

SECTION 19.70.040

# **LANDSCAPE DESIGN GUIDELINES**

**TECHINICAL MANUAL FOR LANDSCAPE DESIGN GUIDELINES**

WATER USE CLASSIFICATIONS OF LANDSCAPE SPECIES (WUCOLS) LIST  
APPROVED TREE LIST FOR THE CITY OF PERRIS  
DESIGN DETAILS



## **CITY OF PERRIS**

**DEVELOPMENT SERVICES DEPARTMENT  
PLANNING DIVISION**

135 NORTH "D" STREET, PERRIS, CA, 92570-2200  
TEL: (951) 943-5003 FAX: (951) 943-8379

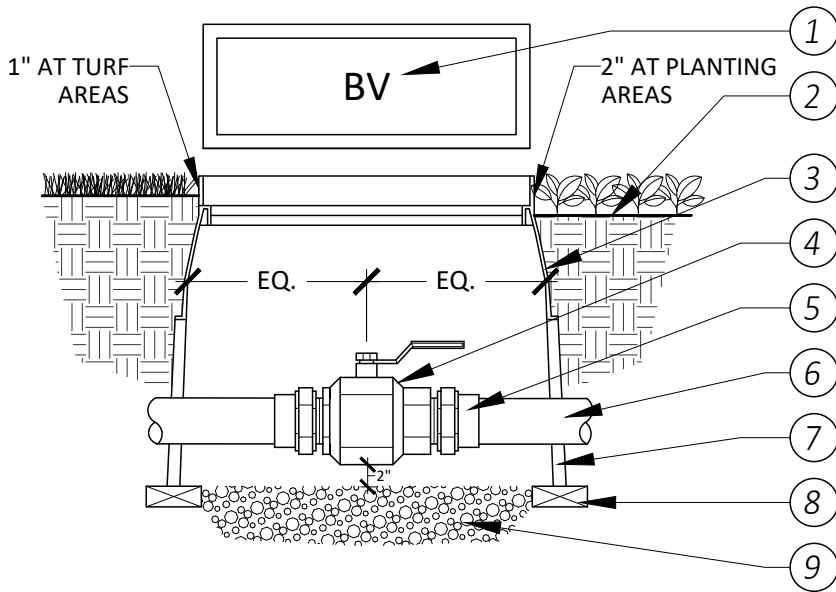


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#### LEGEND:

- ① HEAT BRAND "BV" ON LID IN 1" HIGH CHARACTERS
- ② FINISH GRADE
- ③ RECTANGULAR VALVE BOX WITH BOLT-DOWN LID AND SS BOLT. BOX AND LID TO BE GREEN
- ④ BALL VALVE PER IRRIGATION PLAN
- ⑤ SCH 40 PVC MALE ADAPTER 2 REQUIRED
- ⑥ MAINLINE PIPING PER IRRIGATION PLAN
- ⑦ VALVE BOX EXTENSION(S) AS REQUIRED
- ⑧ BRICK (1 OF 4)
- ⑨ 3/4" CRUSHED ROCK - 4" DEPTH

#### NOTES:

1. USE TEFLON TAPE ON ALL MALE PIPE THREADS
2. CENTER VALVE IN BOX TO INSURE FULL SWING OF HANDLE

N.T.S.

## BALL VALVE



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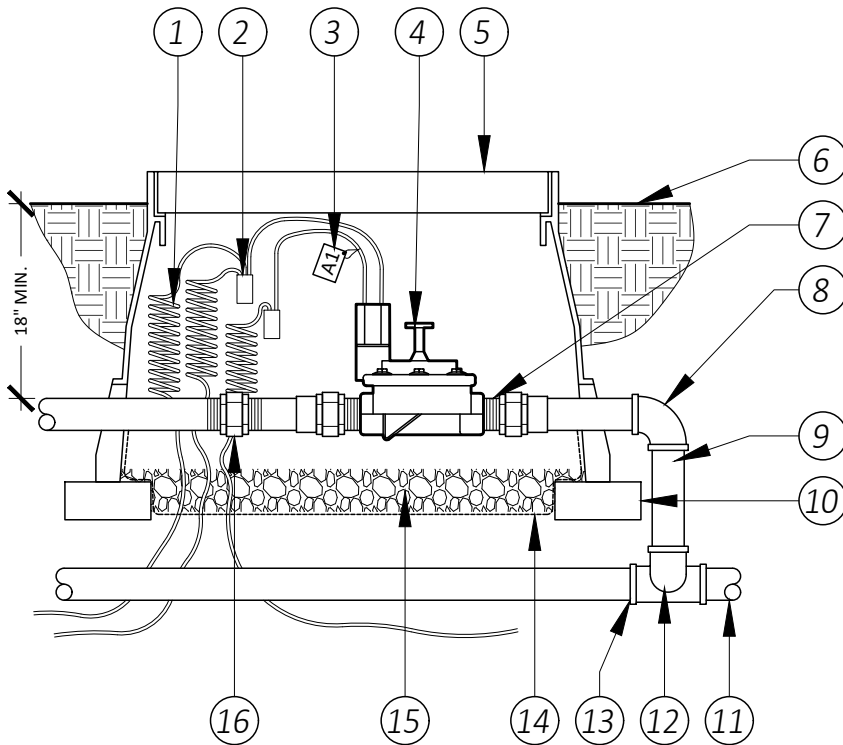
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#### LEGEND:

- ① 30" LINEAR LENGTH OF WIRE, COILED
- ② WATERPROOF CONNECTION
- ③ ID TAG: RAIN BIRD VID SERIES OR EQUAL
- ④ REMOTE CONTROL VALVE
- ⑤ VALVE BOX WITH COVER
- ⑥ TOP OF MULCH BELOW TOP OF COVER 1/2" FOR TURF & 1" FOR GROUND COVER
- ⑦ PVC SCH 80 NIPPLE
- ⑧ PVC SCH 40 ELL
- ⑨ PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- ⑩ BRICK (1 OF 4)
- ⑪ PVC MAINLINE PIPE
- ⑫ SCH 40 NIPPLE (2" LENGTH, HIDDEN) AND SCH 40 ELL
- ⑬ PVC SCH 40 TEE OR ELL
- ⑭ 1/4" HARDWARE CLOTH TO PROTECT FROM BURROWING PESTS
- ⑮ 3" MIN. DEPTH OF 3/4" WASHED GRAVEL
- ⑯ PVC UNION (SIZE AS REQUIRED)



#### NOTES:

1. TEE OFF MAINLINE TO BE SAME SIZE AS LATERAL LINE EXITING VALVE. ONLY REDUCE PIPE SIZE AT VALVE
2. FOR RECLAIMED WATER USE PURPLE VALVE BOX COVER, PIPE, ET. AL.
3. INCLUDE ADDITIONAL EXTENSION AS NEEDED, SAME BRAND AS VALVE BOX

N.T.S.

## REMOTE CONTROL VALVE

1-2

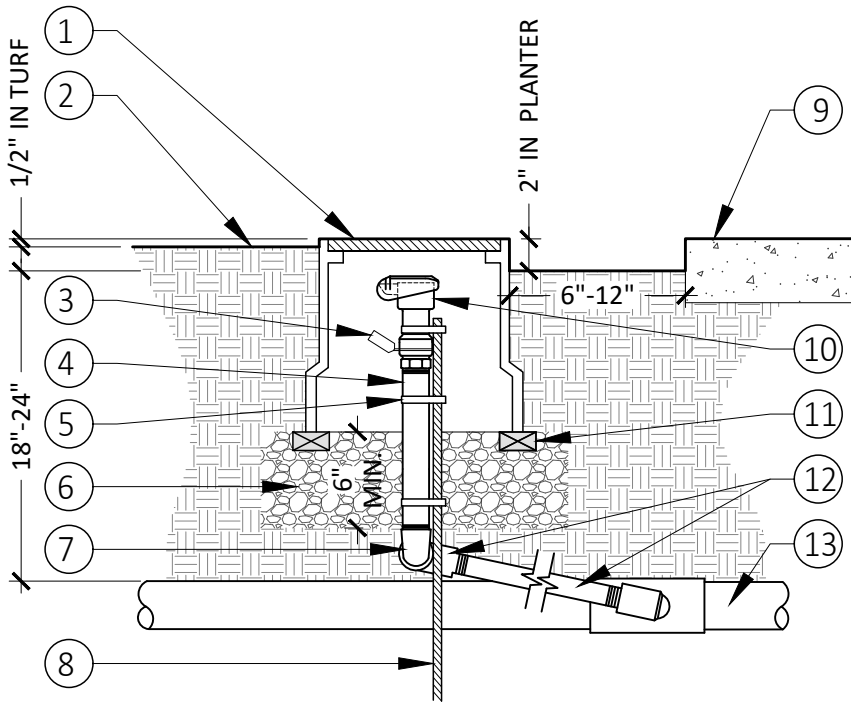
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### LEGEND:

- ① VALVE BOX WITH LOCKING LID AND HEAT BRAND 'QC' IN 2" LETTERS
- ② FINISH GRADE
- ③ I.D. TAG
- ④ BRASS NIPPLE
- ⑤ STAINLESS STEEL SCREW CLAMP
- ⑥ 3/4" CRUSHED AGGREGATE (WASHED)
- ⑦ BRASS 90 ELL
- ⑧ #4 REBAR STAKE (24" MIN)
- ⑨ HARDSCAPE (WHERE OCCURS)
- ⑩ QUICK COUPLING VALVE WITH LOCKING COVER AND KEY LUG
- ⑪ COMMON BRICK (APPROX. 4x2x8)
- ⑫ BRASS 90 STREET ELL FITTING
- ⑬ PRESSURE MAIN LINE

### NOTES:

1. INSTALL VALVE BOX EXTENSIONS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION AT MAIN LINE DEPTH. EXTENSIONS TO BE THE SAME BRAND.
2. INSTALL CHRISTY I.D. TAGS ON ALL RECYCLED IRRIGATION SYSTEMS.
3. VALVE BOX LID SHALL BE GREEN UNLESS A DIFFERENT COLOR IS CALLED FOR BY PLANS.
4. QUICK COUPLERS SHALL HAVE A LOCKING COVER

SCALE: 1"=1'-0"

## QUICK COUPLER VALVE



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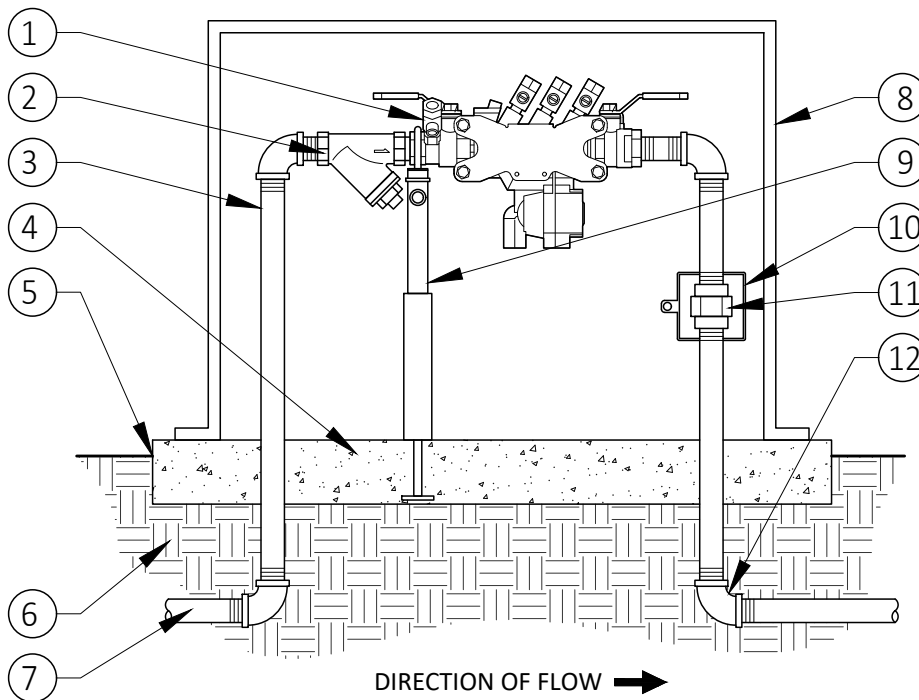
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### LEGEND:

- ① WILKINS MODEL 375XL
- ② WYE TYPE STRAINER MODEL SXL  
SIZE TO MATCH BACKFLOW
- ③ BRASS RISER, SIZE TO MATCH  
BACKFLOW
- ④ CONCRETE BASE
- ⑤ FINISH GRADE 1" BELOW  
CONCRETE PAD
- ⑥ COMPACTED SUBGRADE
- ⑦ FROM METER
- ⑧ STRONG BOX ENCLOSURE
- ⑨ SENTRY GUARD CABLE  
INSTALL PER MANUFACTURER
- ⑩ SENTRY UNION GUARD  
INSTALL PER MANUFACTURER
- ⑪ BRASS UNION  
(SIZE AS REQUIRED)
- ⑫ BRASS ELBOW



### NOTES:

1. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES, HEALTH DEPARTMENT STANDARDS, AND MANUFACTURER'S DIRECTIONS. CONTRACTOR SHALL VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION. FINAL BACKFLOW PREVENTER LOCATION TO BE DETERMINED IN THE FIELD.
2. SCREEN WITH SHRUBS WHEN POSSIBLE

N.T.S.

## REDUCED PRESSURE BACKFLOW PREVENTER (1" - 2")

1-6

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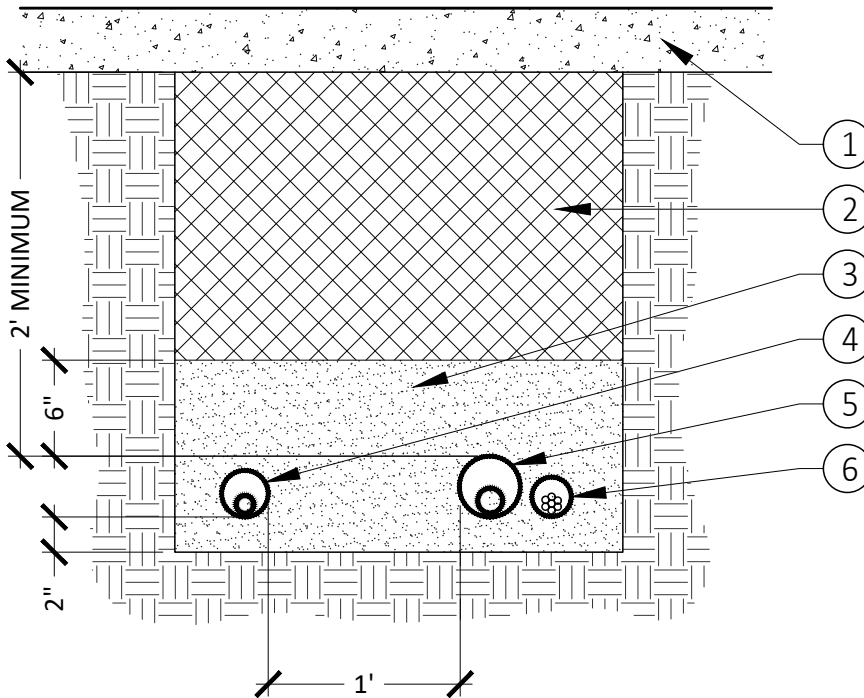
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### LEGEND:

- ① HARDSCAPE (TYPICAL)
- ② CLEAN BACKFILL - 90%  
COMPACTION REQUIRED, SEE  
SPECS
- ③ WASHED SAND (TYPICAL)
- ④ NON-PRESSURE LATERAL  
LINE/SLEEVE (SIZE PER CHART)
- ⑤ PRESSURE SUPPLY LINE/SLEEVE  
(SIZE PER CHART)
- ⑥ CONTROL WIRE SLEEVE  
ADJACENT TO MAINLINE SLEEVE  
(SIZE PER CHART)



PRESSURE MAINLINE	LANDSCAPE	<3"	24"
		3"+	36"
	VEHICULAR PAVING	<3"	30"
		3"+	36"
NON PRESSURE LATERAL	LANDSCAPE	<3"	12"
		3"+	18"
	VEHICULAR PAVING	<3"	24"
		3"+	30"

#### NOTES:

1. SIZE ALL SLEEVES PER SLEEVING CHART ON PLANS. EXTEND SLEEVES 12" BEYOND EDGE OF HARDSCAPE ON BOTH ENDS. RECLAIMED WATER SLEEVES TO BE A MINIMUM OF 42" - 48" DEEP (OR PER WATER DISTRICT STANDARDS) WHERE APPLICABLE.
2. FOR INSTALLATION PRIOR TO PIPING WORK, ADD TO SLEEVE ENDS PVC PIPES EXTENDING VERTICALLY FROM END OF SLEEVE TO BE 18" ABOVE GRADE.
3. AFTER PIPE OR WIRE INSTALLATION, SEAL ANY OPENINGS AT ENDS WITH EXPANDABLE FOAM.

N.T.S.

## SLEEVING



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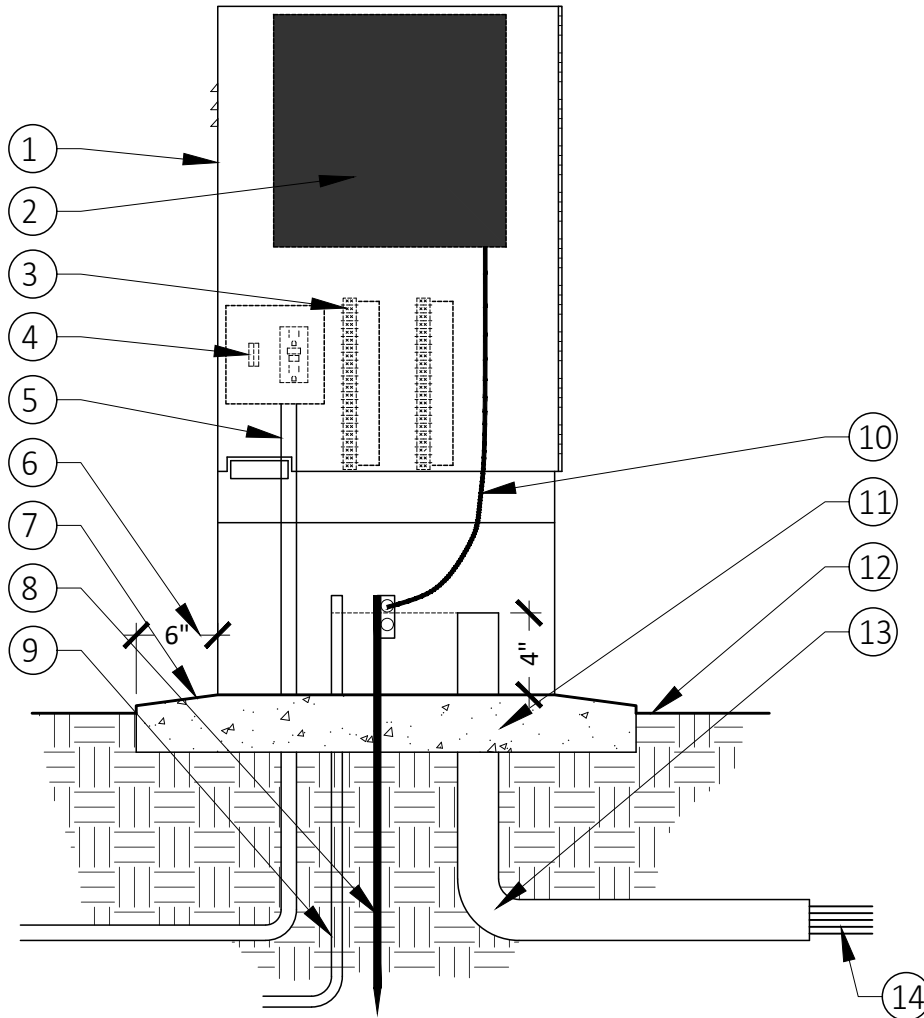
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### LEGEND:

- ① TOP MOUNT STAINLESS STEEL ENCLOSURE
- ② WEATHER TRAK ET PRO3
- ③ TERMINAL STRIPS FOR CONTROL WIRES
- ④ 120V ON-OFF SWITCH WITH GFI CONVENIENCE OUTLET
- ⑤ 120V AC POWER IN CONDUIT
- ⑥ EXTEND EDGE OF BASE 6" BEYOND EDGE OF ENCLOSURE
- ⑦ SLOPE EDGE OF BASE 1% TO DRAIN AWAY FROM ENCLOSURE
- ⑧ 5/8" COPPER GROUNDING ROD LENGTH PER LOCAL CODE OR MANUFACTURER SPECIFICATIONS
- ⑨ 2" PVC SWEEP ELL AND CONDUIT FOR FLOW SENSOR CABLE AND MASTER VALVE WIRES
- ⑩ GROUND CONTROLLER PER MANUFACTURER
- ⑪ 'QUICKPAD' ENCLOSURE MOUNTING PAD PER MFG'S SPECS
- ⑫ FINISH GRADE
- ⑬ 3" PVC SWEEP ELL - EXTEND 12" BEYOND EDGE OF BASE
- ⑭ DIRECT BURIAL CONTROL WIRES TO VALVES



N.T.S.

## EXTERIOR CONTROLLER

1-8

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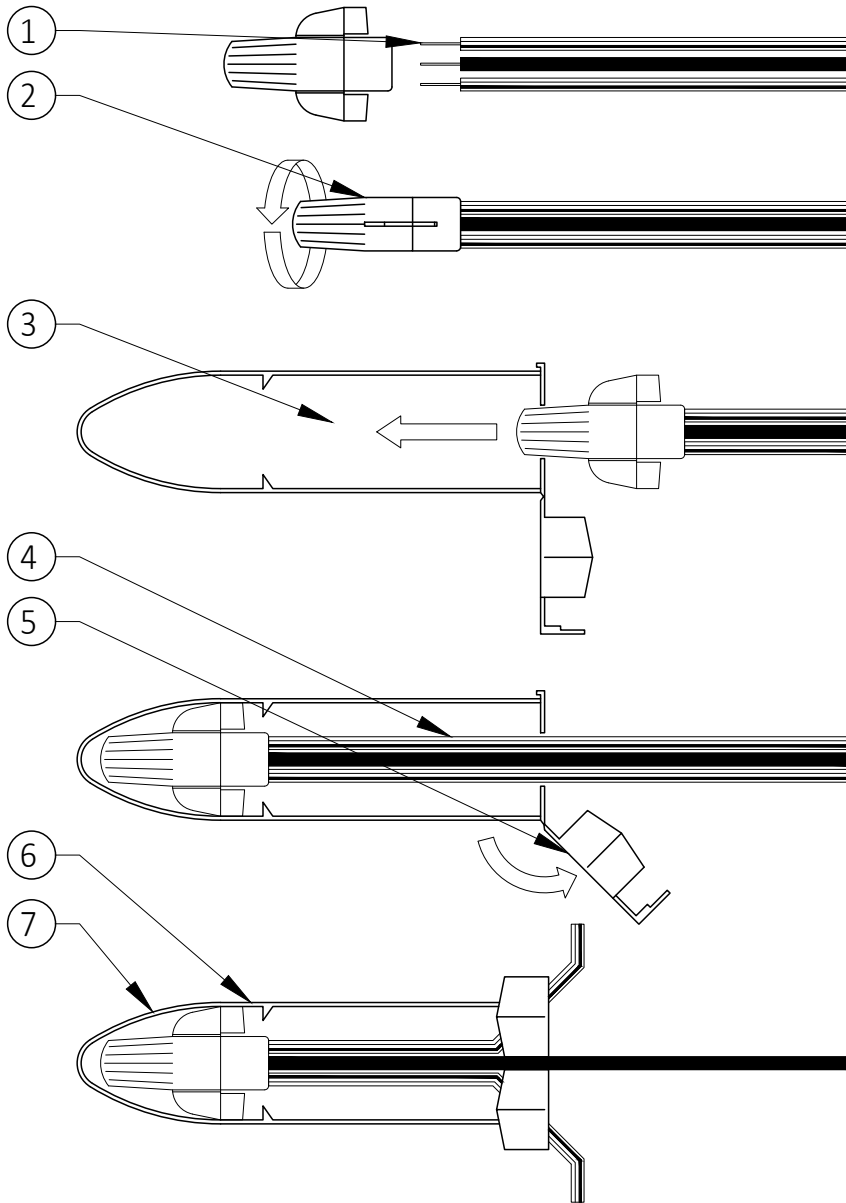


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#### LEGEND:

- ① STRIP WIRES APPROX. 3/4" FROM ENDS
- ② WITH WIRE ENDS EVEN, INSERT WIRES INTO THE CONNECTOR AND TIGHTEN UNTIL SECURE
- ③ INSERT THE CONNECTOR ALL THE WAY INTO THE TUBE UNTIL THE CONNECTOR RESTS ON THE BOTTOM
- ④ FOLD THE WIRE INTO THE CHANNELS
- ⑤ CLOSE THE CAP
- ⑥ COMPLETED WATERPROOF WIRE CONNECTION
- ⑦ CONNECTIONS SHALL BE 3M DBR/Y WIRE CONNECTOR OR APPROVED EQUAL

N.T.S.

## 2-WIRE SYSTEMS

I-12

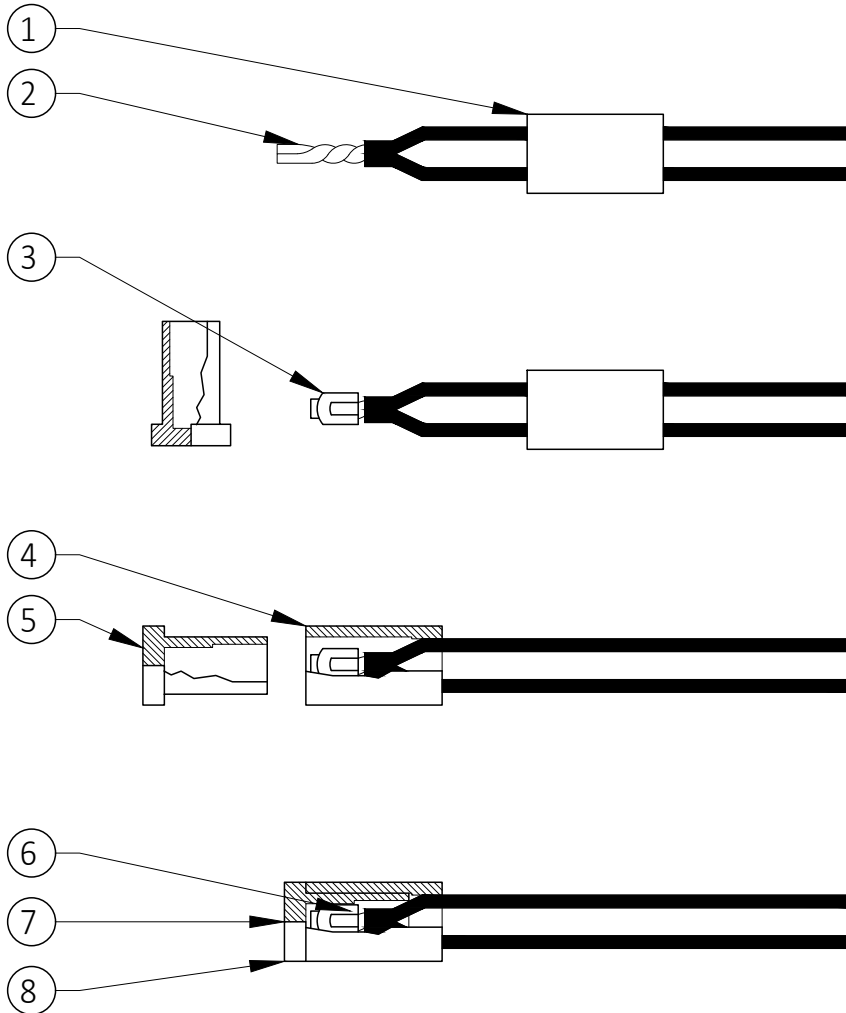
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### LEGEND:

- ① SLIP BASE SOCKET OVER END OF WIRES
- ② STRIP WIRES APPROX. 5/8" FROM ENDS - TWIST TOGETHER WITH PLIERS
- ③ PUT CRIMP END OVER WIRE ENDS - CRIMP SLEEVE AND CUT OFF EXCESS WIRE
- ④ PULL BASE SOCKET OVER END OF WIRES AS FAR AS POSSIBLE
- ⑤ PUSH SEALING PLUG INTO BASE SOCKET
- ⑥ PUSH WIRES TO END OF BASE SOCKET TO INSURE COMPLETE SEALING OF CONNECTION
- ⑦ COMPLETED WATERPROOF WIRE CONNECTION
- ⑧ CONNECTIONS SHALL BE SPEARS DS-100 WIRE CONNECTOR OR APPROVED EQUAL

N.T.S.

## CONVENTIONAL COMMON/SIGNAL WIRE

I-12

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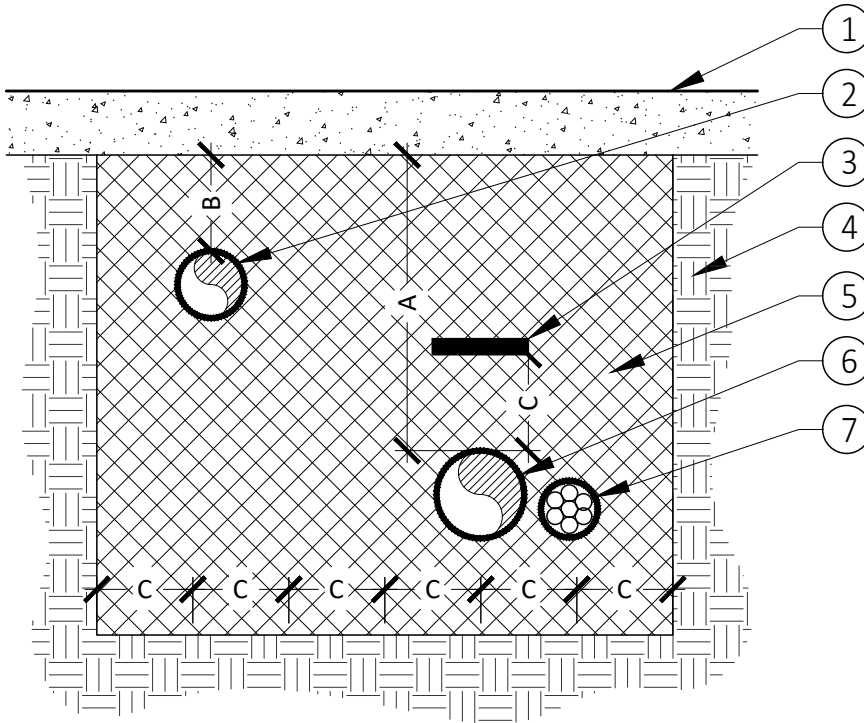
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### LEGEND:

- ① FINISH GRADE
- ② LATERAL LINES, SEE SPECS
- ③ 3" WIDE I.D. TAPE, SEE SPECS FOR TYPE
- ④ UNDISTURBED NATIVE SOIL
- ⑤ CLEAN BACKFILL - 90% COMPACTION REQUIRED, SEE SPECS
- ⑥ PRESSURE MAINLINE
- ⑦ CONTROL WIRE



DIMENSION	A	B	C
1/2" - 2 1/2"	18"	12"	6"
3" - 4"	24"	X	6"
6"	36"	X	6"

**NOTES:**

1. ALL PIPE UNDER PAVING SHALL BE INSTALLED IN A PURPLE PVC CL 200 SLEEVE TWICE THE DIAMETER OF THE CARRIER PIPE AND LOCATED AT A DEPTH OF 36" TO TOP OF SLEEVE.

N.T.S.

## TRENCHING

I-13

DATE: 08/12/24

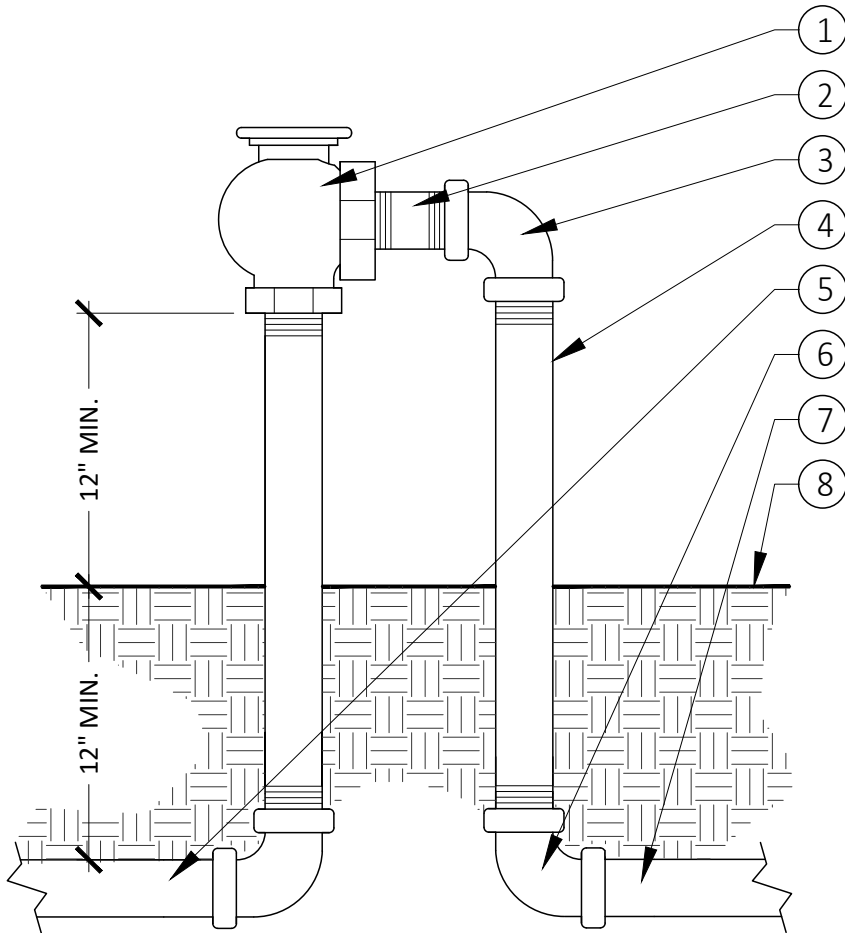


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#### LEGEND:

- ① ATMOSPHERIC VACUUM BREAKER PER LEGEND INSTALL MINIMUM 12" ABOVE THE HIGHEST HEAD ON IT'S VALVE AND PER ALL LOCAL CODES.
- ② SCH 80 UV RESISTANT PVC THREADED NIPPLE - 4" MIN. LENGTH SAME SIZE AS VALVE
- ③ SCH 40 PVC ELL - T x T SAME SIZE AS VALVE
- ④ SCH 80 UV RESISTANT PVC THREADED NIPPLE - LENGTH AS REQUIRED - SAME SIZE AS VALVE
- ⑤ PVC LATERAL LINE FROM VALVE - PER LEGEND
- ⑥ SCH 40 PVC ELL - S x T - SAME SIZE AS VALVE
- ⑦ PVC LATERAL LINE TO HEADS - PER LEGEND
- ⑧ FINISH GRADE

N.T.S.

## ATMOSPHERIC VACUUM BREAKER

1-14

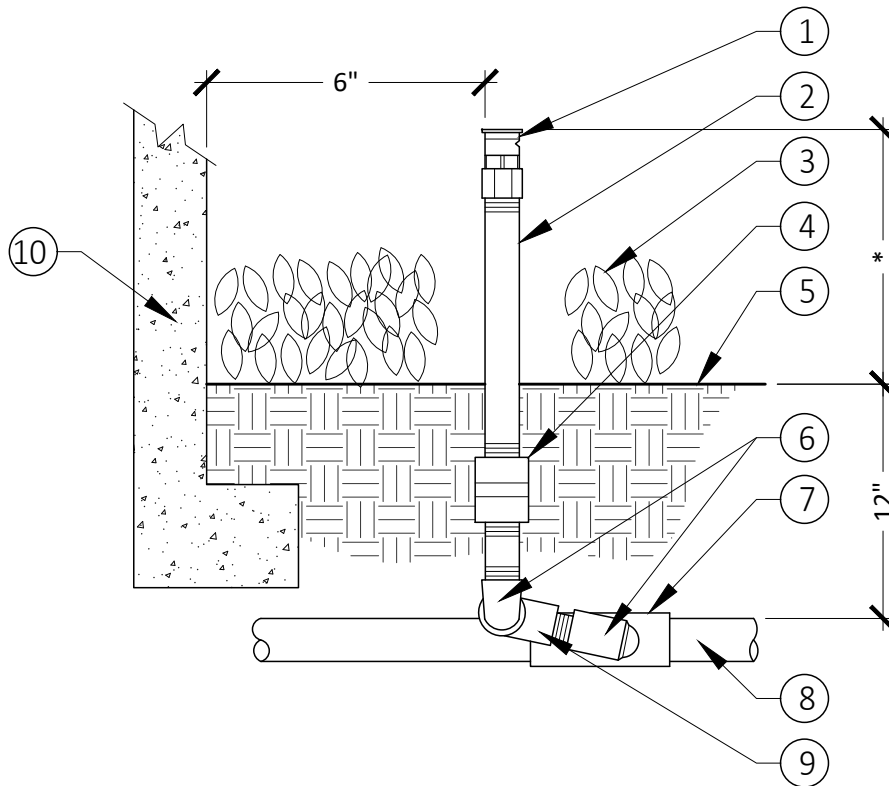
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### LEGEND:

- ① SHRUB SPRAY HEAD / BUBBLER PER LEGEND
- ② PVC SCH 80 NIPPLE - LENGTH AS REQUIRED
- ③ SHRUB AND/OR GROUND COVER PLANTING
- ④ ANTI-DRAIN VALVE AS REQUIRED
- ⑤ FINISH GRADE
- ⑥ MARLEX STREET ELL - TxT
- ⑦ PVC SCH 40 LATERAL LINE FITTING
- ⑧ LATERAL LINE PIPING PER LEGEND
- ⑨ PVC SCH 40 STREET ELL - TxT
- ⑩ WALL, FENCE, OR CURB, ETC.

\*RISER HEIGHT SHALL BE SET AT LEAST 6" CLEAR OF HEAD SPRAY PATTERN

#### NOTES:

1. LOW HEAD DRAINAGE WILL NOT BE ALLOWED. CONTRACTOR TO INSTALL ANTI-DRAIN CHECK VALVES ON ALL HEADS THAT SHOW ANY DRAINAGE AFTER THE VALVE IS SHUT OFF. THIS SHALL BE INCLUDED AS PART OF THE BID.
2. NO OVERSPRAY SHALL BE ALLOWED ON HARDSCAPE, BUILDINGS, AND/OR SITE FEATURES. CONTRACTOR TO FIELD ADJUST LOCATIONS, SPRAY PATTERNS AS REQUIRED.

N.T.S.

## SPRAY ON RISER

I-15

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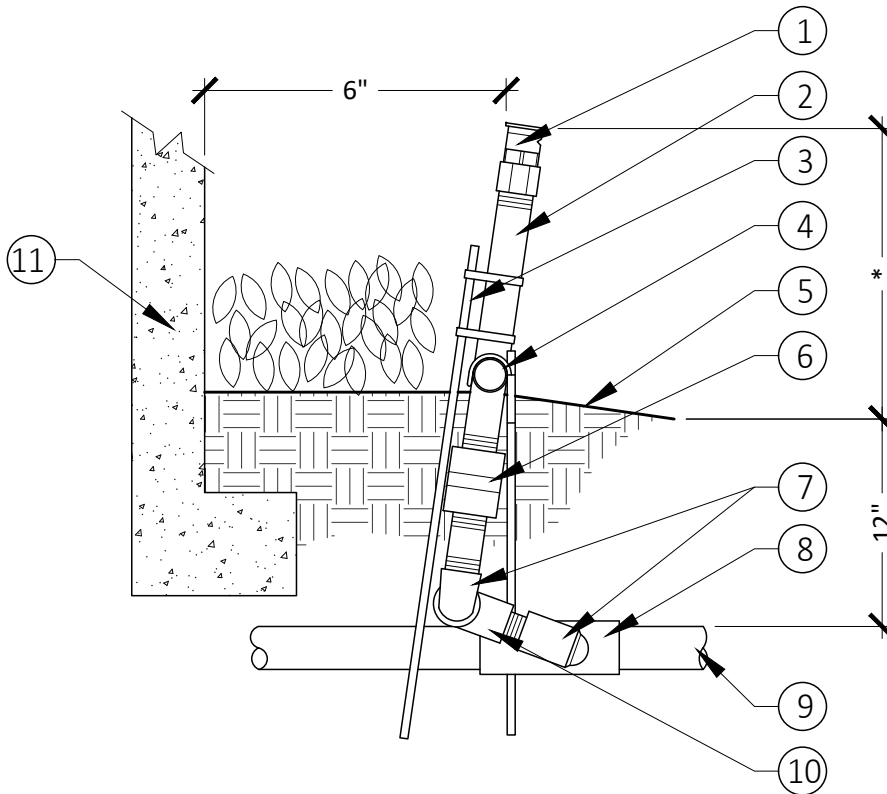
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#### LEGEND:

- ① SHRUB SPRAY HEAD / BUBBLER PER LEGEND
- ② PVC SCH 80 NIPPLE - LENGTH AS REQUIRED
- ③ STAKE EVERY HEAD W/#4x16 LONG REBAR & STAINLESS HOSE CLAMPS (2x)
- ④ SECURE BROWNLINER LATERAL AT SOIL SURFACE W/#3 PS-18 PIPE STABILIZER (STRONGBOX) @ 10'-0" O.C.
- ⑤ FINISH GRADE
- ⑥ ANTI-DRAIN VALVE AS REQUIRED
- ⑦ MARLEX STREET ELL - T x T
- ⑧ PVC SCH 40 LATERAL LINE FITTING
- ⑨ LATERAL LINE PIPING PER LEGEND
- ⑩ PVC SCH 40 STREET ELL - T x T
- ⑪ WALL, FENCE, OR CURB, ETC.



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N.T.S.

## RISER ON SLOPE

I-16

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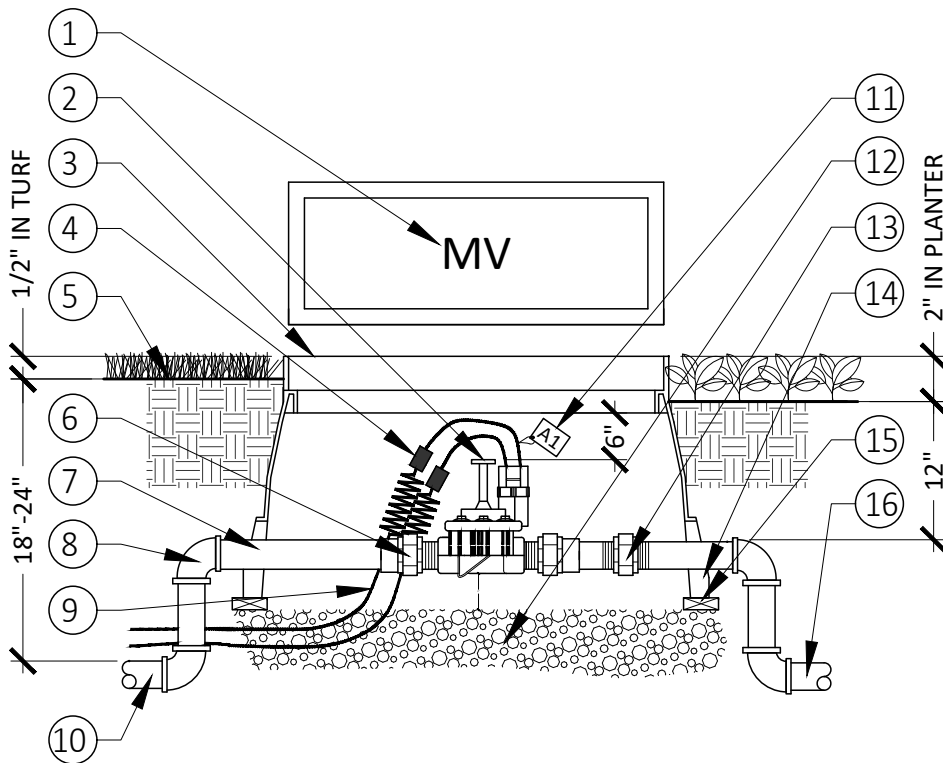
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#### LEGEND:

- ① HEAT BRAND "MV" ON LID IN 2" HIGH CHARACTERS
- ② ELECTRIC CONTROL VALVE PER LEGEND
- ③ JUMBO RECTANGULAR VALVE BOX WITH BOLT-DOWN LID AND SS BOLT. LID AND BOX TO BE GREEN
- ④ WATERPROOF WIRE CONNECTION W/36" EXPANSION LOOP
- ⑤ FINISH GRADE
- ⑥ PVC SCH 40 MALE ADAPTER
- ⑦ PVC MAINLINE PER LEGEND - LENGTH AS REQUIRED
- ⑧ PVC SCH 40 ELL - SxS
- ⑨ UF WIRES TO CONTROLLER MASTER VALVE OUTPUT. GAUGE PER LEGEND
- ⑩ MAINLINE PIPING FROM POINT OF CONNECTION
- ⑪ ID TAG: RAIN BIRD VID SERIES OR EQUAL
- ⑫ 3/4" CRUSHED ROCK - 6" DEEP
- ⑬ PVC SCH 80 UNION - SIZE AS REQUIRED
- ⑭ VALVE BOX EXTENSION(S) AS REQUIRED. USE SAME BRAND AS VALVE BOX
- ⑮ COMMON BRICK - 4 REQUIRED
- ⑯ MAINLINE PIPING TO CONTROL VALVES



N.T.S.

## MASTER VALVE

I-18

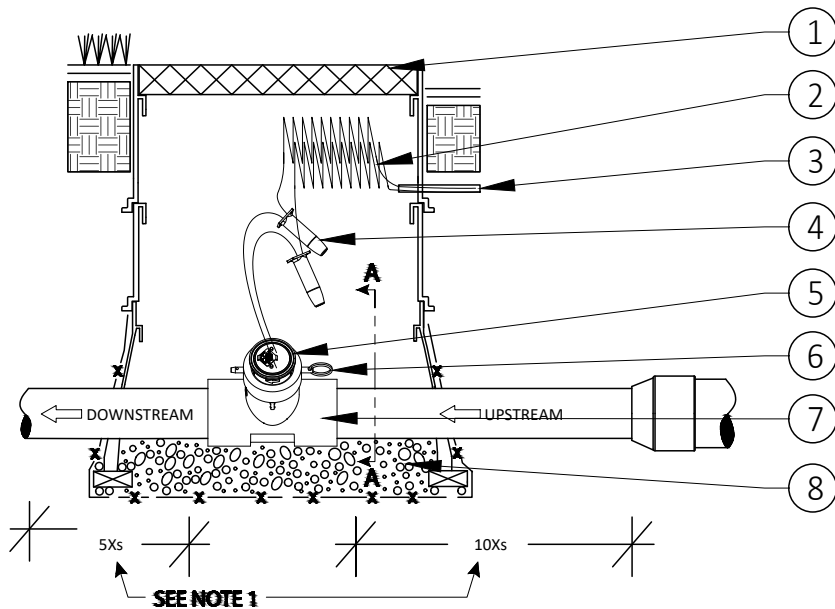
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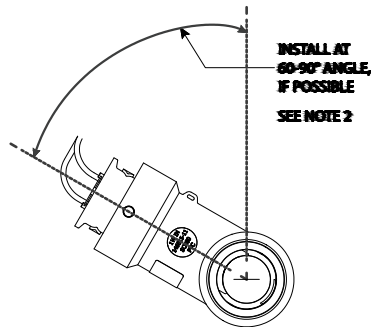
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### LEGEND:

- ① PLASTIC VALVE BOX TO PROVIDE ACCESS
- ② DIRECT BURIAL 1 PAIR, TWISTED SHIELDED CABLE. RECOMMENDED MINIMUM CONDUCTOR SIZE 18 AWG. RATED FOR DISTANCES UP TO 2,000 FT. ENSURE A SERVICE LOOP (EXTRA WIRE LENGTH) IS PROVIDED AT THE FLOW SENSOR IN CASE MAINTENANCE IS NEEDED.
- ③ CABLE ENROUTE TO IRRIGATION CONTROLLER VIA CONDUIT
- ④ 3M DBR/Y-6 SPLICE KIT OR EQUIVALENT DIRECT BURIAL SPLICE KIT
- ⑤ ULTRASONIC FLOW SENSOR PER LEGEND
- ⑥ QUICK RELEASE PIN
- ⑦ TEE COMPATIBLE WITH FLOW SENSOR. SELECT TEE SIZE PER APPLICATION FLOW RATES REQUIRED (SEE DATA SHEET)
- ⑧ GRAVEL SHALL BE PLACED AT BOTTOM OF TEE AND SHALL BE A MIN. OF 10" DEEP.



**SECTION A-A**

### NOTES:

1. 5Xs MEANS 5 TIMES PIPE'S INNER DIAMETER AND 10Xs MEANS 10 TIMES PIPE'S INNER DIAMETER
2. FOR 1-INCH THRU 4-INCH PIPE INSTALLATIONS, THIS ANGLE IS ESPECIALLY IMPORTANT AND SHOULD BE SET AT 60-90 DEGREES FOR MOST ACCURATE OPERATION

N.T.S.

## FLOW SENSOR

I-19

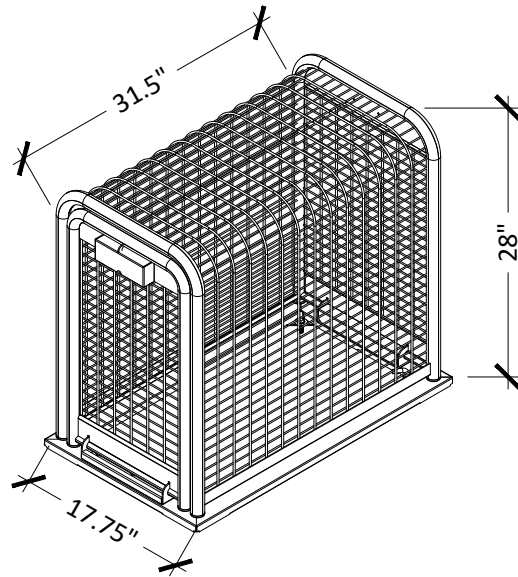
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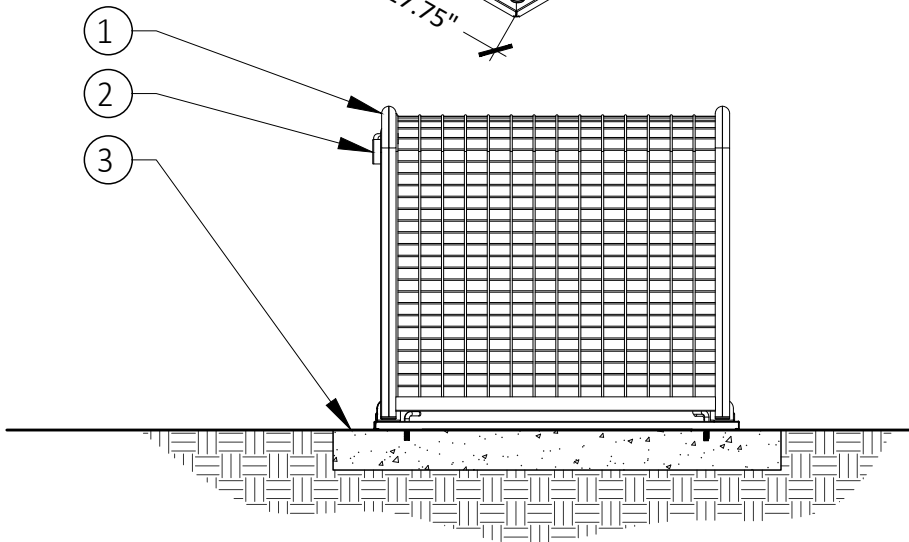
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### LEGEND:

- ① STRONG BOX SBBC-30SS OR EQUAL
- ② HASP FOR PADLOCK
- ③ CONCRETE PAD



### NOTES:

1. FINISH TO BE TWO COATS OF SEMI-GLOSS GREEN ENAMEL PAINT
2. STAINLESS STEEL REQUIRED FOR ALL LANDSCAPE MAINTENANCE DISTRICT AREAS
3. CONTRACTOR TO REQUEST LOCK FROM CITY INSPECTOR

N.T.S.

## BACKFLOW PREVENTION ENCLOSURE

I-21

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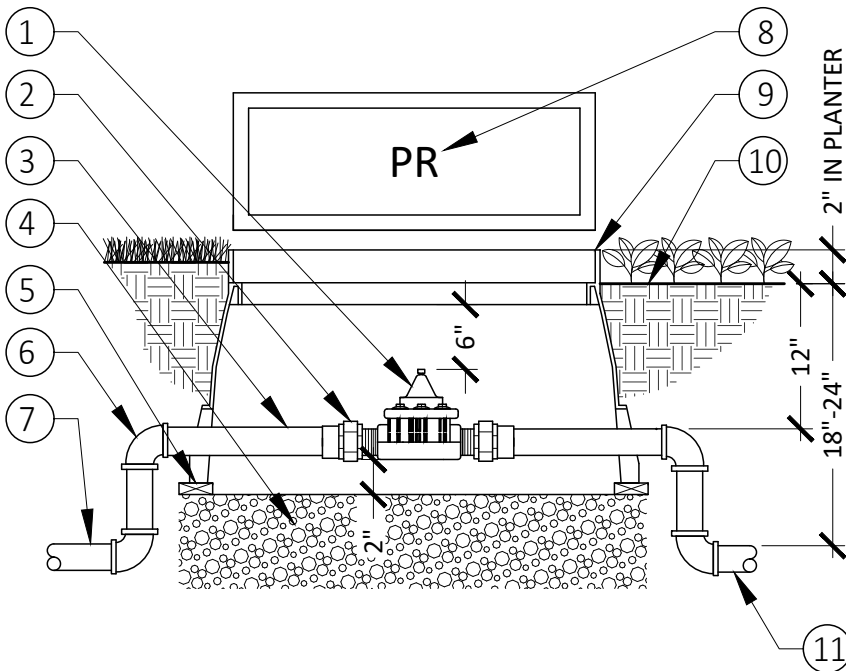
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#### LEGEND:

- ① PRESSURE REDUCING VALVE PER EQUIPMENT LEGEND
- ② PVC SCH 40 MALE ADAPTER (2 REQ.)
- ③ MAINLINE PIPING PER EQUIPMENT LEGEND - LENGTH AS REQUIRED
- ④ 3/4" CRUSHED ROCK - 6" DEEP
- ⑤ COMMON BRICK - 4 REQUIRED
- ⑥ PVC SCH 40 ELL - SxS (4 REQUIRED)
- ⑦ PVC MAINLINE PIPE FROM MASTER VALVE - PER PLAN
- ⑧ HEAT BRAND "PR" ON LID IN 2" HIGH CHARACTERS.
- ⑨ RECTANGULAR PLASTIC VALVE BOX WITH BOLT-DOWN LID. LID AND BOX TO BE GREEN
- ⑩ FINISH GRADE
- ⑪ SCH 40 PVC DOWNSTREAM LINE TO LOCATION SHOWN ON PLANS



#### NOTES:

1. CONTRACTOR TO SET STATIC PRESSURE TO REQUIREMENTS PER IRRIGATION CRITICAL LOSS CALCULATION. ADJUST IN THE FIELD AS NECESSARY TO REDUCE RESIDUAL STATIC PSI TO 10% OF BASE STATIC PSI

N.T.S.

## PRESSURE REDUCING VALVE

1-22

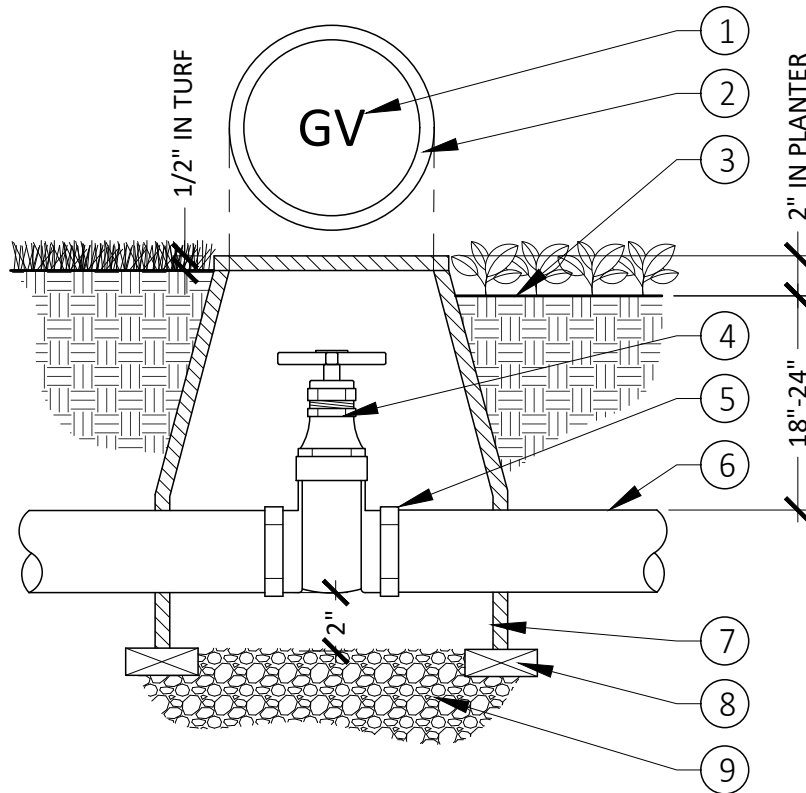
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### LEGEND:

- ① HEAT BRAND "GV" ON LID IN 2" HIGH CHARACTERS
- ② 10" ROUND PLASTIC VALVE BOX WITH LOCKING LID AND SS BOLT SIZED AS REQUIRED. COLOR TO BE GREEN
- ③ FINISH GRADE
- ④ GATE VALVE PER LEGEND
- ⑤ FLANGE OR SOCKET PER PLANS
- ⑥ MAINLINE PIPING PER LEGEND
- ⑦ VALVE BOX EXTENSIONS AS REQUIRED
- ⑧ COMMON BRICK - 4 REQUIRED
- ⑨ 3/4" CRUSHED ROCK - 4" DEEP

### NOTES:

- 1. USE TEFLON TAPE ON ALL MALE PIPE THREADS.

N.T.S.

## 1" - 3" GATE VALVE CROSS HANDLE

I-23

DATE: 08/12/24

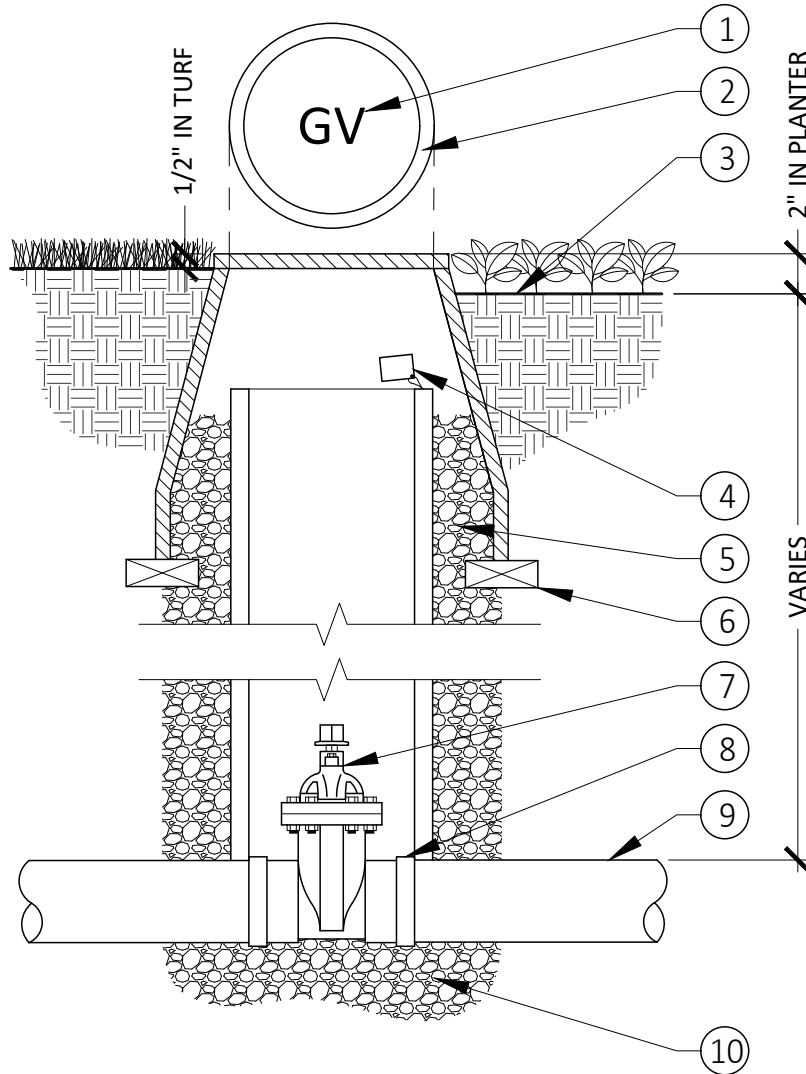


# CITY OF PERRIS

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#### LEGEND:

- ① HEAT BRAND "GV" ON LID IN 2" HIGH CHARACTERS
- ② 10" ROUND PLASTIC VALVE BOX WITH LOCKING LID AND SS BOLT SIZED AS REQUIRED. COLOR PER LEGEND
- ③ FINISH GRADE
- ④ WATER I.D. TAG PER LEGEND
- ⑤ 6" SCH 40 PVC PIPE ACCESS SLEEVE
- ⑥ COMMON BRICK - 4 REQUIRED
- ⑦ GATE VALVE PER LEGEND
- ⑧ FLANGE OR SOCKET PER PLANS
- ⑨ MAINLINE PIPING PER LEGEND
- ⑩ 3/4" CRUSHED ROCK - 4" DEEP

#### NOTES:

- 1. USE TEFLON TAPE ON ALL MALE PIPE THREADS.

N.T.S.

## 4" - 12" GATE VALVE SQUARE NUT

I-23

DATE: 08/12/24



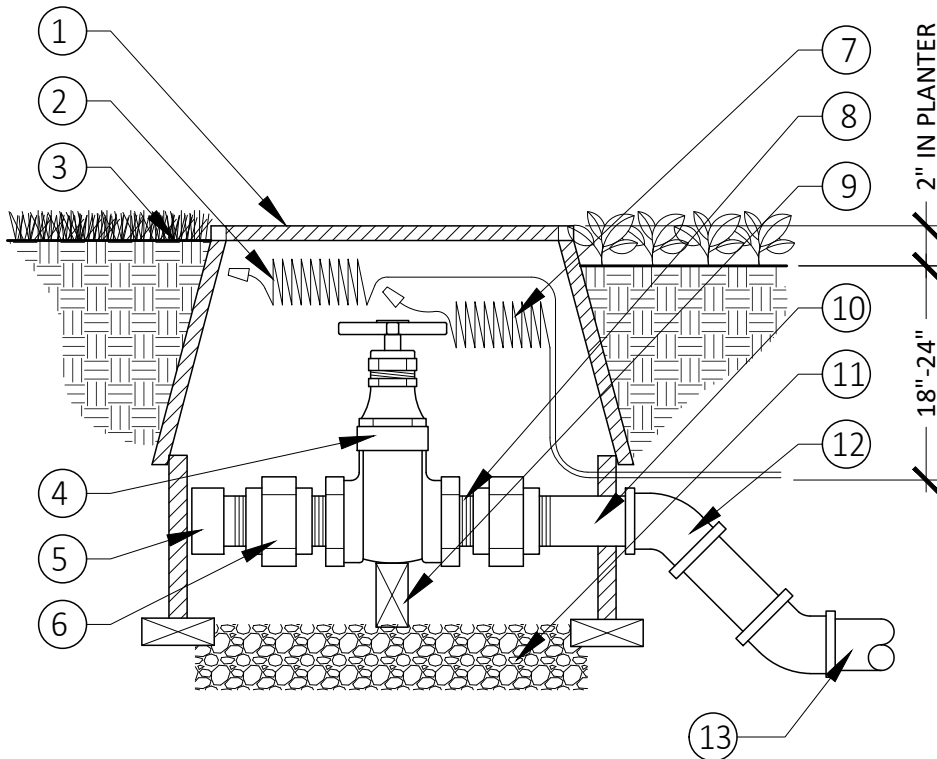
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### LEGEND:

- ① PLASTIC VALVE BOX WITH LOCKING LID BRANDED X-GV OR BV IN 2" HIGH CHARACTERS
- ② 36" PIG-TAIL PILOT + COMMON WIRE AND WATERPROOF END
- ③ FINISH GRADE
- ④ GATE VALVE PER LEGEND
- ⑤ SCH 80 PVC CAP
- ⑥ SCH 80 PVC UNION (FIPT x FIPT)
- ⑦ 36" PIG-TAIL COMMON WIRE (CONTINUOUS LOOP) AND WATERPROOF END
- ⑧ SCH 80 PVC CLOSE NIPPLES
- ⑨ SUPPORT FOR GATE VALVE; REMOVE WHEN CONNECTED
- ⑩ SCH 80 PVC TOE NIPPLE ASSEMBLY
- ⑪ 3/4" WASHED CRUSHED GRAVEL
- ⑫ SCH 80 45° PVC ELBOW
- ⑬ SUPPLY LINE SIZE PER LEGEND



### NOTES:

1. PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX
2. GATE VALVE TO REMAIN AT TIME OF INSTALLATION OF NEW REMOTE CONTROL VALVE

N.T.S.

## IRRIGATION STUB-OUT BOX

1-24

DATE: 08/12/24



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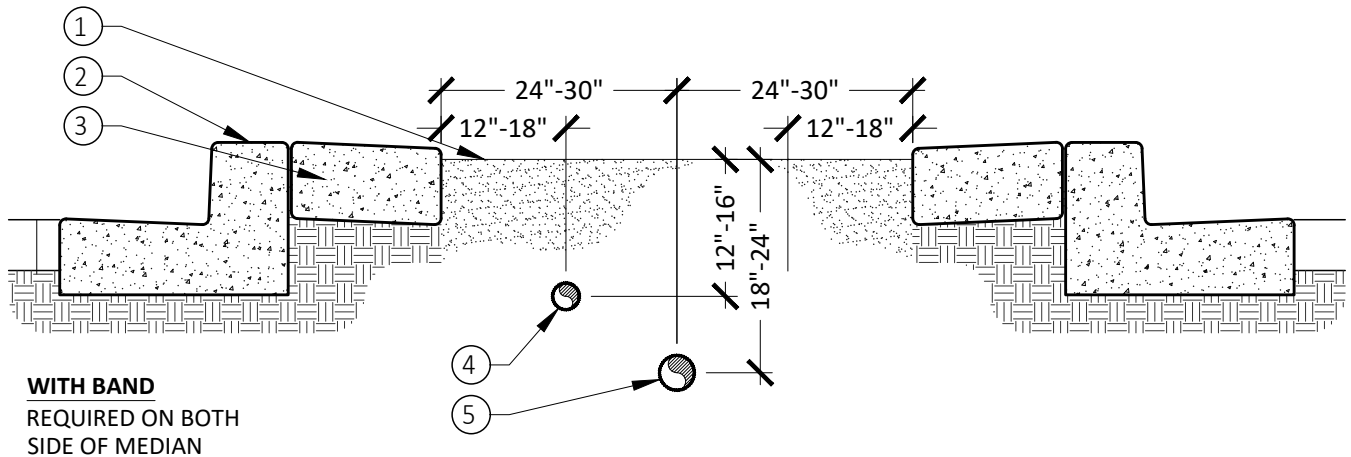
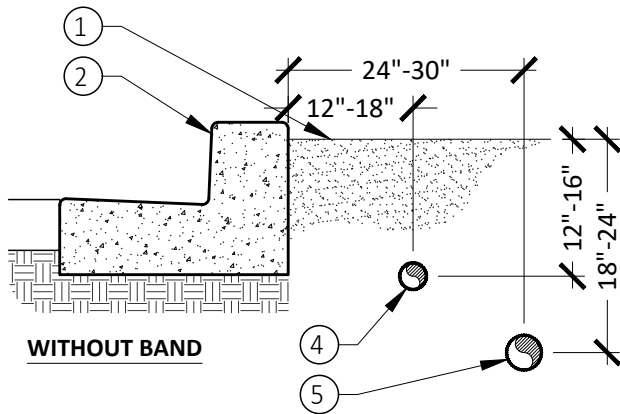
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#### LEGEND:

- ① FINISH GRADE
- ② CONCRETE CURB PER ENGINEERING PLAN
- ③ CONCRETE MAINTENANCE BAND
- ④ LATERAL LINE LOCATION SCHEDULE 40
- ⑤ MAIN LINE LOCATION



#### NOTES:

1. PIPES PLACED IN COMMON TRENCH SHALL HAVE A VERTICAL AND HORIZONTAL OFFSET OF 3" MIN.

N.T.S.

# MEDIAN SAFETY EDGE AND IRRIGATION LINE INSTALLATION

I-25

DATE: 08/12/24

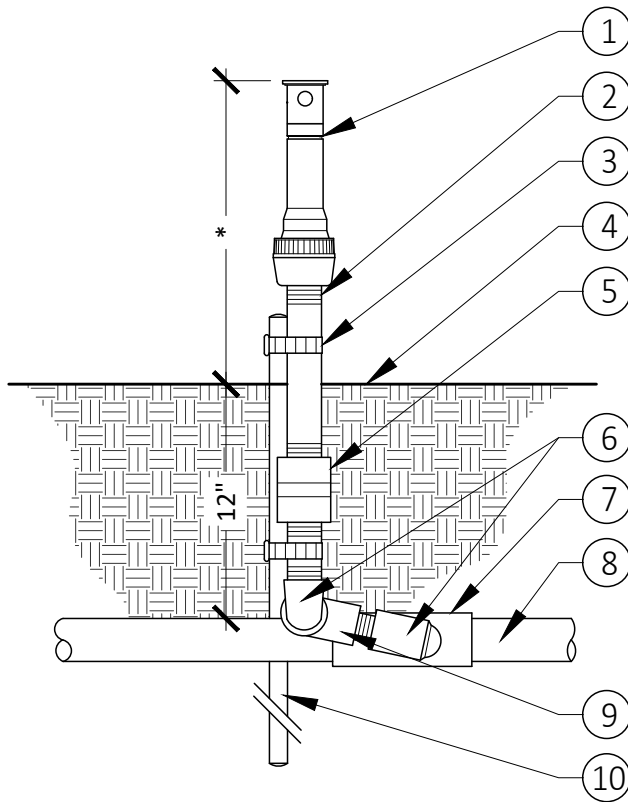


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#### LEGEND:

- ① SHRUB ROTOR HEAD PER LEGEND
- ② PVC SCH 80 NIPPLE (TWO NEEDED) LENGTH AS REQUIRED
- ③ STAINLESS STEEL HOSE CLAMP (TWO REQUIRED)
- ④ FINISH GRADE
- ⑤ ANTI-DRAIN VALVE AS REQUIRED
- ⑥ MARLEX STREET ELL - TxT
- ⑦ PVC SCH 40 LATERAL LINE FITTING
- ⑧ LATERAL LINE PIPING PER LEGEND
- ⑨ PVC SCH 40 STREET ELL - TxT
- ⑩ #3 REBAR STAKE - 18" MIN. LENGTH

\*12" MIN. FOR ROTOR HEADS

#### NOTES:

1. LOW HEAD DRAINAGE WILL NOT BE ALLOWED. CONTRACTOR TO INSTALL ANTI-DRAIN CHECK VALVES ON ALL HEADS THAT SHOW ANY DRAINAGE AFTER THE VALVE IS SHUT OFF. THIS SHALL BE INCLUDED AS PART OF THE BID.
2. NO OVERSPRAY SHALL BE ALLOWED ON HARDSCAPE, BUILDINGS, AND/OR SITE FEATURES. CONTRACTOR TO FIELD ADJUST LOCATIONS, SPRAY PATTERNS AS REQUIRED.

N.T.S.

## ROTOR INSTALLATION ON FIXED RISER

1-26

DATE: 08/12/24

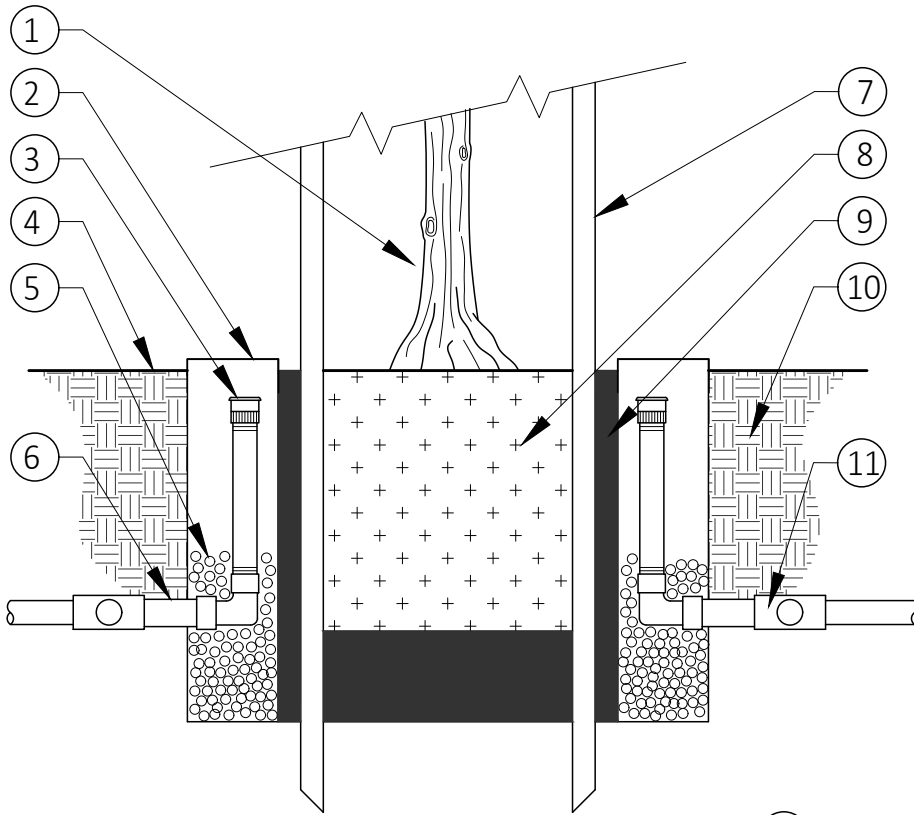


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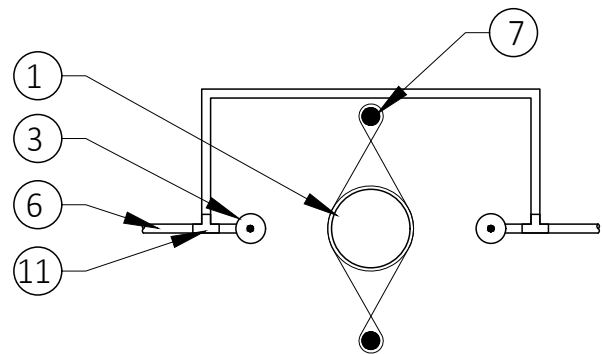
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#### LEGEND:

- ① TREE TRUNK
- ② BUBBLER ASSEMBLY
- ③ RAINBIRD RWS-M-B-1401 18" (TWO PER TREE)
- ④ FINISH GRADE
- ⑤ PEA GRAVEL IN BASE OF DRAIN PIPE PER MANUFACTURER
- ⑥ PVC LATERAL LINE PER LEGEND
- ⑦ TREE SUPPORT STRUCTURE PER PLANTING DETAIL
- ⑧ TREE ROOTBALL
- ⑨ PLANT BACKFILL PER PLANTING PLAN
- ⑩ UNDISTURBED NATIVE SOIL
- ⑪ SCH 40 PVC TEE AROUND PLANTING PIT



**PLAN VIEW**

N.T.S.

#### NOTES:

1. INSTALL ASSEMBLY WITH CAP FLUSH TO GROUND

## DEEP WELL TREE IRRIGATION

### DRIP AND/OR BUBBLER

I-27

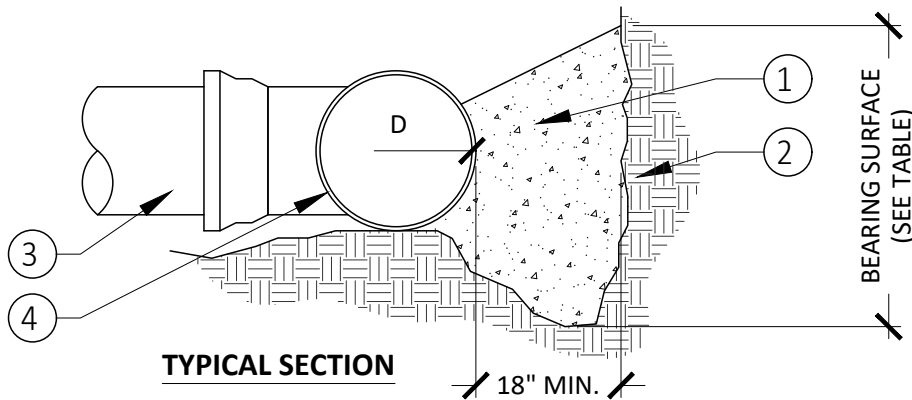
DATE: 08/12/24



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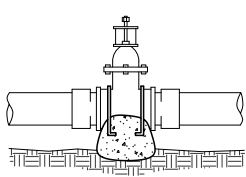
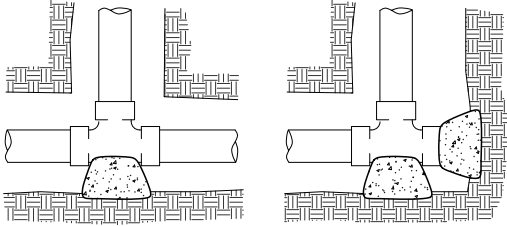
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### LEGEND:

- ① THRUST BLOCK
- ② UNDISTURBED NATIVE SOIL
- ③ WATER MAIN
- ④ FITTING

	DIAMETER OF PIPE D (INCHES)	MINIMUM BEARING SURFACE (sf)				TEES AND DEAD ENDS
		BENDS				
		11 1/4°	22 1/2°	45°	90°	
	4	1	4	4	4	4
	6	1	4	4	4	4
	8	2	4	4	4	4
	10	3	4	4	4	4
	12	4	4	4	4	4
	14	5	4	4	4	4
	16	7	4	4	4	4
	18	9	4	4	4	4
	20	11	4	4	4	4
	24	15	4	4	4	4
	30	24	4	4	4	4
	36	34	4	4	4	4
MINIMUM SURFACE AREA BASED ON WATER PRESSURE OF 150 PSI AND ALLOWABLE SOIL PRESSURE OF 1,000 PSI						

### NOTES:

1. EXTEND THRUST BLOCKS TO UNDISTURBED SOIL. EXCAVATION INTO TRENCH WALL MAY BE NECESSARY.
2. FROM VERTICAL SURFACES OF POURED CONCRETE THRUST BLOCKS EXCEPT ON BEARING SURFACE.
3. ENCASE ALL FITTINGS IN POLYETHYLENE WRAP. DO NOT ALLOW CONCRETE TO DIRECTLY CONTACT JOINTS, FITTING AND/OR BOLTS.
4. ADD #4 MIN. REBAR ANCHORS AS NEEDED. FIELD BEND TO WRAP AROUND EQUIPMENT.

## THRUST BLOCKS

I-28

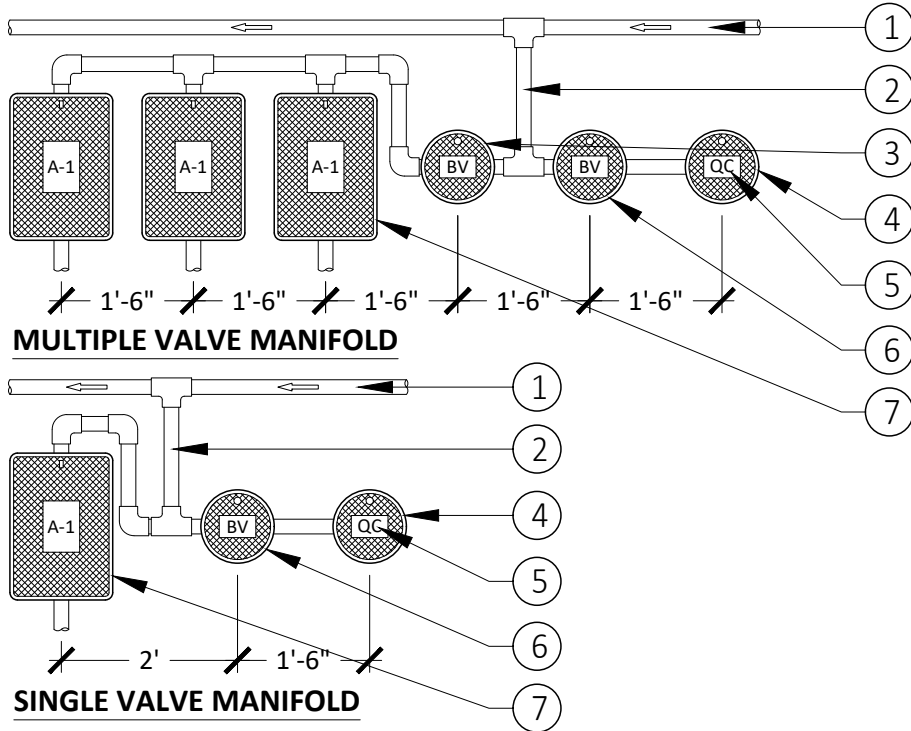
DATE: 08/12/24



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### LEGEND:

- ① SUPPLY LINE (SIZE PER PLAN)
- ② MANIFOLD PIPE (SIZE PER PLAN) (SHOWN AT SIDE FOR GRAPHIC CLARITY, LOCATE UNDERNEATH VALVE BOXES)
- ③ BALL VALVES TO MANIFOLD (PER IRRIGATION LEGEND)
- ④ QUICK COUPLER (PER IRRIGATION LEGEND)
- ⑤ HEAT BRAND ALL VALVE BOXES WITH 2" HIGH CHARACTERS
- ⑥ BALL VALVE AND SUPPLY LINE TO QUICK COUPLER (SIZE PER PLAN)
- ⑦ REMOTE CONTROL VALVE (PER IRRIGATION PLAN)

EQUIPMENT DESIGNATION	IDENTIFICATION GUIDE
ARV	AIR RELIEF VALVE
BS	BASKET STRAINER
BV	BALL VALVE
CCC	COMMUNICATION SPLICES
FS	FLOW SENSOR
FVA	FLUSH VALVE ASSEMBLY
GR	GROUNDING RODS
GV	GATE VALVE
MS	MOISTURE SENSOR
MV	MASTER VALVE
PB	PULL BOX
(STA NO.)	REMOTE CONTROL VALVES
QC	QUICK COUPLERS
CONTACT LANDSCAPE ARCHITECT FOR INFO ON ANY DEVICE IN A BOX NOT LISTED.	

### NOTES:

1. CONTROL VALVES SHALL BE INSTALLED TO ALLOW ORDERLY ARRANGEMENT OF VALVE BOXES.
2. WHERE POSSIBLE, LOCATE VALVE MANIFOLDS IN SHRUB OR GROUND COVER AREAS ONLY 12" FROM HARDSCAPE.
3. LOCATION OF VALVE MANIFOLDS SHALL BE STAKED FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. CENTER VALVE BOXES OVER VALVE MANIFOLDS TO FACILITATE ACCESS AND MAINTENANCE.
5. SET VALVE BOXES AT EQUAL ELEVATIONS W/ TOPS 2" ABOVE FINISH GRADE IN SHRUB/GROUND COVER AREAS.
6. VALVE BOXES SHALL BE SET PARALLEL TO EACH AND PERPENDICULAR TO EDGE OF AREA.
7. DO NOT DEFORM OR COLLAPSE VALVE BOX BY EXCESSIVE SOIL COMPACTION AROUND BOX.
8. SEE ALSO INDIVIDUAL VALVE INSTALLATION DETAILS.

## BOX IDENTIFICATION

1-29

DATE: 08/12/24



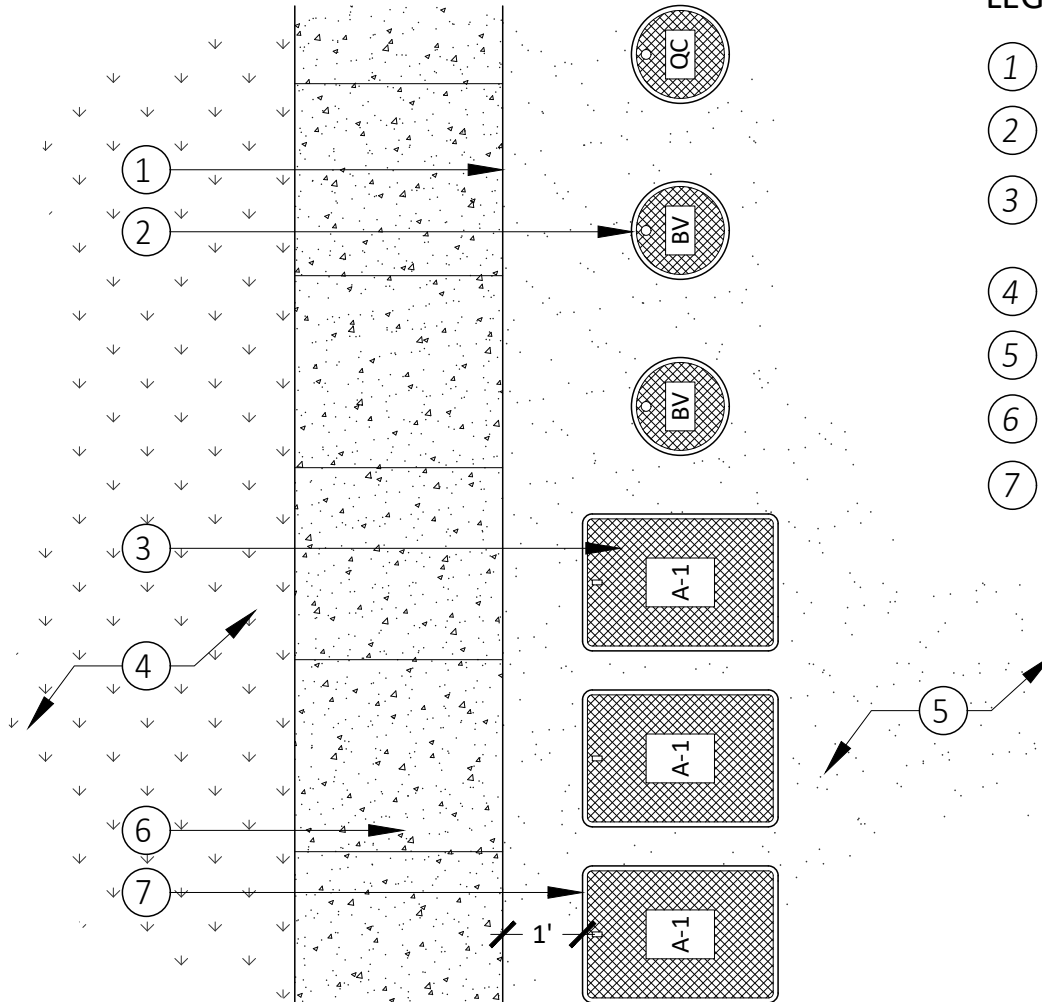
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### LEGEND:

- ① HARDSCAPE EDGE PER PLAN
- ② ROUND BOX FOR QUICK COUPLERS, GATE OR BALL VALVES
- ③ RECTANGULAR VALVE BOX FOR CONTROL VALVES, FLOW SENSORS, MASTER VALVES
- ④ TURF PLANTING AREA
- ⑤ SHRUB AND GROUNDCOVER PLANTING AREA
- ⑥ CONCRETE WALK, PATHWAY OR FLATWORK PER PLAN
- ⑦ WHEN POSSIBLE GROUP VALVES TOGETHER PER DIAGRAM



#### NOTES:

1. VALVE BOXES SHALL BE AT A UNIFORM DISTANCE AND PARALLEL TO THE HARDSCAPE, PLACED ADJACENT TO WALK OR FLATWORK.

## VALVE BOX PLACEMENT

I-31

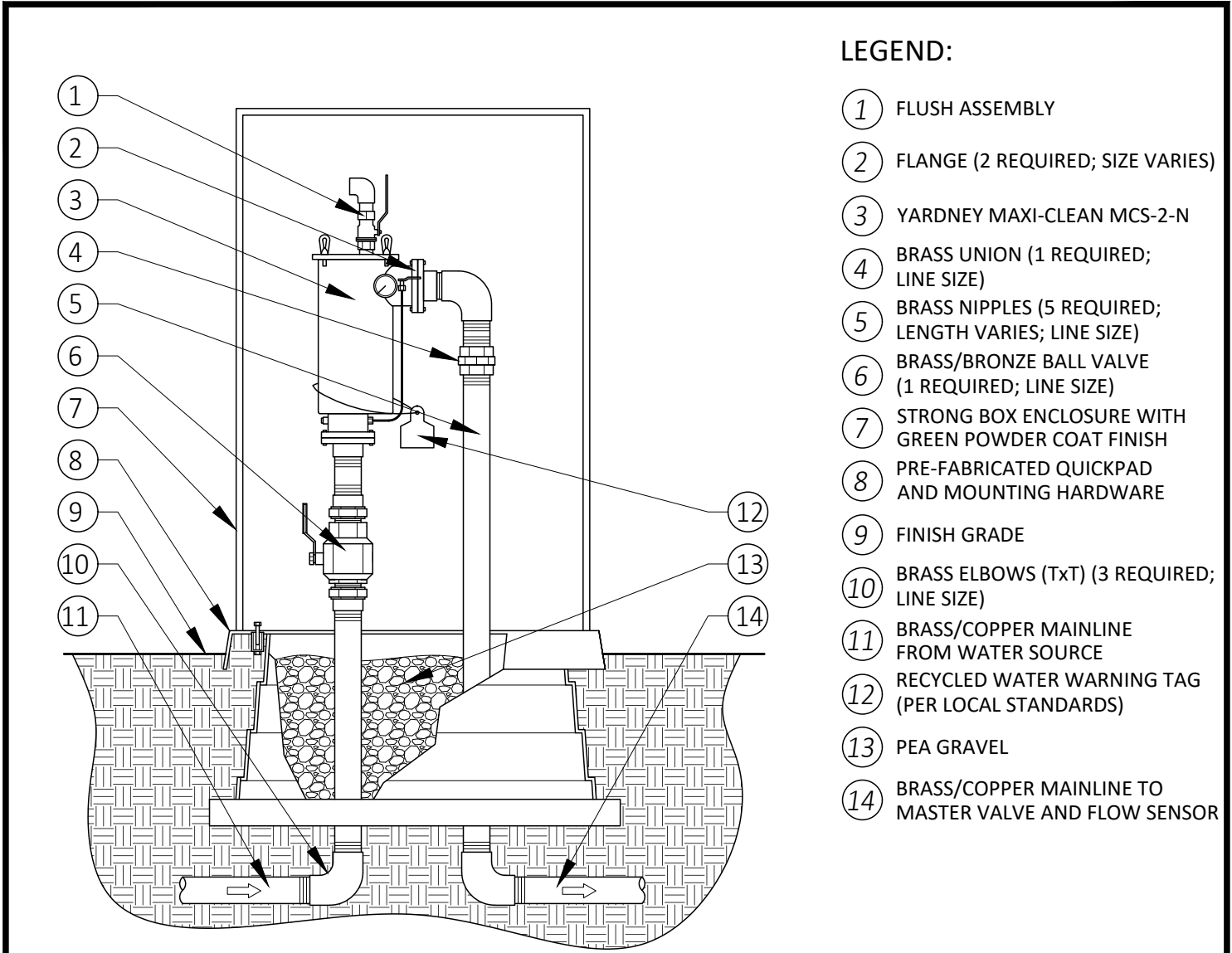
DATE: 08/12/24



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### LEGEND:

- ① FLUSH ASSEMBLY
- ② FLANGE (2 REQUIRED; SIZE VARIES)
- ③ YARDNEY MAXI-CLEAN MCS-2-N
- ④ BRASS UNION (1 REQUIRED; LINE SIZE)
- ⑤ BRASS NIPPLES (5 REQUIRED; LENGTH VARIES; LINE SIZE)
- ⑥ BRASS/BRONZE BALL VALVE (1 REQUIRED; LINE SIZE)
- ⑦ STRONG BOX ENCLOSURE WITH GREEN POWDER COAT FINISH
- ⑧ PRE-FABRICATED QUICKPAD AND MOUNTING HARDWARE
- ⑨ FINISH GRADE
- ⑩ BRASS ELBOWS (T×T) (3 REQUIRED; LINE SIZE)
- ⑪ BRASS/COPPER MAINLINE FROM WATER SOURCE
- ⑫ RECYCLED WATER WARNING TAG (PER LOCAL STANDARDS)
- ⑬ PEA GRAVEL
- ⑭ BRASS/COPPER MAINLINE TO MASTER VALVE AND FLOW SENSOR

## BASKET STRAINER

1-32

DATE: 08/12/24



# CITY OF PERRIS

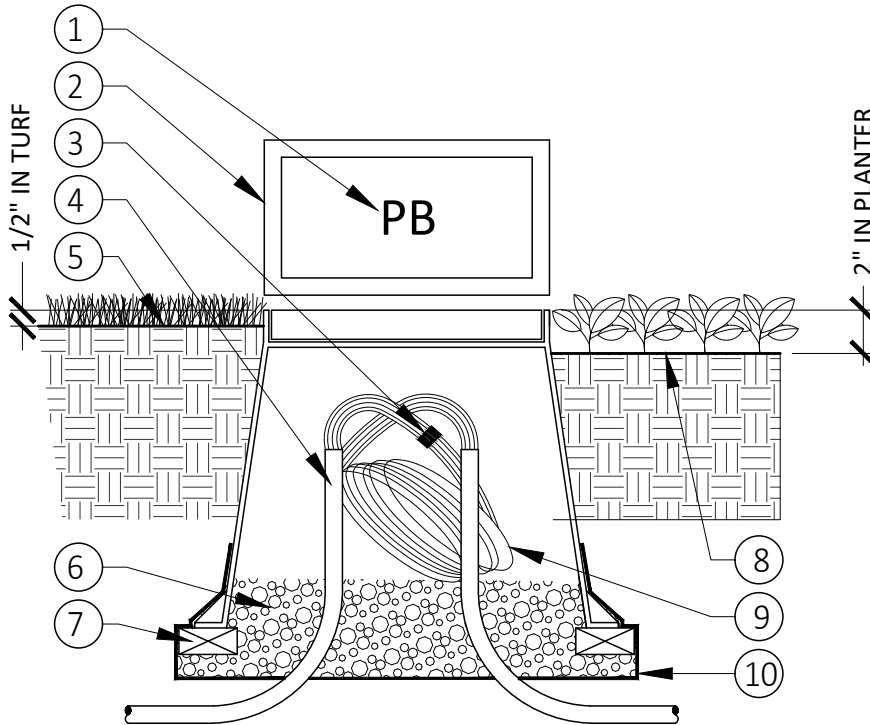
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#### LEGEND:

- ① HEAT BRAND 'PB' ONTO LID IN 2" HIGH CHARACTERS
- ② PLASTIC RECTANGULAR VALVE BOX WITH BOLT DOWN COVER. USE STAINLESS BOLT, NUT AND WASHER. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE
- ③ WIRE CONNECTORS
- ④ PVC ELECTRICAL SWEEP IF INSTALLED IN CONDUIT
- ⑤ FINISH GRADE IN TURF AREAS
- ⑥ PEA GRAVEL
- ⑦ COMMON BRICK (4 REQUIRED)
- ⑧ FINISH GRADE IN SHRUB AREAS
- ⑨ 36" WIRE EXPANSION LOOP (TYP.)
- ⑩ LANDSCAPE FABRIC



#### NOTES:

1. ELECTRICAL SWEEPS NOT REQUIRED FOR DIRECT BURIAL INSTALLATION.
2. OPEN ENDS OF ELECTRICAL SWEEPS TO BE SEALED USING APPROVED AEROSOL FOAM PRODUCT.

## PULL BOX

1-34

DATE: 08/12/24



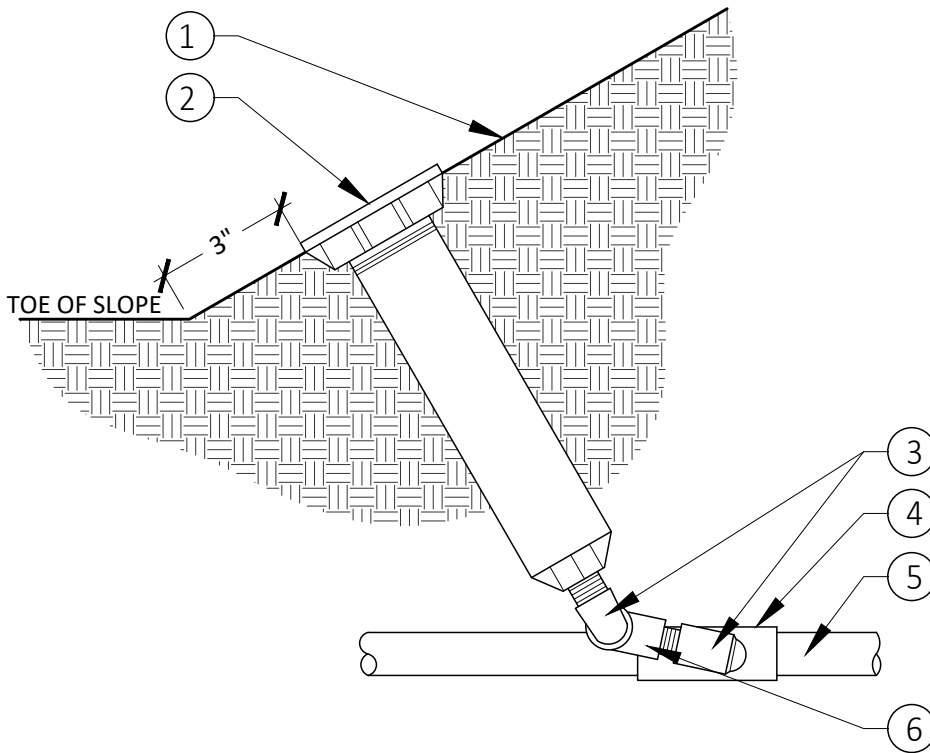
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### LEGEND:

- ① FINISH GRADE
- ② ROTOR HEAD PER LEGEND
- ③ MARLEX STREET ELL - TxT
- ④ PVC SCH 40 LATERAL LINE FITTING
- ⑤ LATERAL LINE PIPING PER LEGEND
- ⑥ PVC SCH 40 STREET ELL - TxT



### NOTES:

1. LOW HEAD DRAINAGE WILL NOT BE ALLOWED. CONTRACTOR TO INSTALL ANTI-DRAIN CHECK VALVES ON ALL HEADS THAT SHOW ANY DRAINAGE AFTER THE VALVE IS SHUT OFF. THIS SHALL BE INCLUDED AS PART OF THE BID.
2. NO OVERSPRAY SHALL BE ALLOWED ON HARDSCAPE, BUILDINGS, AND/OR SITE FEATURES. CONTRACTOR TO FIELD ADJUST LOCATIONS, SPRAY PATTERNS AS REQUIRED.

## HEAD AT TOE OF SLOPE

I-35

DATE: 08/12/24

IRRIGATION DETAIL

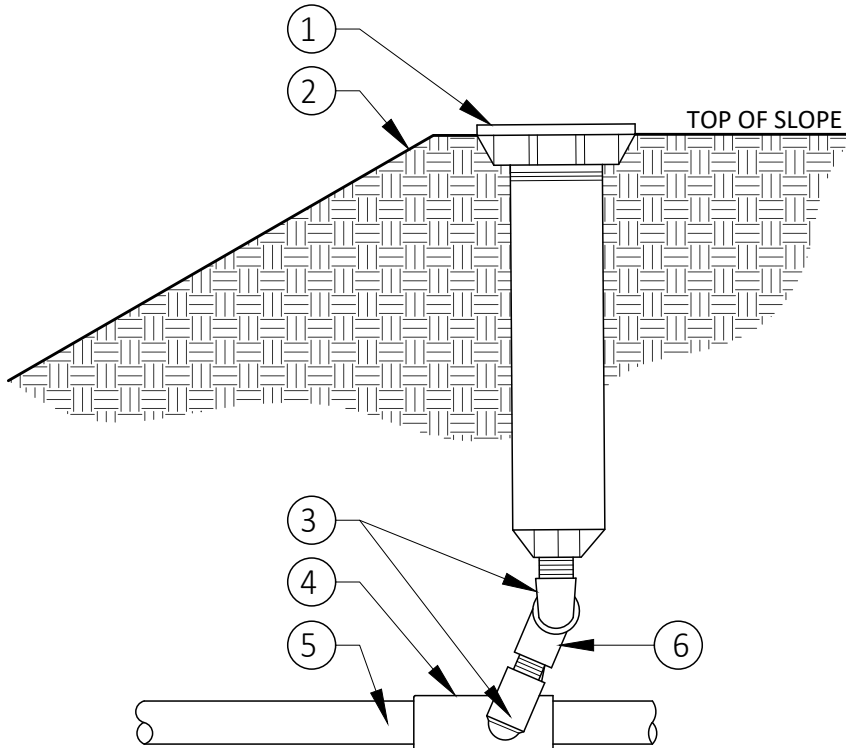


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#### LEGEND:

- ① ROTOR HEAD PER LEGEND
- ② FINISH GRADE
- ③ MARLEX STREET ELL - T x T
- ④ PVC SCH 40 LATERAL LINE FITTING
- ⑤ LATERAL LINE PIPING PER LEGEND
- ⑥ PVC SCH 40 STREET ELL - T x T

#### NOTES:

1. LOW HEAD DRAINAGE WILL NOT BE ALLOWED. CONTRACTOR TO INSTALL ANTI-DRAIN CHECK VALVES ON ALL HEADS THAT SHOW ANY DRAINAGE AFTER THE VALVE IS SHUT OFF. THIS SHALL BE INCLUDED AS PART OF THE BID.
2. NO OVERSPRAY SHALL BE ALLOWED ON HARDSCAPE, BUILDINGS, AND/OR SITE FEATURES. CONTRACTOR TO FIELD ADJUST LOCATIONS, SPRAY PATTERNS AS REQUIRED.

## HEAD AT TOP OF SLOPE

1-36

DATE: 08/12/24

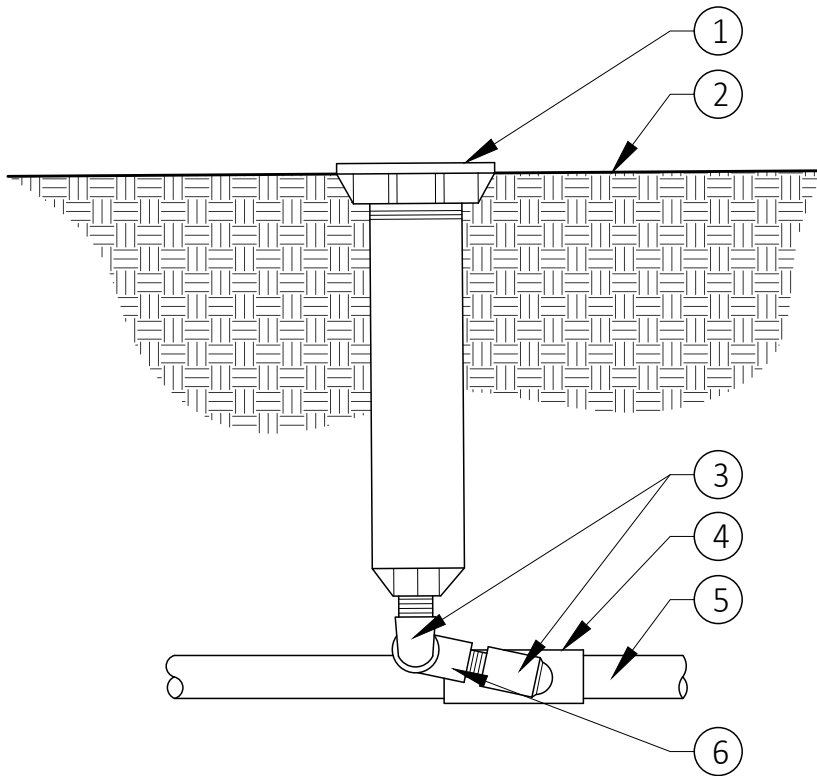
IRRIGATION DETAIL



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### LEGEND:

- ① ROTOR HEAD PER LEGEND
- ② FINISH GRADE
- ③ MARLEX STREET ELL - T x T
- ④ PVC SCH 40 LATERAL LINE FITTING
- ⑤ LATERAL LINE PIPING PER LEGEND
- ⑥ PVC SCH 40 STREET ELL - T x T

### NOTES:

1. LOW HEAD DRAINAGE WILL NOT BE ALLOWED. CONTRACTOR TO INSTALL ANTI-DRAIN CHECK VALVES ON ALL HEADS THAT SHOW ANY DRAINAGE AFTER THE VALVE IS SHUT OFF. THIS SHALL BE INCLUDED AS PART OF THE BID.
2. NO OVERSPRAY SHALL BE ALLOWED ON HARDSCAPE, BUILDINGS, AND/OR SITE FEATURES. CONTRACTOR TO FIELD ADJUST LOCATIONS, SPRAY PATTERNS AS REQUIRED.

## TURF ROTOR

1-37

DATE: 08/12/24

IRRIGATION DETAIL



# CITY OF PERRIS

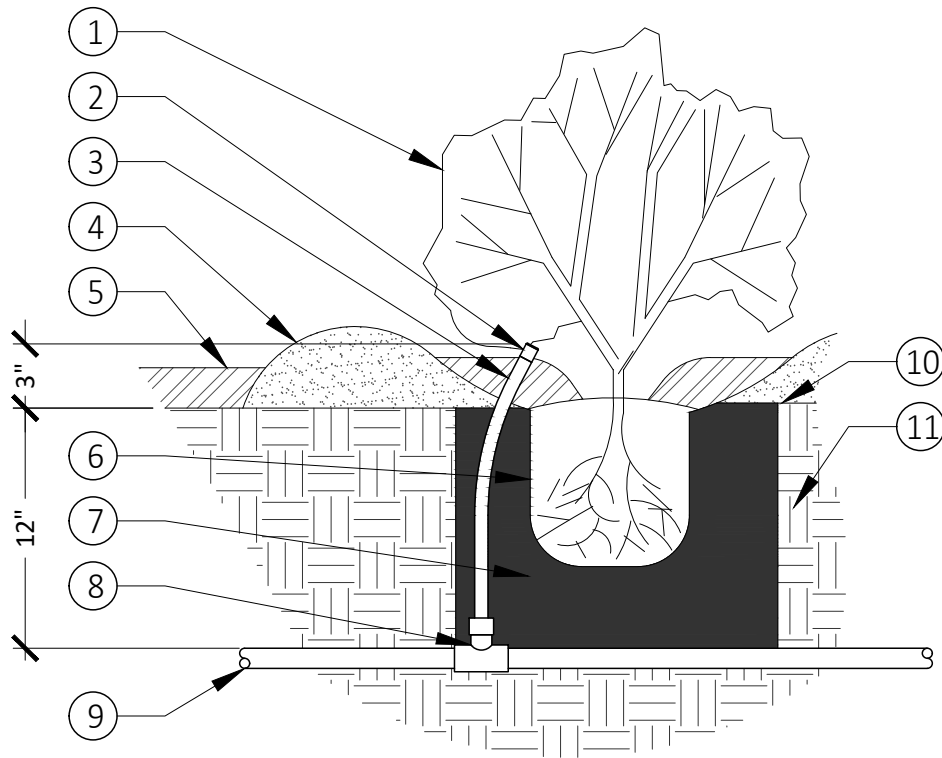
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#### LEGEND:

- ① SHRUB OR GROUNDCOVER PER PLANTING PLAN
- ② DRIP EMITTER PER IRRIGATION EQUIPMENT LEGEND
- ③ 1/2" x 12" FLEXIBLE RISER TUBING WITH MALE ADAPTERS AT EACH END PER IRRIGATION EQUIPMENT LEGEND
- ④ WATERING BASIN PER SHRUB PLANTING DETAIL
- ⑤ MULCH PER SHRUB PLANTING DETAIL
- ⑥ PLANT ROOTBALL
- ⑦ COMPACTED BACKFILL PER SPECIFICATIONS
- ⑧ SCH. 40 PVC TEE (SXSXT) OR ELL (SXT)
- ⑨ NON-PRESSURE LATERAL LINE - SIZE AND TYPE PER PLAN
- ⑩ FINISH GRADE
- ⑪ UNDISTURBED NATIVE SOIL



#### NOTES:

1. ALL THREADED FITTINGS MUST HAVE TEFLON TAPE.
2. INSTALL DRIP EMITTER INSIDE PLANT WATERING BASIN DIRECTLY ADJACENT TO ROOTBALL.

N.T.S.

## EMITTER ON FLEXIBLE RISER

1-38

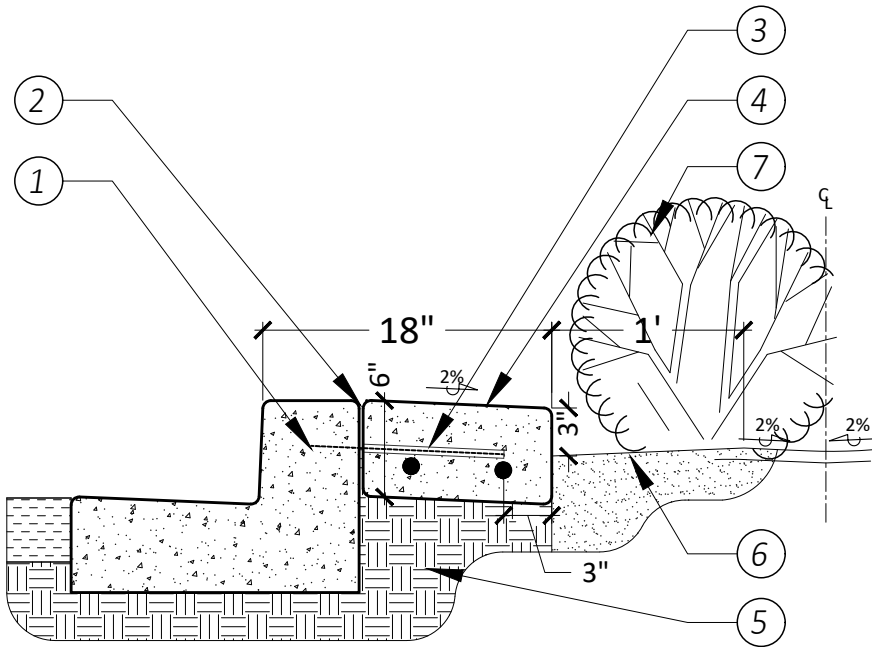
DATE: 08/12/24



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### LEGEND:

- ① CONCRETE CURB PER ENGINEERING PLAN
- ② COLD JOINT WITH 1/2" RADIUS AT ALL EDGES (TYP.)
- ③ 12" LONG #4 DOWEL AT 5' O.C., TO EXTEND 9" INTO MAINTENANCE BAND
- ④ 12"x6" CONCRETE MAINTENANCE BAND WITH #4 REBAR CONTINUOUS AND #4 REBAR TIES AT 36" O.C. CENTERED IN SLAB; COLOR AND FINISH PER CONSTRUCTION LEGEND. SLOPE AT 2% TOWARD CENTER OF MEDIAN (TYP.). PROVIDE 1/4"x 1" DEEP SAWCUT JOINTS EXTENDING FROM ALL SCORED JOINTS ON ADJACENT CURB.
- ⑤ 90% RELATIVE COMPACTED SUBGRADE
- ⑥ FINISH GRADE IN PLANTERS TO BE 2" BELOW FINISH SURFACE OF MAINTENANCE BAND; PLANTER SOIL TO SLOPE AT 2% MIN. (5% MAX.) TOWARD CENTER OF MEDIAN. FEATHER OUTER 12" OF PLANTER SOIL TO MEET MAINTENANCE BAND 3" BELOW FINISH SURFACE.
- ⑦ MEDIAN PLANTING PER PLANTING PLAN

### NOTE:

1. INSTALL  $\frac{3}{8}$ " BITUMINOUS FELT EXPANSION JOINTS @ 20'-0" O.C. MAX AND @ BEGINNING AND END OF RADII.
2. PROVIDE 1" DP x  $\frac{1}{2}$ " WD CONTROL JOINTS @ 5'-0" O.C.
3. SLOPE FINISH SURFACE OF 12" CONCRETE MAINTENANCE BAND TOWARD CENTER OF MEDIAN.
4. COLOR SAMPLE OF CONCRETE ALONG WITH SAMPLE OF COBBLE REQUIRED FOR APPROVAL BY CITY OF PERRIS LANDSCAPE ARCHITECT PRIOR TO PURCHASE AND INSTALLATION.

SCALE: 1"=1'

## SAFETY EDGE

L-1

DATE: 08/12/24

LANDSCAPING DETAIL



# CITY OF PERRIS

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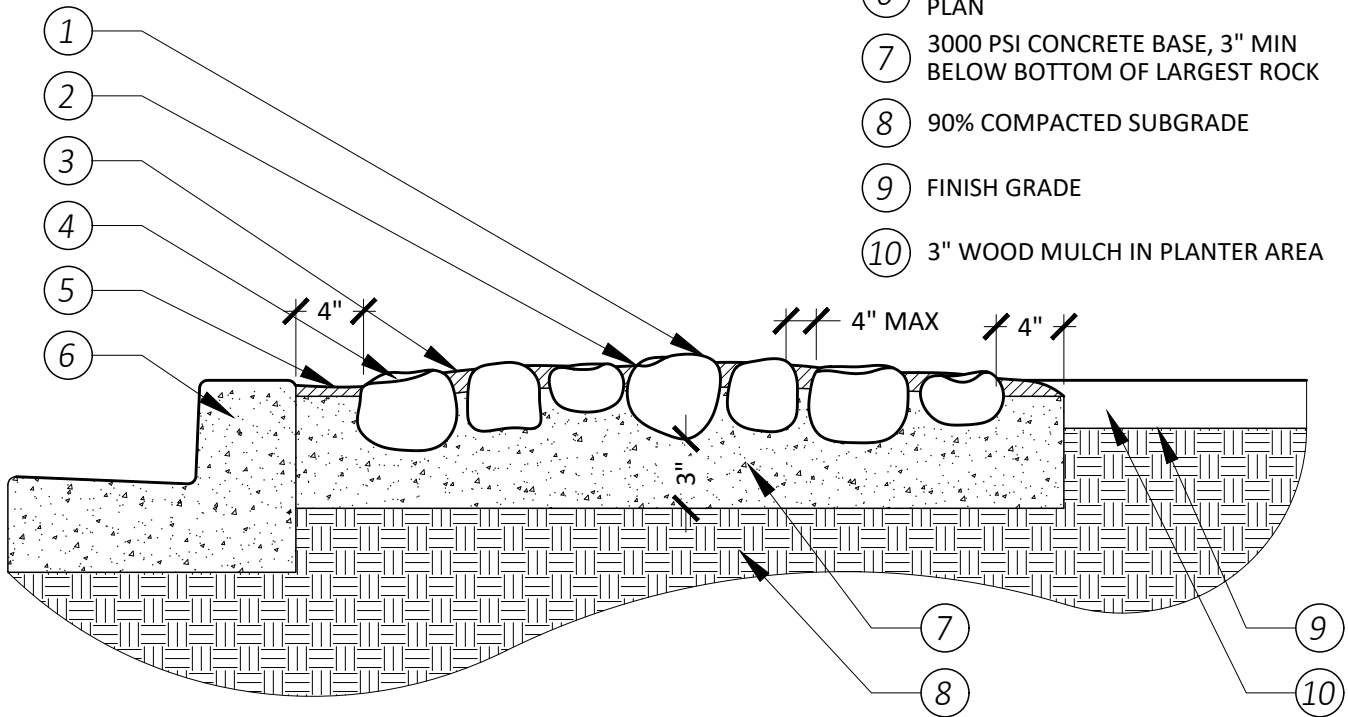
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**NOTES:**

1. ROCK BLANKET: COBBLE  
AVAILABLE FROM: SUPERIOR READYMIX OR APPROVED EQUAL  
CONTACT: 951-658-1562  
SIZE: 6" - 12"  
COLOR: PALM SPRINGS GOLD  
(TO BE CONFIRMED BY THE CITY)
2. NO EXPOSED MORTAR AT OUTSIDE EDGES
3. COLOR SAMPLE OF COBBLE AND MORTAR WITH COLOR  
SAMPLE OF CONCRETE REQUIRED FOR SUBMITTAL AND  
APPROVAL BY CITY OF PERRIS LANDSCAPE ARCHITECT PRIOR  
TO PURCHASE AND INSTALLATION

**LEGEND:**

- ① 1" MAX BETWEEN TOP OF ADJACENT  
ROCKS
- ② 1" - 1 1/2" BETWEEN TOP OF ROCK  
AND MORTAR
- ③ 1 1/2" MAX. BETWEEN ROCKS AFTER  
MORTAR APPLICATION
- ④ ROCK, FLAT SIDE UP
- ⑤ 1" - 1 1/2" DEPTH DRY APPLIED  
COLORED MORTAR
- ⑥ CONCRETE CURB PER ENGINEERING  
PLAN
- ⑦ 3000 PSI CONCRETE BASE, 3" MIN  
BELOW BOTTOM OF LARGEST ROCK
- ⑧ 90% COMPACTED SUBGRADE
- ⑨ FINISH GRADE
- ⑩ 3" WOOD MULCH IN PLANTER AREA



SCALE: 1"=1'

### ROCK BED AT MEDIAN NOSE

L-2

DATE: 08/12/24



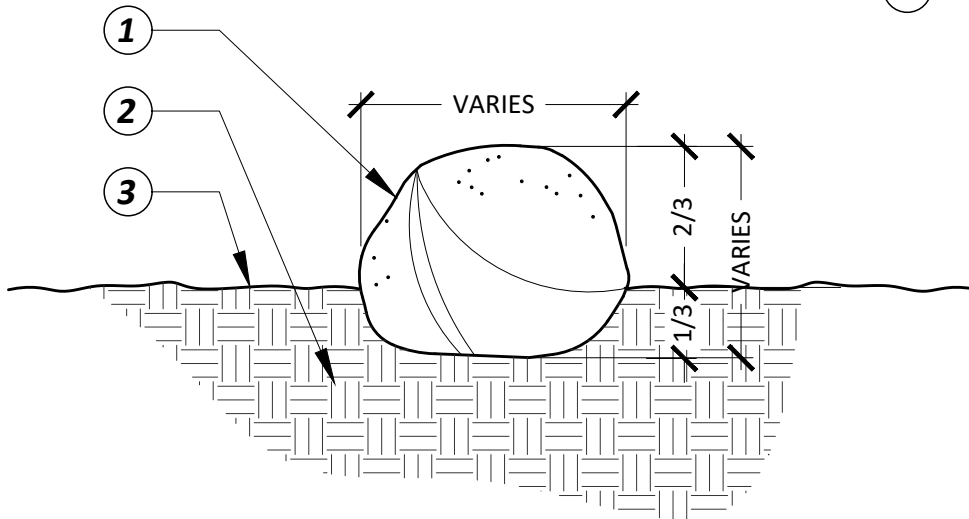
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(951) 943-5003

### LEGEND:

- ① STONE OR BOULDER. REFER TO PLANS FOR TYPE, SIZE AND SUPPLIER
- ② 90% COMPACTED SUBGRADE
- ③ FINISH GRADE



### NOTES:

1. SAMPLES OF ACTUAL SPECIMENS SHALL BE APPROVED PRIOR TO PURCHASE/DELIVERY
2. FINAL LOCATIONS AND ORIENTATIONS SHALL BE APPROVED BY THE CITY LANDSCAPE ARCHITECT PRIOR TO FINAL PLACEMENT/INSTALLATION
3. BOULDERS SHALL BE PLACED SO AS TO APPEAR AS PART OF THE ADJACENT AREA AND IN A NATURAL FORM. AT NO TIME SHALL ANY BOULDER BE PLACED ON TOP OF SOIL OR D.G. WITHOUT EMBEDDING IN AND COMPACTING THE SURROUNDING SOIL

SCALE: 1"=1'

## BOULDER PLACEMENT

L-3

DATE: 08/12/24



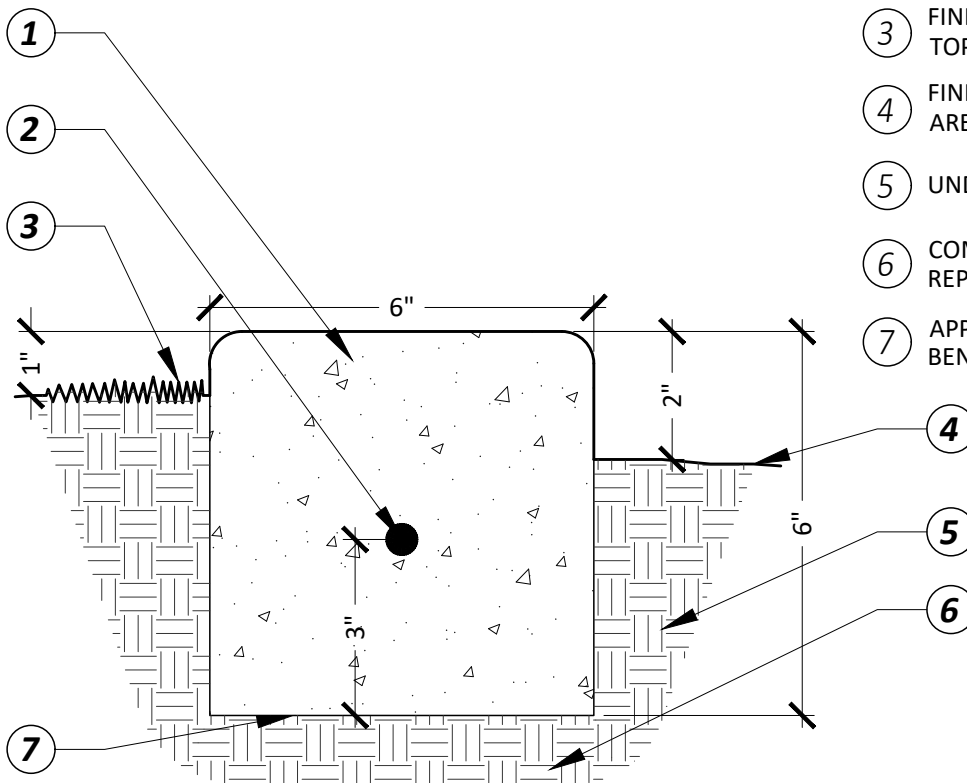
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### LEGEND:

- ① 2,500 PSI NATURAL GREY CONCRETE WITH LIGHT BROOM FINISH.
- ② #3 REBAR - CONTINUOUS LAP BARS 8" @ SPLICES AND TIE (>20'-0" LENGTH)
- ③ FINISH GRADE PER PLAN (1" BELOW TOP OF CURB)
- ④ FINISH GRADE IN GROUNDCOVER AREAS (2" BELOW TOP OF CURB).
- ⑤ UNDISTURBED NATIVE SOIL
- ⑥ COMPACTED SUBGRADE PER SOILS REPORT
- ⑦ APPLY PRE-EMERGENT HERBICIDE BENEATH MOW STRIP.



### NOTES:

1. INSTALL 1/2" PREFORMED EXPANSION JOINTS @ 20' O.C. AND AT BEGINNING/END OF RADIUS
2. PROVIDE 1" DP x 1/8" THICK TOOLED CONTROL JOINT @ 10' O.C.

SCALE: 1"=3"

## CONCRETE MOWCURB

L-4

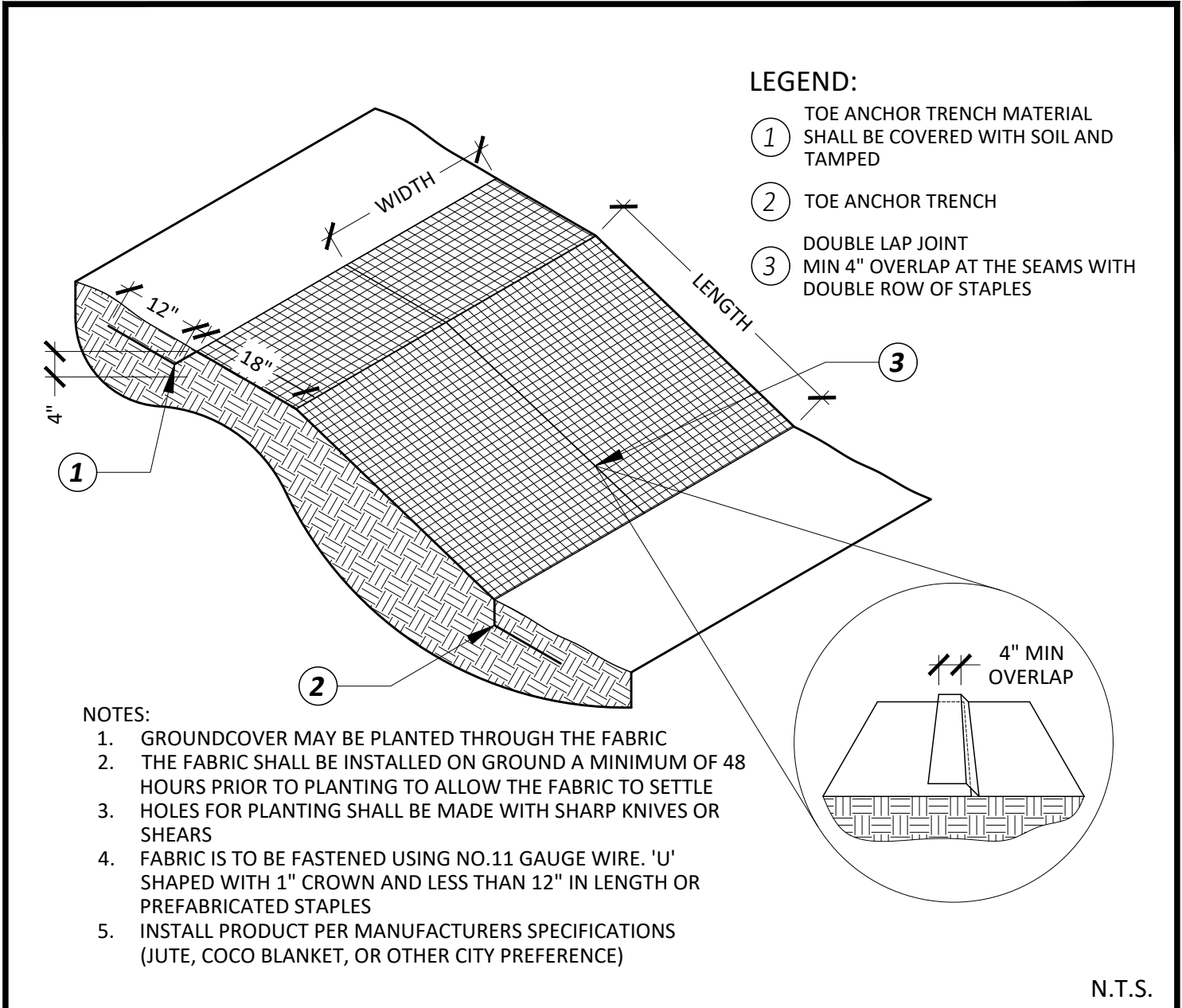
DATE: 08/12/24



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### EROSION CONTROL NETTING

L-5

DATE: 08/12/24



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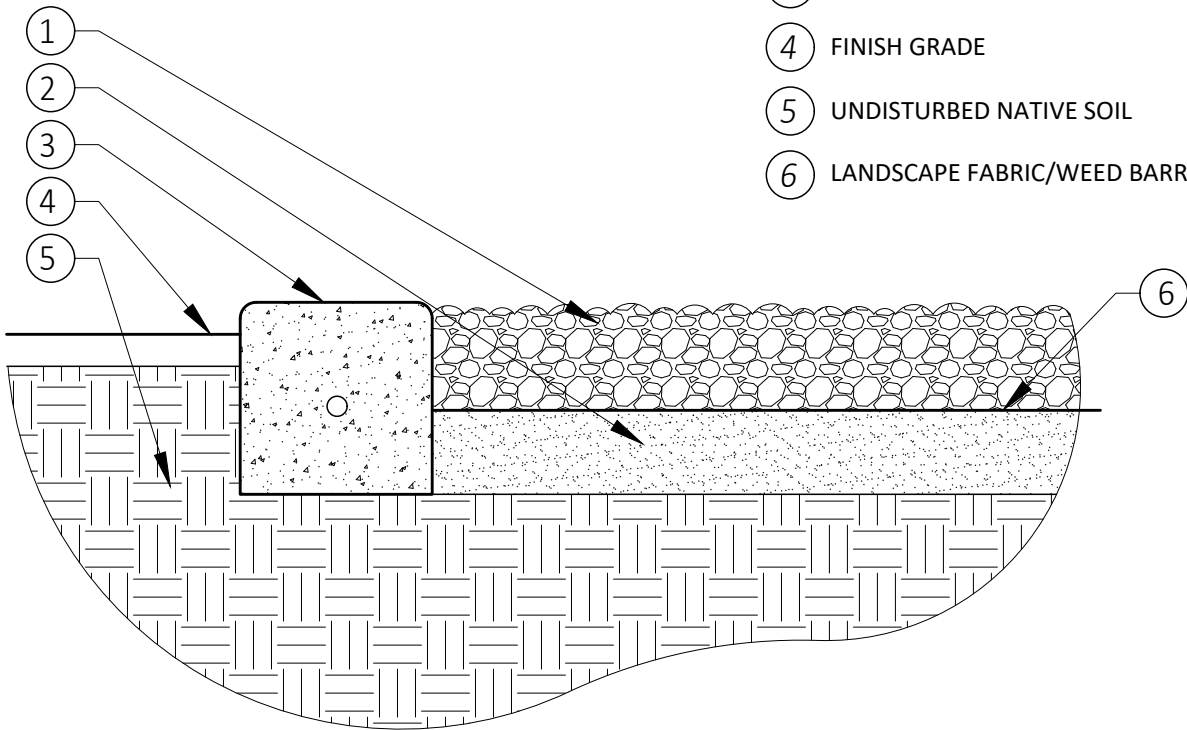
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#### LEGEND:

- ① 4" STABILIZED DECOMPOSED GRANITE; MOJAVE GOLD.
- ② 90% COMPACTED SUBGRADE
- ③ 6" CONCRETE MOWCURB
- ④ FINISH GRADE
- ⑤ UNDISTURBED NATIVE SOIL
- ⑥ LANDSCAPE FABRIC/WEED BARRIER



#### NOTES:

1. CONTRACTOR TO SUBMIT COLOR SAMPLE OF STABILIZED D.G. TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
2. STABILIZER AND DECOMPOSED GRANITE SHALL BE PREMIXED BY MANUFACTURER PRIOR TO DELIVERY ON-SITE.
3. COMPACT DG PER STABILIZER MANUFACTURER REQUIREMENTS

N.T.S.

## DECOMPOSED GRANITE PATH

L-16

DATE: 08/12/24



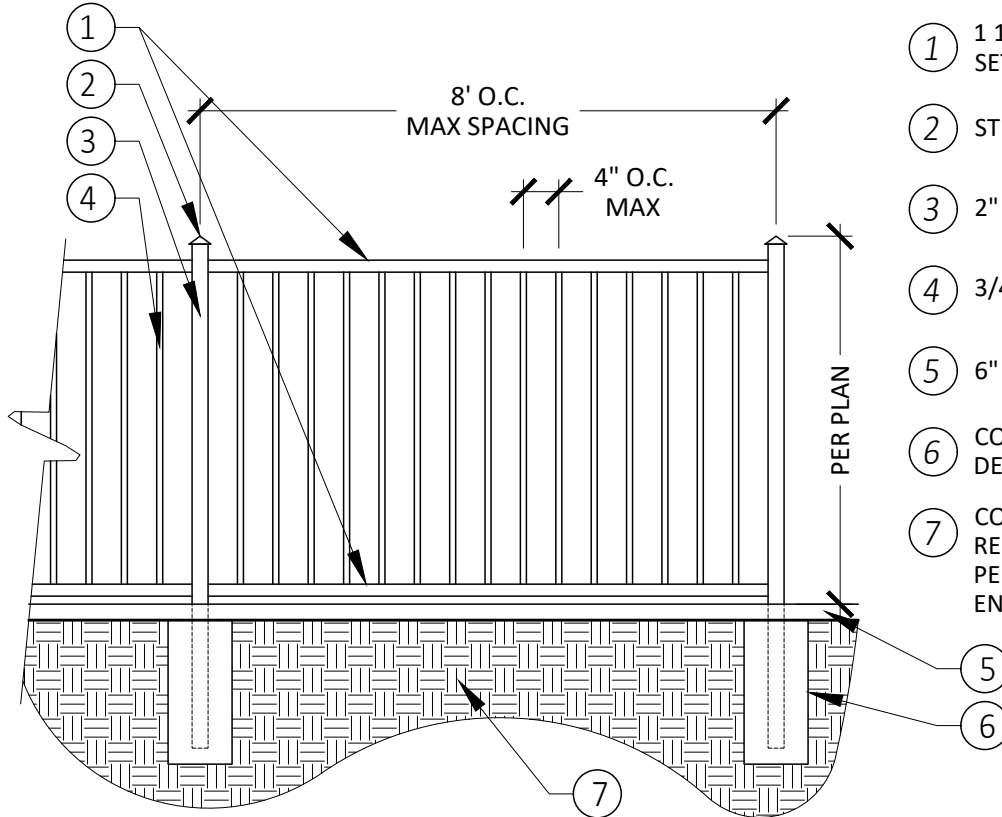
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### LEGEND:

- ① 1 1/2" MIN SQUARE 14 GAUGE RAIL. SET BOTTOM RAIL 4" ABOVE GRADE.
- ② STEEL STD. CAP
- ③ 2" MIN. SQUARE 14 GAUGE POST
- ④ 3/4" MIN. SQUARE 16 GAUGE PICKETS
- ⑤ 6" x 8" CONCRETE MOWCURB
- ⑥ CONCRETE FOOTING TO BE DETERMINED BY ENGINEER
- ⑦ COMPACTED SUBGRADE PER SOIL REPORT PROVIDED BY CONTRACTOR PER SOILS REPORT AND STRUCTURAL ENGINES



### NOTES:

1. ALL WELDS SHALL BE 1/8" FILLET WELDS AND GROUND SMOOTH
2. POWER WASH WROUGHT IRON PRIOR TO PRIME COAT
3. PAINT ALL METAL MEMBERS WITH ONE COAT PRIMER AND TWO COATS HIGH SHEEN BLACK ENAMEL. PAINT DUNN EDWARDS OR APPROVED EQUAL.
4. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION
5. CONCRETE MOWCURB MUST BE CONTINUOUS BELOW ALL FENCING
6. AT POST, SLOPE CONCRETE TO DRAIN WATER AWAY FROM POST

N.T.S.

## TUBULAR STEEL FENCING

L-17

DATE: 08/12/24



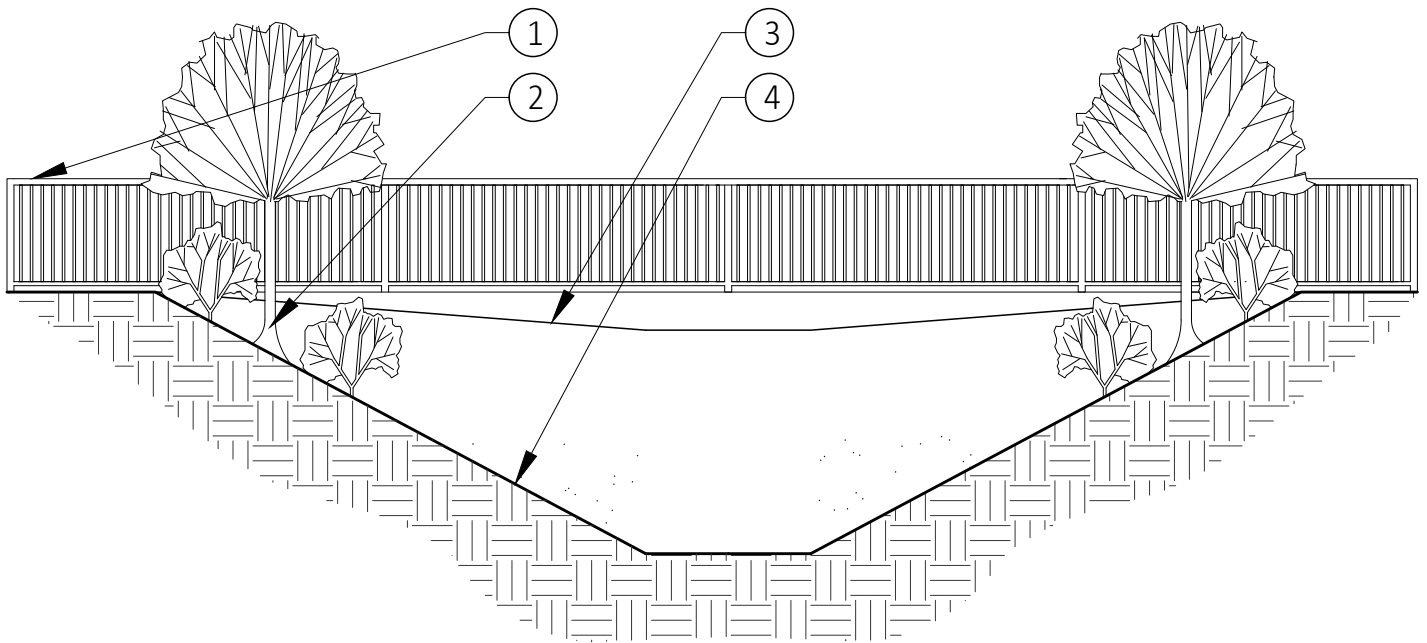
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### LEGEND:

- ① DECORATIVE CMU/TUBULAR STEEL PERIMETER FENCE
- ② TYPICAL SLOPE PLANTING
- ③ CONCRETE MAINTENCE PATH
- ④ NON PLANTED/IRRIGATED LOWER ZONE



N.T.S.

## TYPICAL DRAINAGE BASIN

L-19

DATE: 08/12/24



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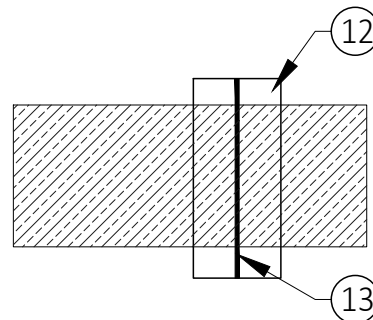
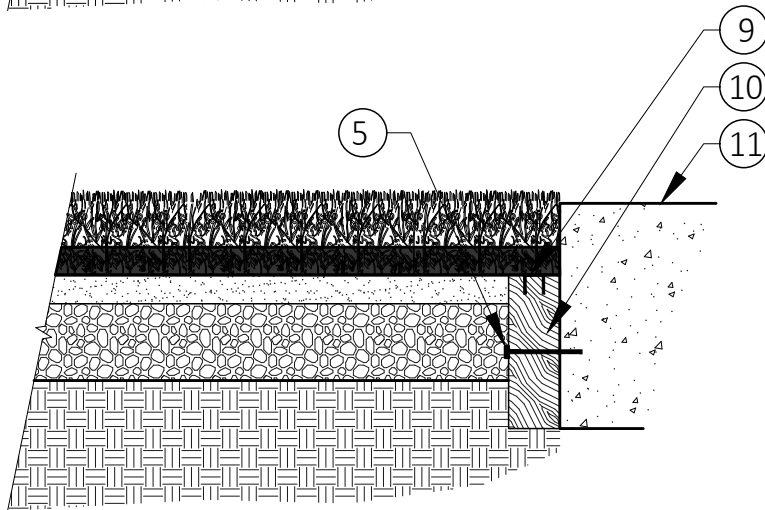
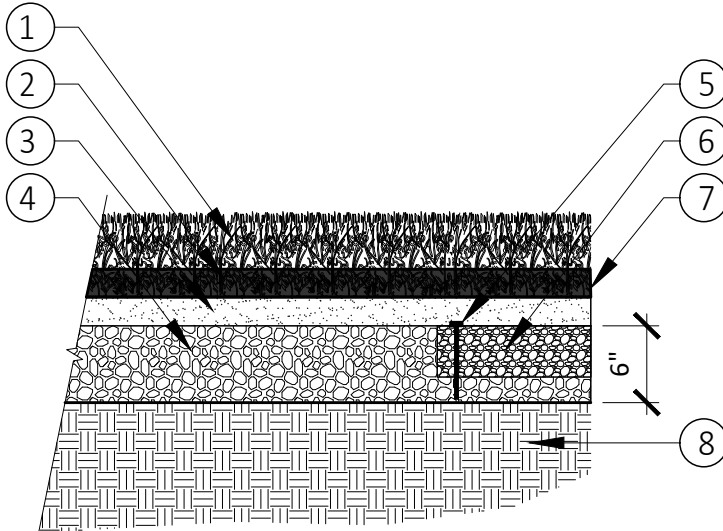
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#### LEGEND:

- ① SYNTHETIC GRASS
- ② GRANULAR INFILL PER MANUFACTURER SPECIFICATIONS
- ③ 2-4 LBS. SAND INFILL
- ④ COMPACTED CLASS II AGGREGATE BASE
- ⑤ #3 - 6" GALVANIZED NAIL
- ⑥ 1/4" MINUS FINES 1" - 2", 95% COMPACTION
- ⑦ EDGE OF LAWN AREA
- ⑧ COMPACTED SUBGRADE PER SOILS MANAGEMENT PLAN
- ⑨ NAIL OR STAPLE TO SECURE GRASS AT NAIL BOARD
- ⑩ 2"X6" PERIMETER WOOD AND PLASTIC COMPOSITE BOARD
- ⑪ CONCRETE PAVING
- ⑫ SEAMING CLOTH
- ⑬ SEAMING ADHESIVE



N.T.S.

## ARTIFICIAL TURF

L-20

DATE: 08/12/24



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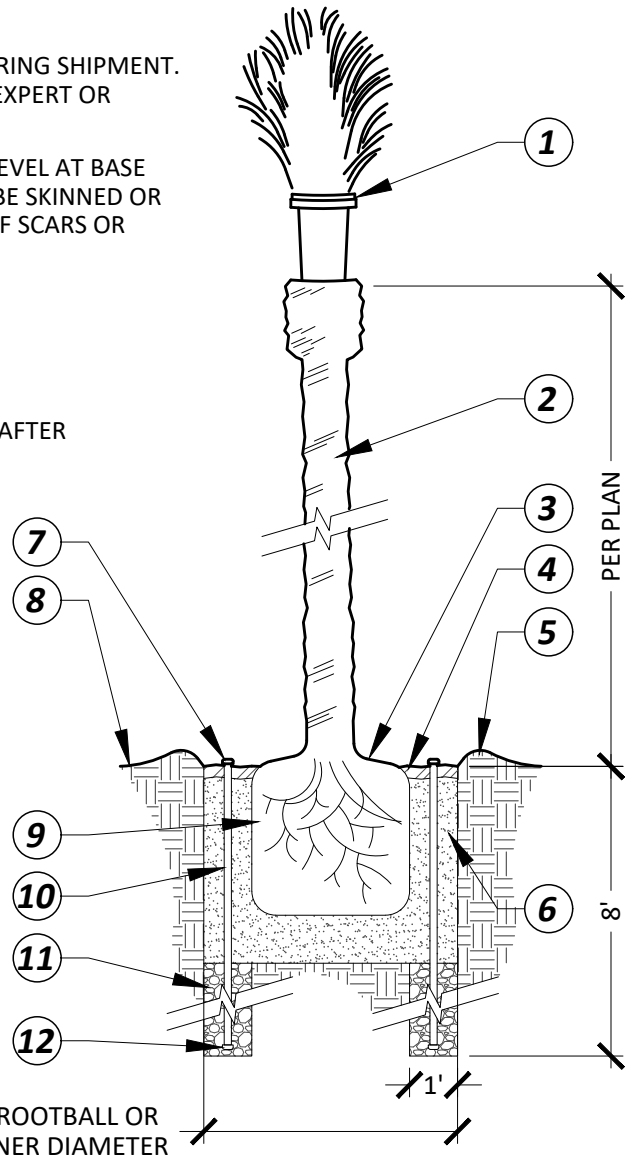
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### LEGEND:

- ① PALM TREE PER PLAN; FRONDS TO BE TIED AND PROTECTED DURING SHIPMENT. UNTIE FRONDS AFTER 60 DAYS OR AS DIRECTED BY PALM TREE EXPERT OR LANDSCAPE ARCHITECT.
- ② TRUNK HEIGHT PER PLAN MEASURED FROM ORIGINAL GRADE LEVEL AT BASE OF TRUNK TO TERMINAL BUD AT BASE OF FRONDS. TRUNK TO BE SKINNED OR DIAMOND CUT DEPENDING ON VARIETY, STRAIGHT AND FREE OF SCARS OR ROT. SET TRUNK PLUMB.
- ③ PLANT BASE OF TREE 4" ABOVE SURROUNDING GRADE. DO NOT BURY ANY PART OF TRUNK.
- ④ 3" DEPTH OF WOOD MULCH
- ⑤ TEMPORARY WATERING BASIN 4" MIN. DEPTH; REMOVE BASIN AFTER MAINTENANCE PERIOD
- ⑥ WASHED COARSE CONCRETE SAND BACKFILL; DO NOT USE EARTH OR OTHER TYPES OF SAND
- ⑦ 4" DIA. BLACK PVC SLIP CAP SET 3" MAX. ABOVE FINISH GRADE. DRILL 3/4" DIA. HOLE IN TOP OF CAP TO ALLOW FOR REMOVAL.
- ⑧ FINISH GRADE
- ⑨ ROOTBALL SHALL BE PROTECTED DURING SHIPMENT; MIN. SIZE 4'x4'x5'
- ⑩ 4" DIA. x 8' PERFORATED PVC PIPE IN FILTER SOCK; CENTER IN HOLE
- ⑪ 12" DIA. x 8' DEEP AUGURED HOLE FILLED WITH 3/4" CRUSHED GRAVEL
- ⑫ 4" DIA. PVC SLIP CAP GLUED TO BOTTOM OF PIPE

### NOTE:

- IN TURF AREAS, MAINTAIN TURF 12" CLEAR FROM PALM TRUNK



## PALM TREE PLANTING

P-1

DATE: 08/12/24



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#### LEGEND:

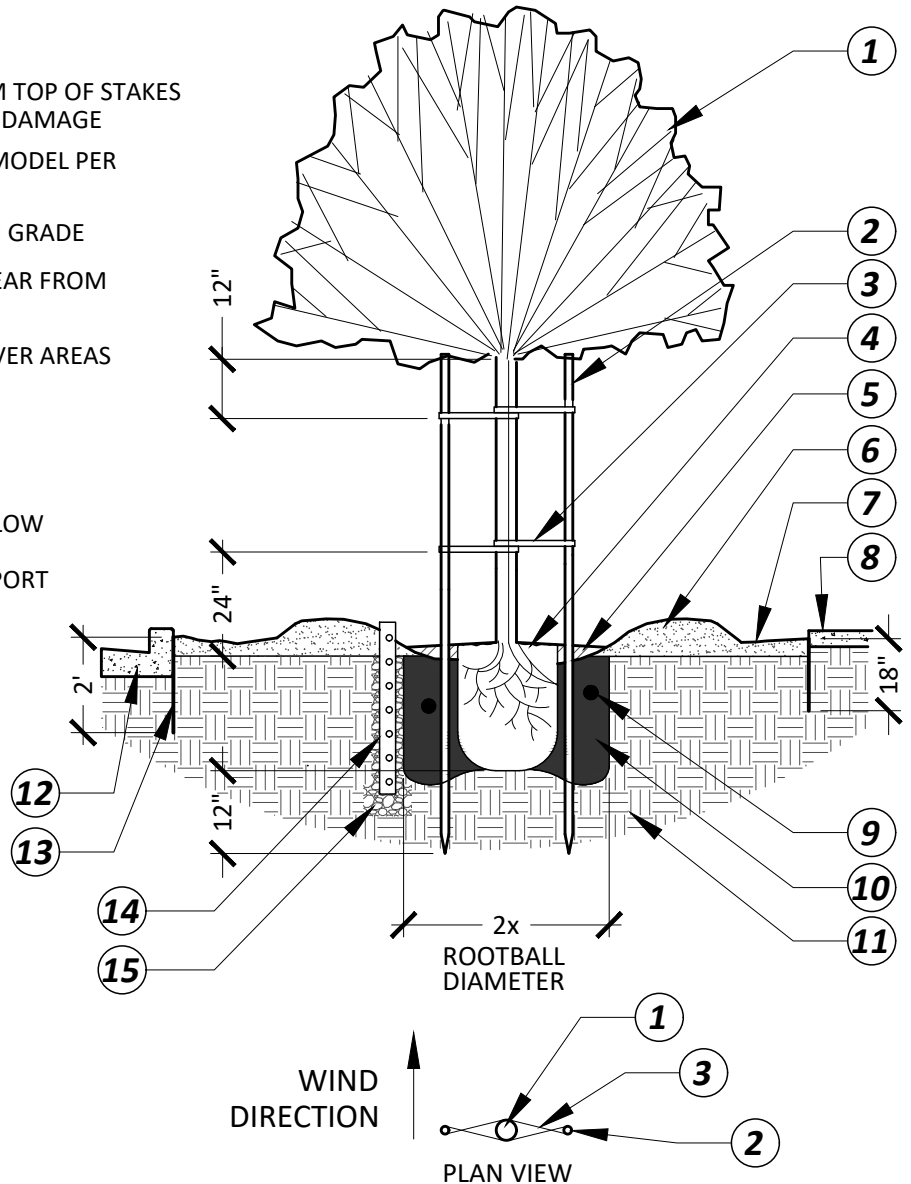
- ① TREE PER PLAN
- ② 3"Øx10' LONG LODGE POLE STAKES; TRIM TOP OF STAKES BELOW LOWEST BRANCHES TO PREVENT DAMAGE
- ③ V.I.T. CINCH-TIE TREE TIES; 4 PER TREE, MODEL PER CHART BELOW
- ④ ROOTBALL; SET CROWN 2" ABOVE FINISH GRADE
- ⑤ 3" DEPTH OF WOOD MULCH; KEEP 3" CLEAR FROM TRUNK
- ⑥ EARTH WATERING BASIN IN GROUNDCOVER AREAS
- ⑦ FINISH GRADE
- ⑧ CONCRETE PAVING PER PLAN
- ⑨ 21 GRAM PLANT TABLETS PER CHART BELOW
- ⑩ COMPACTED BACKFILL MIX PER SOIL REPORT
- ⑪ UNDISTURBED NATIVE SOIL
- ⑫ CONCRETE CURB PER PLAN
- ⑬ DEEP ROOT BARRIER AT EDGE OF HARDSCAPE
- ⑭ 4" WRAPPED IN FILTER SOCK AIR BREATHING TUBE
- ⑮ 2 CUBIC FT. OF 3/4" GRAVEL AT BOTTOM OF TUBE

#### PLANTING TABLETS QUANTITIES:

15 GALLON.....	16 TABS
24" BOX.....	22 TABS
36" BOX.....	28 TABS
48" BOX.....	34 TABS
60" BOX.....	40 TABS

#### V.I.T. CINCH-TIE MODEL #:

15 GALLON.....	CT24
24"-36" BOX.....	CT23



SCALE: 1/4"=1'-0"

## TREE PLANTING

P-3

DATE: 08/12/24



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#### LEGEND:

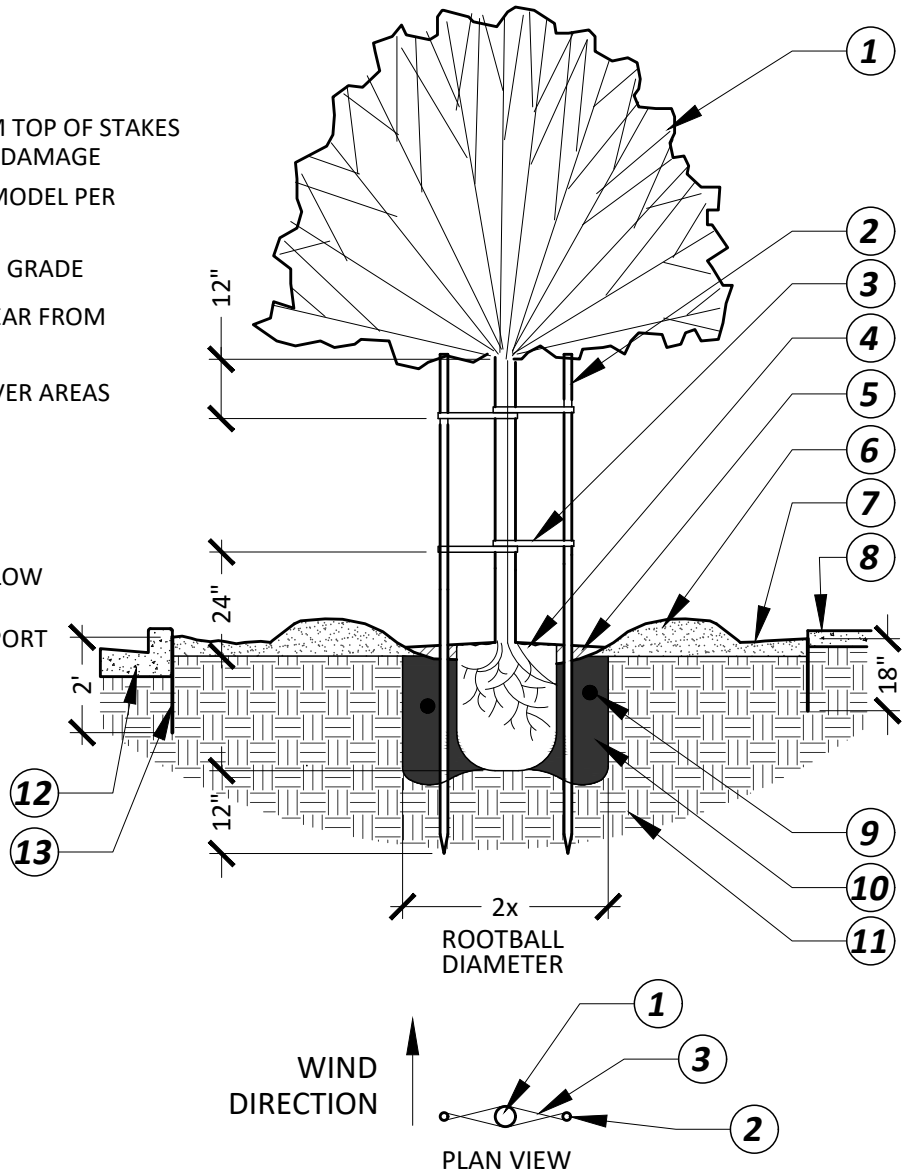
- ① TREE PER PLAN
- ② 3"Øx10' LONG LODGE POLE STAKES; TRIM TOP OF STAKES BELOW LOWEST BRANCHES TO PREVENT DAMAGE
- ③ V.I.T. CINCH-TIE TREE TIES; 4 PER TREE, MODEL PER CHART BELOW
- ④ ROOTBALL; SET CROWN 2" ABOVE FINISH GRADE
- ⑤ 3" DEPTH OF WOOD MULCH; KEEP 3" CLEAR FROM TRUNK
- ⑥ EARTH WATERING BASIN IN GROUND COVER AREAS
- ⑦ FINISH GRADE
- ⑧ CONCRETE PAVING PER PLAN
- ⑨ 21 GRAM PLANT TABLETS PER CHART BELOW
- ⑩ COMPACTED BACKFILL MIX PER SOIL REPORT
- ⑪ UNDISTURBED NATIVE SOIL
- ⑫ CONCRETE CURB PER PLAN
- ⑬ DEEP ROOT BARRIER AT EDGE OF HARDSCAPE

#### PLANTING TABLETS QUANTITIES:

15 GALLON.....	16 TABS
24" BOX.....	22 TABS
36" BOX.....	28 TABS
48" BOX.....	34 TABS
60" BOX.....	40 TABS

#### V.I.T. CINCH-TIE MODEL #:

15 GALLON.....	CT24
24"-36" BOX.....	CT23



## TREE PLANTING

P-3

DATE: 08/12/24



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#### LEGEND:

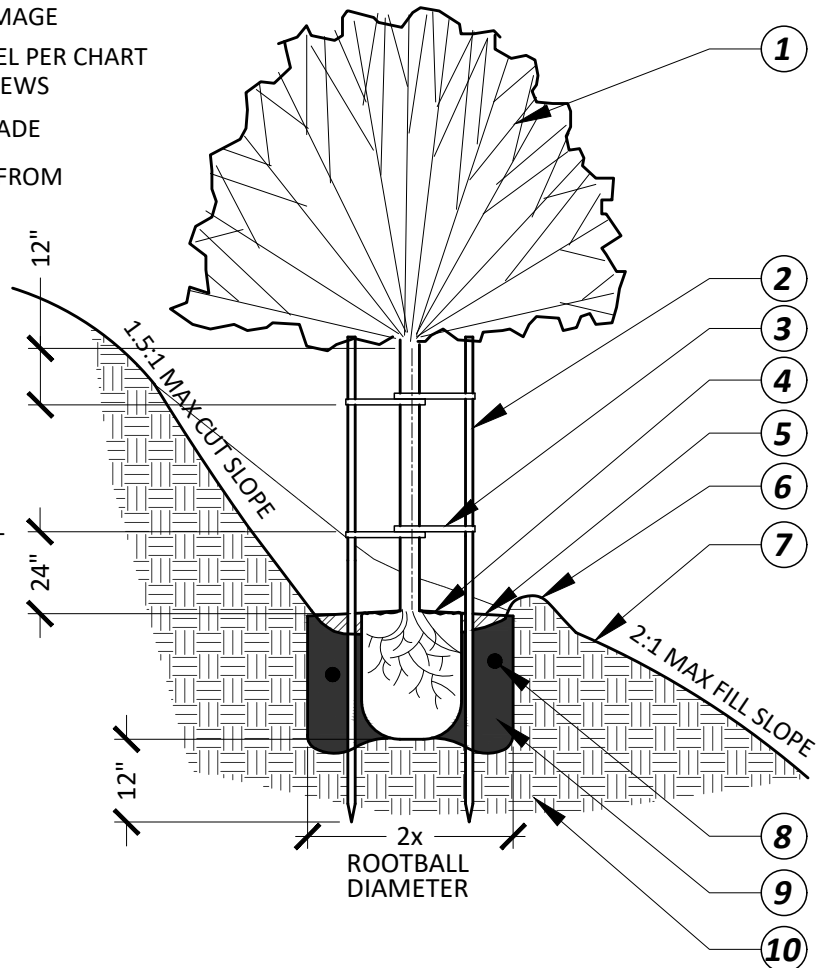
- ① TREE PER PLAN
- ② 3"Øx10' LONG LODGE POLE STAKES; TRIM TOP OF STAKES BELOW LOWEST BRANCHES TO PREVENT DAMAGE
- ③ V.I.T. CINCH-TIE TREE TIES; 4 PER TREE, MODEL PER CHART BELOW. ATTACH TO STAKE WITH WOOD SCREWS
- ④ ROOTBALL; SET CROWN 2" ABOVE FINISH GRADE
- ⑤ 3" DEPTH OF WOOD MULCH; KEEP 3" CLEAR FROM TRUNK
- ⑥ ROUND-TOPPED SOIL BERM 4" HIGH x 8" WIDE ABOVE ROOTBALL SURFACE; CENTER ON DOWNHILL SIDE OF ROOTBALL FOR 240°. BERM SHALL BEGIN AT ROOTBALL PERIPHERY
- ⑦ FINISH GRADE
- ⑧ 21 GRAM PLANT TABLETS PER CHART BELOW
- ⑨ COMPACTED BACKFILL MIX PER SOIL REPORT
- ⑩ UNDISTURBED NATIVE SOIL

#### PLANTING TABLETS QUANTITIES:

15 GALLON.....	16 TABS
24" BOX.....	22 TABS
36" BOX.....	28 TABS
48" BOX.....	34 TABS
60" BOX.....	40 TABS

#### V.I.T. CINCH-TIE MODEL #:

15 GALLON.....	CT24
24"-36" BOX.....	CT23



SCALE: 1/4"=1'-0"

## TREE SLOPE PLANTING

P-3

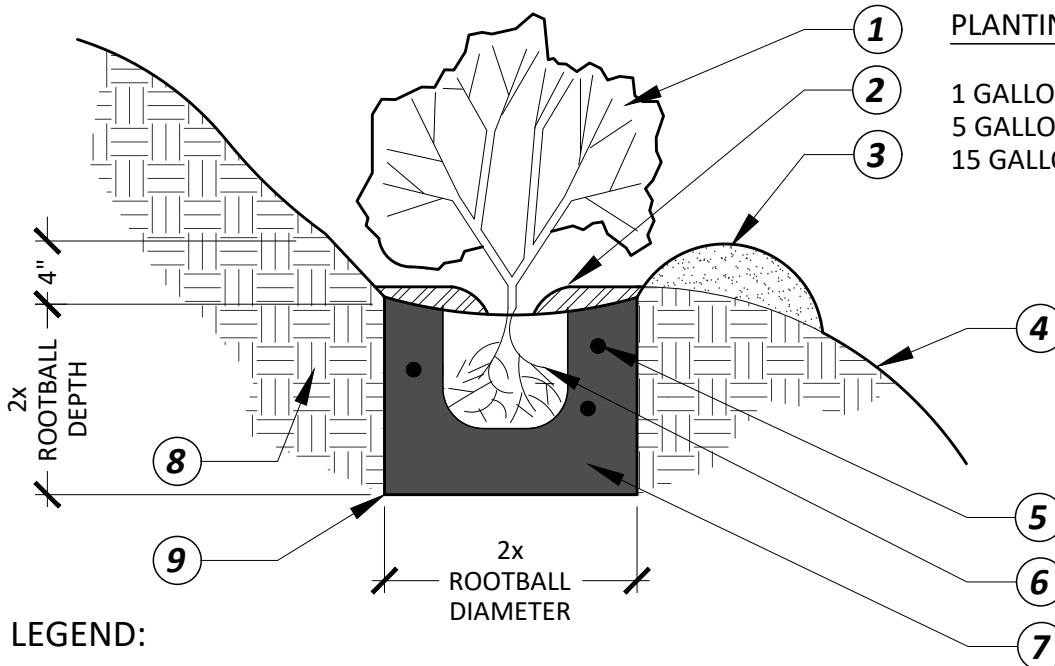
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**PLANTING TABLETS QUANTITIES:**

1 GALLON.....	2 TABS
5 GALLON.....	8 TABS
15 GALLON.....	16 TABS

**LEGEND:**

- ① SHRUB OR VINE PER PLAN
- ② 3" DEPTH OF WOOD MULCH; KEEP 3" CLEAR FROM TRUNK
- ③ ROUND-TOPPED SOIL BERM 4" HIGH x 8" WIDE ABOVE ROOTBALL SURFACE; CENTER ON DOWNHILL SIDE OF ROOTBALL FOR 240°. BERM SHALL BEGIN AT ROOTBALL PERIPHERY
- ④ FINISH GRADE
- ⑤ 7 GRAM PLANT TABLETS; QUANTITIES PER CHART ABOVE
- ⑥ ROOTBALL; SET CROWN SLIGHTLY ABOVE FINISH GRADE
- ⑦ COMPACTED BACKFILL MIX
- ⑧ UNDISTURBED NATIVE SOIL
- ⑨ CUT PLANTING PIT INTO SLOPE TO CREATE LEVEL BASIN

SCALE: 1"=1'-0"

## SHRUB SLOPE PLANTING

P-5

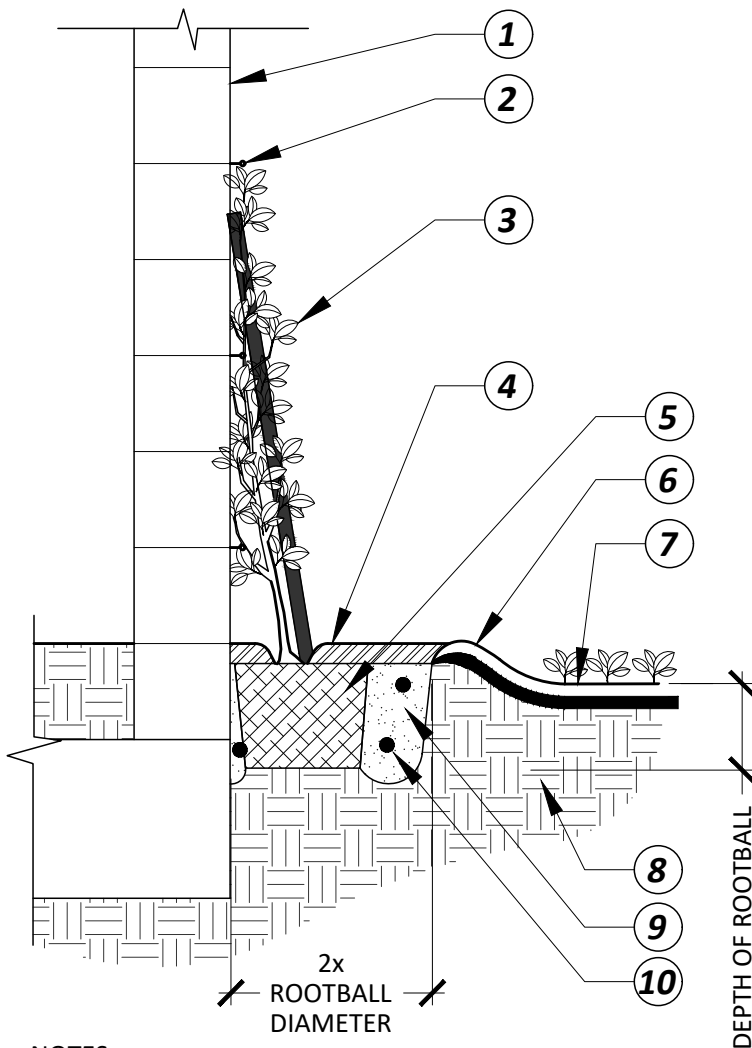
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### LEGEND:

- ① FACE OF WALL OR BUILDING; PROP TOP OF STAKE AGAINST WALL OR BUILDING
- ② 1" DIA. EYE SCREW; INSTALL (1) EVERY 2' OR AT PLANT TENDRIL, DRILL PILOT HOLE AND FASTEN W/ EPOXY RESIN
- ③ VINE PER PLAN
- ④ 3" THICK MULCH LAYER
- ⑤ ROOTBALL; SET TIGHT TO FOOTING. TOP OF ROOTBALL SHALL BE PLACED 3/4" ABOVE FINISH GRADE.
- ⑥ EARTH WATERING BASIN; RAKE SMOOTH PRIOR TO COMPLETION OF MAINTENANCE PERIOD
- ⑦ FINISHED GRADE
- ⑧ UNDISTURBED NATIVE SOIL
- ⑨ BACKFILL MIX PER RESULTS OF SOIL MANAGEMENT PLAN PROVIDED BY CONTRACTOR
- ⑩ 7 GRAM PLANT TABLETS; QUANTITIES PER CHART BELOW

### PLANTING TABLETS QUANTITIES:

1 GALLON.....	2 TABS
5 GALLON.....	8 TABS
15 GALLON.....	16 TABS

### NOTES:

1. REMOVE NURSERY STAKE AFTER VINE BEGINS TO ADHERE TO WALL/END OF MAINTENANCE PERIOD

SCALE: 1"=1'-0"

## VINE PLANTING

P-6

DATE: 08/12/24



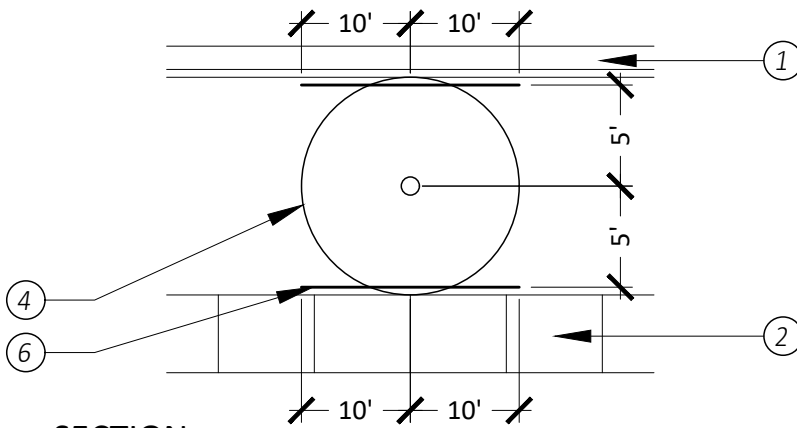
# CITY OF PERRIS

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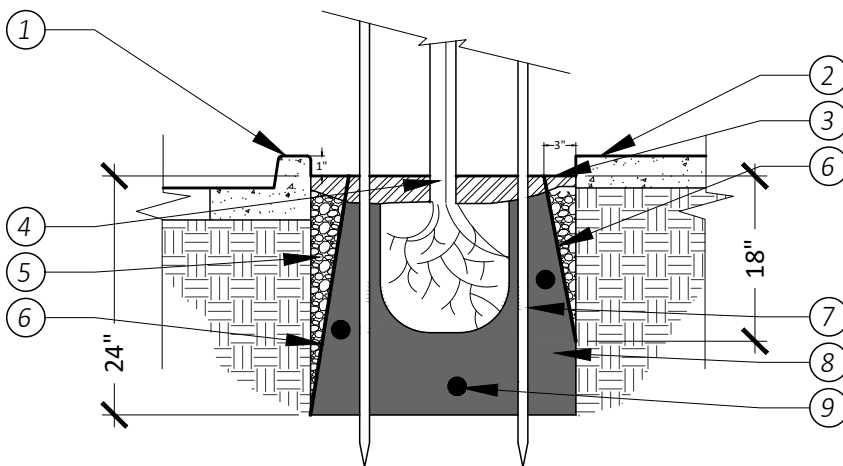
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#### PLAN VIEW



#### SECTION



#### LEGEND:

- ① CONCRETE CURB PER PLAN
- ② CONCRETE SIDEWALK/HARDSCAPE PER PLAN
- ③ FINISH GRADE
- ④ TREE PER PLANTING PLAN
- ⑤ 3/4" TO 1 1/2" GRAVEL OR CRUSHED ROCK
- ⑥ CP SERIES ROOTBARRIER BY CENTURY PRODUCTS (714) 632-7083  
24" AGAINST CURB/STREET  
18" AGAINST ALL OTHER HARDSCAPE
- ⑦ STAKE PER 'TREE PLANTING' DETAIL
- ⑧ COMPACTED BACKFILL MIX PER SOIL MANAGEMENT PLAN
- ⑨ PLANT TABLETS PER 'PLANT TABLETS' DETAIL

#### NOTES:

1. RAISED ROOT PROTECTORS SHALL BE FACING TOWARDS THE TREE
2. TOP OF BARRIER SHALL BE 1" ABOVE THE FINISHED GRADE

N.T.S.

## ROOT BARRIER

P-7

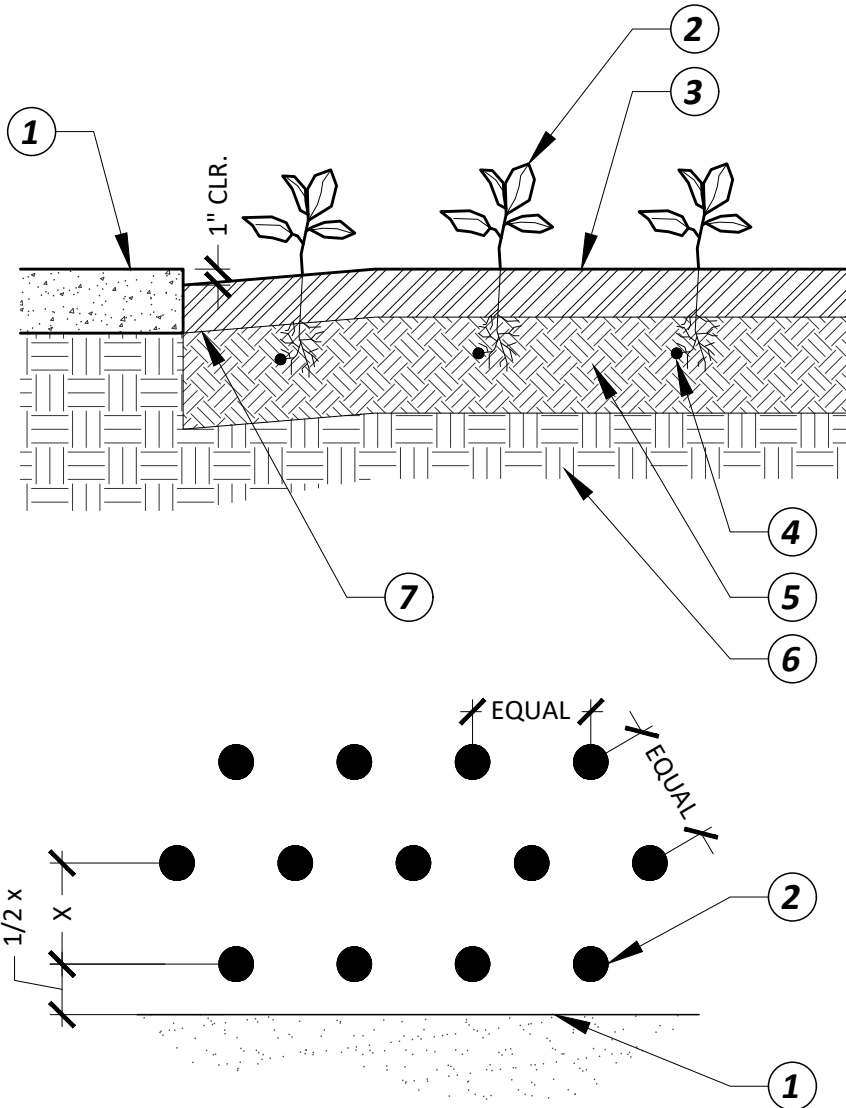
DATE: 08/12/24



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### LEGEND:

- ① CONCRETE PAVING PER PLAN
- ② GROUND COVER PER PLAN
- ③ 3" MIN. BARK MULCH. INSTALL AFTER PLANT INSTALLATION
- ④ FERTILIZER TABLET PER SPECIFICATIONS & SOILS REPORT
- ⑤ FERTILIZER TABLET PER SPECIFICATIONS & SOILS REPORT
- ⑥ UNDISTURBED NATIVE SOIL
- ⑦ SHOVEL CUT KEY FOR HARDSCAPE EDGE

SCALE: N.T.S.

## GROUND COVER PLANTING

P-8

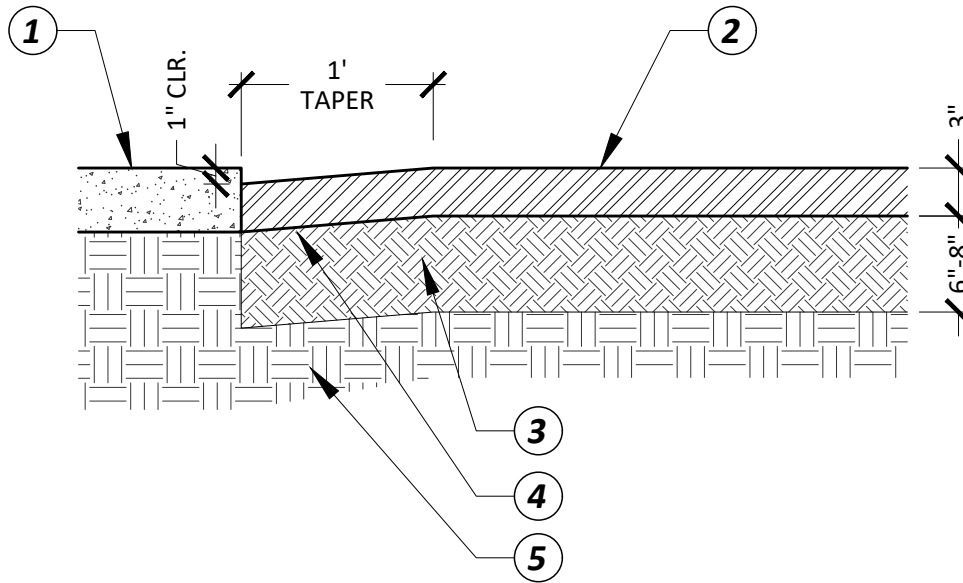
DATE: 08/12/24



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### LEGEND:

- ① CONCRETE PAVING PER PLAN
- ② 3" MIN. BARK MULCH; INSTALL AFTER PLANT INSTALLATION
- ③ 6"-8" AMENDED SOIL
- ④ SHOVEL CUT KEY
- ⑤ UNDISTURBED NATIVE SOIL

### NOTES:

1. PRIOR TO PURCHASE/PLACEMENT OF THE MULCH, THE CONTRACTOR SHALL SUBMIT A SAMPLE TO THE INSPECTOR FOR APPROVAL.
2. MULCH AROUND TREES AND SHRUBS AS PER PLANTING DETAILS AND BLEND IN TO EDGES AT GROUND COVER AREAS.
3. MOISTEN MULCH AFTER INSTALLATION TO ASSIST IN COMPACTION.
4. NO MULCH SHALL BE PLACED OVER THE ROOTBALL OF A WOODY PLANT OR ALLOWED TO REMAIN THERE.
5. WHEN PLANTING GROUNDCOVER FROM FLATS, USE NO MORE THAN A 1" LAYER OF WOOD CHIPS.

SCALE: 1"=1'-0"

## BARK MULCH

P-9

DATE: 08/12/24



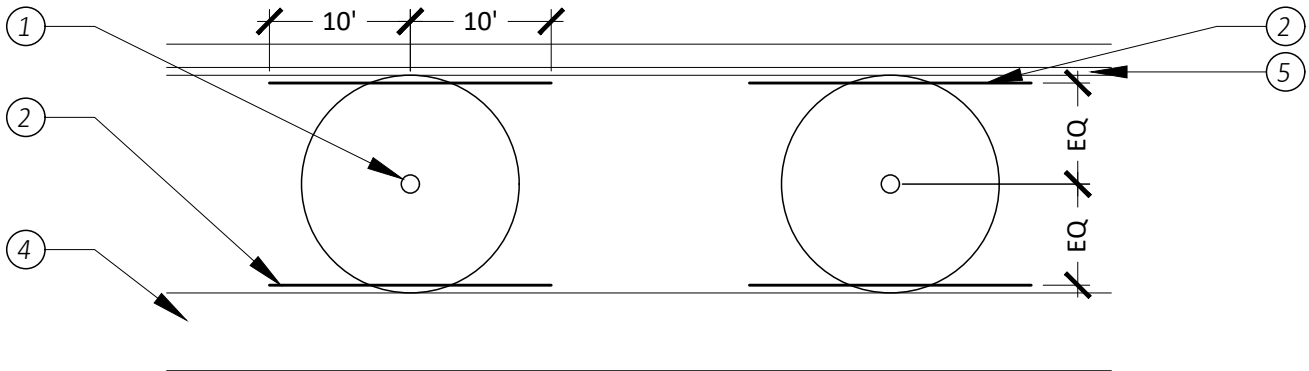
# CITY OF PERRIS

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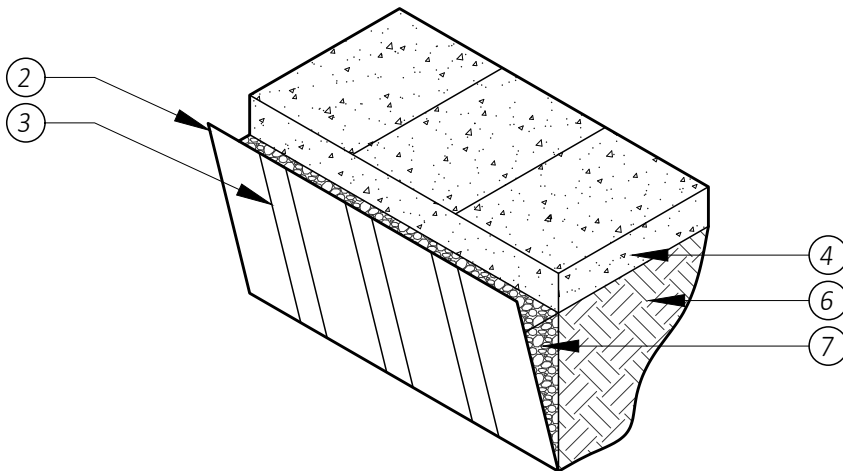
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#### PLAN VIEW



#### ELEVATION



#### LEGEND:

- ① TREE TRUNK LOCATION
- ② CP SERIES ROOTBARRIER BY CENTURY PRODUCTS (714) 632-7083  
24" AGAINST CURB/STREET  
18" AGAINST ALL OTHER HARDSCAPE
- ③ VERTICAL RIBS
- ④ CONCRETE SIDEWALK/HARDSCAPE PER PLAN
- ⑤ CONCRETE CURB PER PLAN
- ⑥ COMPACTED SUBGRADE
- ⑦ 3/4" TO 1 1/2" GRAVEL OR CRUSHED ROCK

#### NOTES:

1. INSTALL IN TRENCH WITH VERTICAL RIBS FACING TOWARDS THE TREE. TOP OF BARRIER TO EXTEND TO TOP OF CURB OR WALK, OR 1" ABOVE TOP OF MULCH LAYER OR FINISH GRADE

N.T.S.

## LINEAR ROOT BARRIER

P-10

DATE: 08/12/24



# CITY OF PERRIS

## DEVELOPMENT SERVICES DEPARTMENT PLANNING DIVISION

135 NORTH D STREET, PERRIS, CA 92570-2200  
(951) 943-5003

**Estimated Total Water Use**

**Equation:  $ETWU = ET_o \times 0.62 \times [((PF \times HA)/IE) + SLA]$ ; Considering precipitation  $ETWA = (ET_o - Eppt) \times 0.62 \times [((PF \times HA)/IE) + SLA]$**

**Enter values in Pale Blue Cells**

**Tan Cells Show Results**

**Messages and Warnings**

Irrigation Efficiency Default Value for overhead 0.75 and drip 0.81.

Plant Water Use Type	Plant Factor
Very Low	0 - 0.1
Low	0.2 - 0.3
Medium	0.4 - 0.6
High	0.7 - 1.0
SLA	1.0

Hydrozone	Select System From the Dropdown List click on cell below	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft <sup>2</sup> ) Without SLA	Enter Irrigation Efficiency (IE)	(PF x HA (ft <sup>2</sup> ))/IE
Zone 1	Overhead Spray	High	0.80	11,000	0.75	11,733
Zone 2	Overhead Spray	High	0.80	4,000	0.75	4,267
Zone 3	Overhead Spray	Medium	0.50	1,000	0.75	667
Zone 4	Drip	Low	0.30	17,000	0.81	6,296
Zone 5	Drip	Low	0.30	10,000	0.81	3,704
Zone 6	Drip	Low	0.20	5,000	0.81	1,235
Zone 7						
Zone 8						
Zone 9						
Zone 10						
Zone 11						
Zone 12						
Zone 13						
Zone 14						
Zone 15						
Zone 16						
Zone 17						
Zone 18						
Zone 19						
Zone 20						
Zone 21						
Zone 22						
Zone 23						
Zone 24						
Zone 25						
			SLA	2,000		27,901
			Sum	50,000		2,000

Results	ETWU =	ETWU complies with MAWA
MAWA = 1,080,660	973,285 Gallons	<b>ETWU complies with MAWA</b>
	130,110 Cubic Feet	
	1,301.10 HCF	
	2.99 Acre-feet	
	0.97 Millions of Gallons	

REFER TO LINK ON STATE WEBSITE  
[https://www.dgs.ca.gov/-/media/Divisions/DSA/Publications/sustainability/MWELocalculator\\_with065ETAF.xlsx?la=en&hash=3D747B5F23B1BA963920F1B0CAD40D8CF24F1ABC](https://www.dgs.ca.gov/-/media/Divisions/DSA/Publications/sustainability/MWELocalculator_with065ETAF.xlsx?la=en&hash=3D747B5F23B1BA963920F1B0CAD40D8CF24F1ABC)

DATE: 01/17/24