS

5 Composite Headerboard
NTS

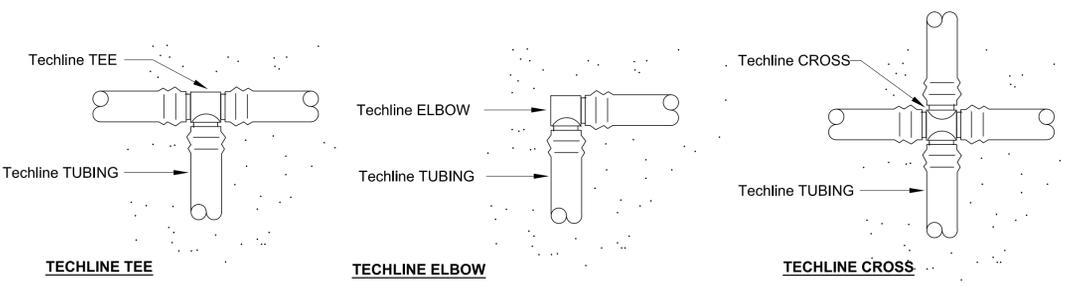


4 Pressure Gauge
NTS

2 Techline Start Connection w PVC Riser
NTS



1 Manual Flushing Valve
NTS



3 Techline Fittings
NTS

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|---------------|----------------------------|------------------------------|-----------------------------------|
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| DRAWING NO. | 25 |
| SHT 25 OF 25 | |