

AB-1881 CALCULATIONS : MAXIMUM APPLIED WATER ALLOWANCE	
MAWA = Maximum Applied Water Allowance (GALLONS)	
MAWA = (ETo) x (0.62) x [(0.70 x LA) + (0.3 x SLA)]	
ETo = Reference Evapotranspiration (Inches per year)	56.5
0.62 = Conversion Factor (to gallons per square foot)	0.62
0.70 = ET Adjustment Factor (70% of Reference ET)	0.70
LA = Total Landscaped Area (square feet)	34,238
SLA = Special Landscape Area	0
TOTAL MAWA 839,550.0	

AB-1881 CALCULATIONS : ESTIMATED APPLIED WATER USE	
EAWU = Estimated Applied Water Use by Hydrozone (GALLONS)	
EAWU = (ETo) x (0.62) x [(PF) x (HA) / (IE) + (SLA)]	
ETo = Reference ET (inches per year)	56.5
0.62 = Conversion Factor (to gallons per square foot)	0.62
PF = Plant Factor (Kc)	Hydrozone Specific
HA = Hydrozone Area	Hydrozone Specific
IE = Irrigation Efficiency	Hydrozone Specific
SLA = Special Landscape Area	0
Hydrozone	PF HA IE (PF) x (HA) / (IE)
Turf (Drip Line)	0.8 2,869 0.90 2,550.2
Shrubs (Drip)	0.5 31,369 0.90 17,427.2
Trees (Bubbler)	
TOTAL AREA 34,238 Total 19,977.4	
EAWU = (ETo) x (0.62) x [(TOTAL SUM OF PF x HA / IE) + (SLA)]	
TOTAL EAWU 699,809.9	

'A' POINT OF CONNECTION INFORMATION	
WATER TYPE	POTABLE
WATER METER SIZE	1 1/2"
BACKFLOW PREVENTER SIZE	1"
PRESSURE REGULATOR	N/A
MASTER VALVE SIZE	1"
FLOW SENSOR SIZE	3/4"
MAXIMUM FLOW	14 GPM
CONTROLLER SIZE	16 STATION
NUMBER OF VALVES	13
STATIC PRESSURE AT POC	65 PSI

PRESSURE LOSS CALCULATIONS			
STATION #6A / 14 GPM			
MAXIMUM FLOW			
EQUIPMENT	SIZE	LOSS	
Service Line - Copper Tubing	1 1/2"	0.5	
Water Meter	1 1/2"	0.4	
Backflow Preventer - Reduced Pressure	1"	12.0	
Master Valve	1"	3.0	
Flow Sensor	3/4"	2.0	
SCH 40 PVC Mainline - 50'	1 1/2"	0.3	
Electric Control Valve	1"	3.0	
Lateral Lines (10% Pressure Dif. Max.)	Misc.	2.0	
SUBTOTAL PRESSURE LOSSES		23.2	
MISC. LOSSES THROUGH SYSTEM	10%	2.3	
Elevation Gain in Feet (Pressure Loss)	0	0.0	
TOTAL PRESSURE LOSSES		25.5	
Pressure Required at Sprinkler Head		25.0	
TOTAL PRESSURE REQUIRED		50.5	
Static Pressure at Meter (POC)		65.0	
RESIDUAL PRESSURE		14.5	

PRESSURE LOSS CALCULATIONS			
STATION #10A / 9.5 GPM			
FARTHEST FROM POC			
EQUIPMENT	SIZE	LOSS	
Service Line - Copper Tubing	1 1/2"	0.3	
Water Meter	1 1/2"	0.4	
Backflow Preventer - Reduced Pressure	1"	12.0	
Master Valve	1"	3.9	
Flow Sensor	3/4"	1.0	
SCH 40 PVC Mainline - 480'	1 1/2"	1.4	
Electric Control Valve	1"	3.9	
Lateral Lines (10% Pressure Dif. Max.)	Misc.	2.0	
SUBTOTAL PRESSURE LOSSES		24.9	
MISC. LOSSES THROUGH SYSTEM	10%	2.5	
Elevation Gain in Feet (Pressure Loss)	0	0.0	
TOTAL PRESSURE LOSSES		27.4	
Pressure Required at Sprinkler Head		25.0	
TOTAL PRESSURE REQUIRED		52.4	
Static Pressure at Meter (POC)		65.0	
RESIDUAL PRESSURE		12.6	



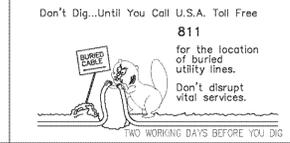
HYDROZONE INFORMATION MATRIX									
Station #	Area (sq. ft.)	% of Total Area	Plant Type	Water Use (WUCOLS)	Irrigation Type	Solar Exposure	Zone Flow (gpm)	Precipitation Rate (in/hr)	Zone Pressure
1A	535	1.6%	Turf	High	Drip Line	Sun	8.9	1.60	25 psi
2A	861	2.5%	Turf	High	Drip Line	Sun	14.4	1.60	25 psi
3	514	1.5%	Turf	High	Drip Line	Sun	8.6	1.60	25 psi
4A	601	1.8%	Turf	High	Drip Line	Sun	10.0	1.60	25 psi
5A	358	1.0%	Turf	High	Drip Line	Sun	6.0	1.60	25 psi
6A	0	0.0%	Trees	Moderate	Bubbler	Sun	14.0	+/- 3.00	25 psi
7A	7,563	22.1%	Shrubs / GC	Moderate	Drip	Sun	5.0	0.35	25 psi
8A	3,652	10.7%	Shrubs / GC	Moderate	Drip	Sun	4.5	0.35	25 psi
9A	0	0.0%	Trees	Moderate	Bubbler	Sun	10.0	+/- 3.00	25 psi
10A	0	0.0%	Trees	Moderate	Bubbler	Sun	9.5	+/- 3.00	25 psi
11A	7,265	21.2%	Shrubs / GC	Moderate	Drip	Sun	4.4	0.35	25 psi
12A	7,505	21.9%	Shrubs / GC	Moderate	Drip	Sun	3.8	0.35	25 psi
13A	5,103	14.9%	Shrubs / GC	Moderate	Drip	Sun	4.5	0.35	25 psi
14A	SPARE STATION								
15A	SPARE STATION								
16A	SPARE STATION								
1B	281	0.8%	Shrub / GC	Moderate	Drip Line	Sun	2.1	0.70	25 psi
34,238		TOTAL AREA (sq. ft.)							

PIPE SIZING	
I	3/4" PIPE
II	1" PIPE
III	1 1/4" PIPE
IV	1 1/2" PIPE
V	2" PIPE
VI	2 1/2" PIPE
VII	3" PIPE
VIII	4" PIPE
IX	6" PIPE
X	8" PIPE

SCH 40 PVC SLEEVING CHART		
1 1/4" SLEEVE	1-8 WIRES	1/2" PIPE
1 1/2" SLEEVE	9-16 WIRES	3/4" PIPE
2" SLEEVE	17-28 WIRES	1" PIPE
2 1/2" SLEEVE	27-38 WIRES	1 1/4" PIPE
3" SLEEVE	39-54 WIRES	1 1/2" PIPE
4" SLEEVE	55-100 WIRES	2" PIPE
6" SLEEVE	100+ WIRES	3" PIPE
8" SLEEVE	N/A	4" PIPE
12" SLEEVE	N/A	6" PIPE

- IRRIGATION SHEET REFERENCES
- SEE SHEETS LS 1.1, LS 1.2, LS 3.1 AND LS 3.2 FOR PLANS
 - SEE SHEET LS 1.1 FOR LEGENDS
 - SEE SHEET LS 1.2 FOR GENERAL NOTES
 - SEE SHEET LS 1.3, LS 1.4, AND LS 3.1 FOR DETAILS
 - SEE SHEET LS 1.1 FOR POINT OF CONNECTION INFO
 - SEE SHEET LS 1.1 FOR HYDROZONE INFORMATION MATRIX
 - SEE SHEET LS 1.1 FOR AB-1881 / WATER BUDGET CALCULATIONS
 - SEE SHEET LS 1.1 FOR PRESSURE LOSS CALCULATIONS
 - SEE SHEET LS 3.2 FOR CONTROLLER SCHEDULE GUIDELINES

AS-BUILT
Harry Clarke
 08/01/14
 NO AS-BUILT CHANGES



PLANS PREPARED BY:
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 999 W. TOWN AND COUNTRY ROAD
 ORANGE, CA 92668-4713
 (714) 567-2501



EQUIPMENT LEGEND			
SYMBOL	MANUFACTURER / MODEL NUMBER	SIZE	DETAIL
[M]	WATER METER BY OTHERS - SEE POINT OF CONNECTION NOTE ON PLANS	1 1/2"	N/A
[BP]	FEBCO 825YA SERIES REDUCED PRESSURE BACKFLOW PREVENTER INSTALL IN STRONG BOX SBBC-30-CR STEEL ENCLOSURE PER CITY STANDARD	1"	2002
NOT SHOWN	WILKINS YBP-80 SERIES Y-STRAINER WITH 80-MESH SCREEN	1"	2002
[MV]	TORO TPV-F-100 SERIES MASTER CONTROL VALVE - NORMALLY CLOSED	1"	A, LS 1.4
[FS]	RAIN BIRD FS-075-P SERIES FLOW SENSOR IN PLASTIC TEE	3/4"	A, LS 1.4
[FI]	EZ-FLO EZ-005-FX SERIES FERTILIZER INJECTION SYSTEM	5 GALLON	2024
[RS]	RAIN BIRD RSD SERIES OR APPROVED EQUAL RAIN SENSOR IN PROTECTIVE ENCLOSURE	N/A	2017
[SW]	SPARE WIRE STUB OUT EXTRA CONTROL WIRES - LOCATE WIRES IN STANDARD VALVE BOX	2 x 14 GA UF	B, LS 1.4
[V]	WILKINS 850U SERIES BALL VALVE	LINE SIZE	2015
[C]	RAIN BIRD #33-DLRC SERIES QUICK COUPLING VALVE WITH LOCKING VINYL COVER	3/4"	2014
[T]	TORO TBV-F-100 SERIES ELECTRIC CONTROL VALVE (FOR TREE BUBBLERS SYSTEMS)	1"	2010
[D]	TORO DZK-TPV-1-MF DRIP ZONE KIT - WITH 150 MESH FILTER AND 25 PSI PRESSURE REGULATOR (FOR TURF DRIP LINE, SHRUB DRIP LINE, AND SHRUB POINT-SOURCE DRIP SYSTEMS)	1"	2019
[X]	MANUAL FLUSH VALVE FOR POINT-SOURCE DRIP SYSTEMS	N/A	A, LS 3.1
[E]	FLUSH VALVE FOR DRIP LINE SYSTEMS - MODEL # IN DETAIL	1/2"	2021
[V]	AUTOMATIC AIR / VACUUM RELEASE VALVE FOR TURF DRIP LINE SYSTEMS - MODEL # IN DETAIL	1/2"	2020
[S]	SCH 40 PVC IRRIGATION PRESSURE MAINLINE (1 1/2" AND SMALLER) - 18" MINIMUM COVER	1 1/2"	2001/2003
[L]	SCH 40 PVC IRRIGATION MAINLINE (2" AND LARGER) - 18" MINIMUM COVER	PLAN SIZE	2001/2003
[N]	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MINIMUM COVER	PLAN SIZE	2001/2003
[S]	SCH 40 PVC PIPE SLEEVING - EXTEND 6" BEYOND EDGE OF HARDSCAPE - 18" MINIMUM COVER	PLAN SIZE	2001/2003
[S]	SCH 40 PVC WIRE SLEEVING - EXTEND 6" BEYOND EDGE OF HARDSCAPE - 18" MINIMUM COVER	PLAN SIZE	2001/2003
[T]	TURF - TORO RCP-412-xxx DRIP LINE WITH 1 GPH EMITTERS AT 12" O.C. / ROWS AT 12" O.C.	PLAN SIZE	2023
[T]	SHRUBS - TORO RBP-418-xxx DRIP LINE WITH 1 GPH EMITTER AT 18" O.C. / ROWS AT 18" O.C. TURF TUBING TO BE BURIED 4" DEEP - SHRUB TUBING TO BE 1"-2" DEEP AND MULCHED OVER	PLAN SIZE	2023
[C]	RAIN BIRD ESP-8-LXME-F FLOW SENSING CONTROLLER WITH ONE RAIN BIRD ESP-LXM-8 MODULE INSTALL WITH RAIN BIRD ET MANAGER CARTRIDGE FOR SMART OPERATION	16 STATION	2017
NOT SHOWN	UF DIRECT BURIAL CONTROL WIRE WITH WATERPROOF CONNECTIONS	14 GA UF	B, LS 3.1

SPRINKLER LEGEND										
SYMBOL	MANUFACTURER / MODEL NUMBER	NOZZLE	RAD	PSI	FLOW - GPM		DETAIL			
					Q	T	H	TT	TQ	F
TREE BUBBLERS										
[O]	RAIN BIRD 1401 SERIES	2 PER TREE	N/A	25	0.5 (2 x 0.25 PER TREE)					2011
* SINGLE SYMBOL ON PLANS REPRESENTS TWO (2) BUBBLERS FOR EACH TREE. REFER TO INSTALLATION DETAIL.										
DRIP EMITTERS ON POLY-FLEX RISERS										
[•]	RAIN BIRD XB-10-PC-10-32	2 PER PLANT	N/A	25	2 GPH (2 x 1 GPH PER SHRUB)					C/D, LS 3.1
** SINGLE SYMBOL ON PLANS REPRESENTS TWO (2) DRIP EMITTERS FOR EACH SHRUB. REFER TO INSTALLATION DETAIL.										

POINT OF CONNECTION 'A'
 MAKE IRRIGATION POINT OF CONNECTION INTO NEW 1 1/2" IRRIGATION WATER METER PROVIDED BY OTHERS. VERIFY EXACT LOCATION IN THE FIELD AND ADJUST AS NECESSARY. INSTALL BACKFLOW PREVENTER IMMEDIATELY DOWNSTREAM OF METER PER ALL LOCAL CODES. INSTALL IN ENCLOSURE AS CALLED FOR IN THE BACKFLOW PREVENTER DETAIL. FINAL BACKFLOW PREVENTER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. INSTALL BALL VALVE DOWNSTREAM OF BACKFLOW DEVICE. INSTALL MASTER VALVE DOWNSTREAM OF BALL VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS USING RECOMMENDED WIRE TYPE. INSTALL FLOW SENSOR DOWNSTREAM OF MASTER VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS USING RECOMMENDED WIRE TYPE. MAXIMUM DEMAND IS 14 GPM. STATIC PRESSURE AT METER IS 65 PSI. CONTRACTOR SHALL VERIFY STATIC PRESSURE AT METER PRIOR TO START OF WORK AND NOTIFY THE LANDSCAPE ARCHITECT IN WRITING IMMEDIATELY IF A DISCREPANCY IS FOUND. DO NOT PROCEED WITH ANY IRRIGATION INSTALLATION WORK UNTIL ANY AND ALL WATER SUPPLY AND PRESSURE ISSUES HAVE BEEN RESOLVED.

CONTROLLER
 INSTALL IRRIGATION CONTROLLER IN APPROXIMATE LOCATION SHOWN ON THE PLANS. INSTALL IN STRONG BOX SB-18SS STAINLESS STEEL ENCLOSURE OR STAINLESS STEEL ENCLOSURE APPROVED BY THE CITY. FINAL CONTROLLER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. 120V AC POWER TO BE PROVIDED BY OTHERS. CONTRACTOR IS TO PROVIDE CONDUIT WITH PULL CORD FROM POWER LOCATION TO FINAL CONTROLLER LOCATION. CONDUIT SIZE TO BE COORDINATED WITH ELECTRICIAN PROVIDING THE 120V AC POWER. THE IRRIGATION CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS PER LOCAL CODES. MOUNT, GROUND, AND WIRE ALL THE CONTROL EQUIPMENT PER THE MANUFACTURER'S DIRECTIONS, THESE PLANS, AND PER ALL LOCAL CODES.

SLEEVING
 MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.

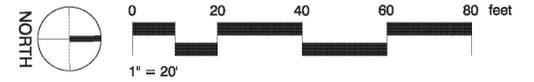
TREE BUBBLER SYSTEMS
 ALL TREES ARE TO RECEIVE TWO (2) BUBBLERS. THE SINGLE SYMBOL ON THE PLANS REPRESENTS TWO BUBBLERS. THE BUBBLERS AND ASSOCIATED LATERAL LINES ARE SHOWN OUTSIDE OF PLANTING AREAS FOR CLARITY ONLY. INSTALL ALL BUBBLERS ADJACENT TO TREES PER THE DETAIL. FINAL BUBBLER LOCATIONS AND QUANTITIES TO BE DETERMINED IN THE FIELD SO AS TO MATCH THE FINAL TREE PLANTING. THIS MAY REQUIRE MOVING, ADDING, OR OMITTING BUBBLERS AS NECESSARY.

TURF DRIP LINE SYSTEMS
 ALL TURF AREAS ARE TO BE IRRIGATED WITH SUB-SURFACE DRIP LINE SYSTEMS. THE DRIP LINE TUBING SHALL BE TORO DL2000 WITH 1.0 GPH EMITTERS AT 12" O.C. ROWS OF TUBING TO BE INSTALLED AT ABOUT 18" O.C. INSTALL DRIP LINE SYSTEMS PER THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS. CONTRACTORS NOT FAMILIAR WITH DRIP LINE SYSTEM IRRIGATION SYSTEMS SHALL CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR ON-SITE TRAINING AND PRODUCT INFORMATION PRIOR TO START OF WORK. TURF DRIP LINE SYSTEMS SHALL HAVE TUBING BURIED 4" BELOW FINISH GRADE AND STAPLED DOWN PRIOR TO TRENCH BACKFILL.

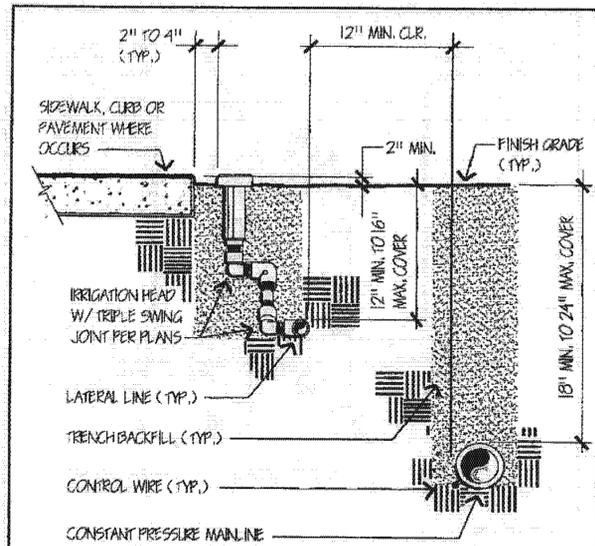
SHRUB DRIP LINE SYSTEMS
 SHRUB AREAS WITH DRIP LINE IRRIGATION ARE TO BE IRRIGATED WITH TORO DL2000 WITH 1.0 GPH EMITTERS AT 18" O.C. ROWS OF TUBING TO BE INSTALLED AT ABOUT 18" O.C. INSTALL DRIP LINE SYSTEMS PER THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS. CONTRACTORS NOT FAMILIAR WITH DRIP LINE SYSTEM IRRIGATION SYSTEMS SHALL CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR ON-SITE TRAINING AND PRODUCT INFORMATION PRIOR TO START OF WORK. SHRUB DRIP LINE SYSTEMS SHALL HAVE TUBING BURIED 1"-2" BELOW FINISH GRADE, STAPLED DOWN, AND COVERED WITH MULCH.

SHRUB POINT-SOURCE DRIP SYSTEMS
 SHRUB AREAS WITH POINT-SOURCE DRIP SYSTEMS ARE TO RECEIVE TWO (2) 1 GPH EMITTERS PER SHRUB. ALL PIPING FOR THESE SYSTEMS SHALL BE RIGID PVC WITH POLY-FLEX RISERS PER DETAILS. NO POLY TUBING OR SPAGHETTI TUBING WILL BE ALLOWED.

SLOPES
 IS IS THE INTENT OF THIS DESIGN TO GROUP PLANTS THAT ARE IN FLAT OR TOP OF SLOPE AREAS SEPARATELY FROM PLANTS THAT ARE AT THE BOTTOM OF SLOPES. MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY TO SPLIT THE POINT-SOURCE DRIP SYSTEMS APPROPRIATELY.

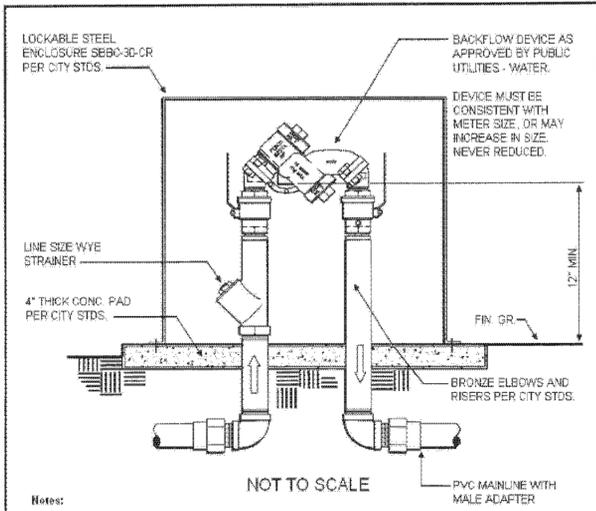


IOWA AVENUE GRADE SEPARATION IRRIGATION PLAN			ACCT. NO. XX-XX-XXX
MARK REVISIONS APPR DATE			DWG NO. R-4237L
DESIGN BY _____ DRAWN BY _____ CHECKED BY _____			LS 1.1 [AS-BUILT]
SCALE: AS SHOWN			SHEET 1 OF 11



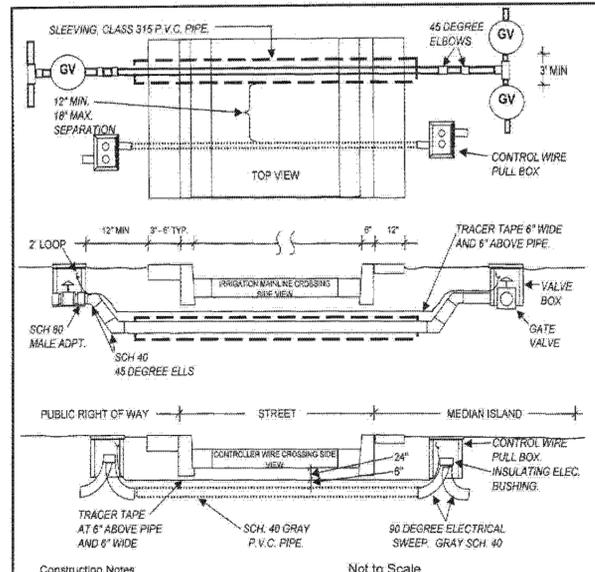
- Construction Notes**
- 1) Controller wire shall be taped every 100'.
 - 2) Main Line pipe and Lateral Line pipe shall not be placed within the same trench.
 - 3) Rotor type sprinklers shall have a minimum 4" clearance between the hardscape and edge of rotor.

Approved P.V. 5/13/08	Date 5/13/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2001
Revised	Date	TRENCH AND LINE PLACEMENT	



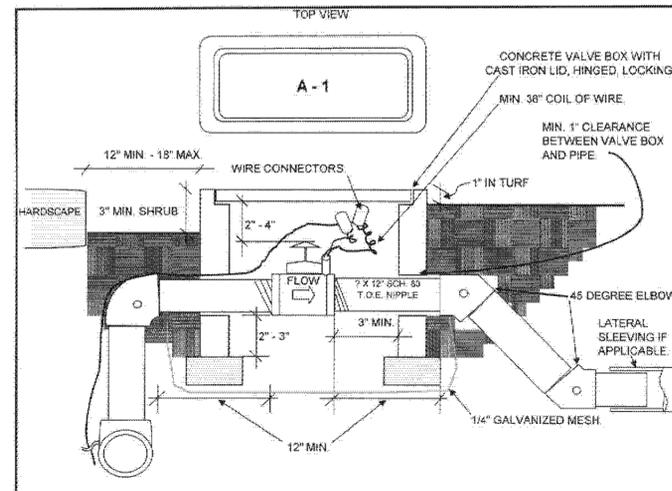
- Notes:**
- 1) Install backflow device square with hardscape elements as approved by the Public Works Inspector in the field.
 - 2) Coordinate with Public Utilities-Water for location of backflow and water meter. Wherever possible, locate service and backflow in the parkway at mid-block a minimum of 150' from the Back of Curb Return at the nearest intersection per City standards.
 - 3) The backflow enclosure must be locking Stainless Steel powder coated green per City specifications. SBB-30-CR or Applicable size.
 - 4) Backflow device shall be a Febo 825 YA installed using 250 psi rated brass/bronze pipe and fittings, between P.O.C. and device including the ninety degree elbows at the point of connection to the mainline. Contact Public Utilities-Water Backflow Program Staff (951) 351-6320 or (951) 351-6282 for inspection before back filling.

Approved P.V. 4/23/08	Date 4/23/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2002
Revised P.V. 7/8/08	Date 7/8/08	REDUCED PRESSURE BACKFLOW WENCLOSURE	



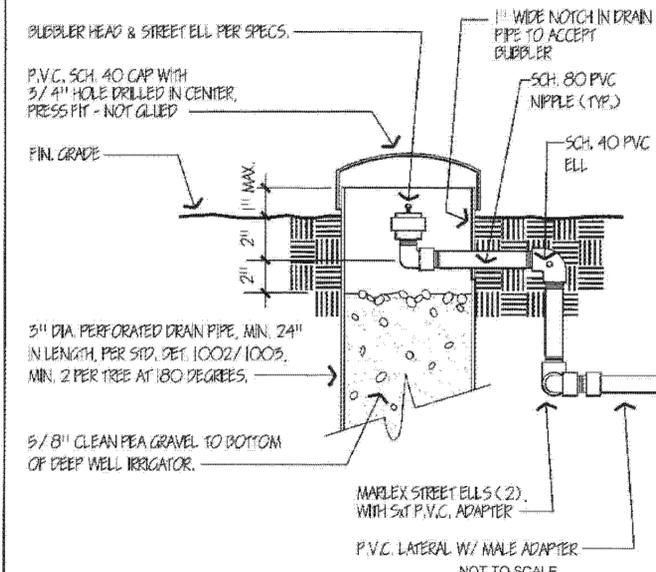
- Construction Notes**
- 1) The Contractor shall mark the proposed crossing with blue paint, and receive written approval from the inspector prior to trenching and/or boring. They shall also have Dig Alert markings prior to inspection.
 - 2) The irrigation tracer tape shall be 6" wide, Blue in color, and read "CAUTION Irrigation Line Buried Below".
 - 3) The irrigation wire tracer tape shall be 6" wide, Red in color, and read "CAUTION Electrical Line Buried Below".

Approved P.V. 5/13/08	Date 5/13/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2003
Revised	Date	TYPICAL STREET CROSSING	



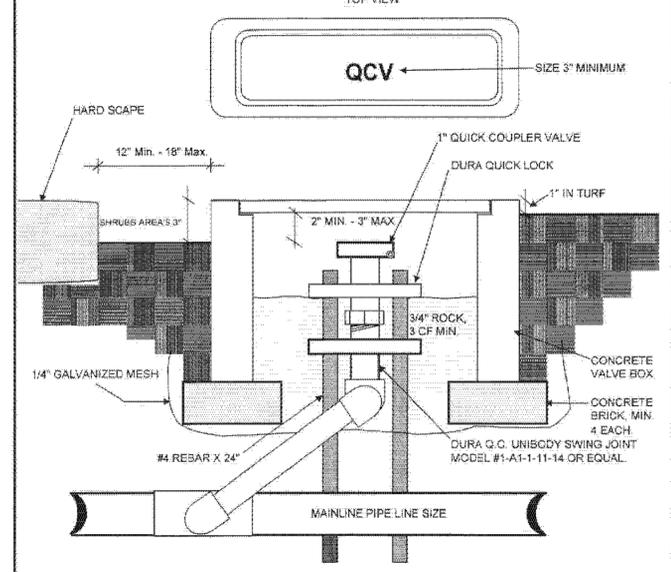
- Construction Notes**
- 1) EACH VALVE SHALL HAVE ITS OWN TEE OR ELL CONNECTION TO THE MAINLINE. NO MANIFOLD CONNECTIONS.
 - 2) PROVIDE MINIMUM 3' CLEAR DISTANCE BETWEEN VALVES AND WIRE BOXES
 - 3) INSTALL VALVE BOX SO THAT THE BOX DOES NOT REST ON ANY IRRIGATION LINES
 - 4) WHERE PIPE DEPTH MUST CHANGE IN LESS THAN 10' HORIZONTAL DISTANCE, USE 45 DEGREE ELBOWS.
 - 5) 3/4" GRAVEL ROCK SHALL BE PLACED IN EACH BOX MINIMUM 2 CF.

Approved P.V. 5/27/08	Date 5/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2010
Revised	Date	REMOTE CONTROL VALVE "IN-LINE"	



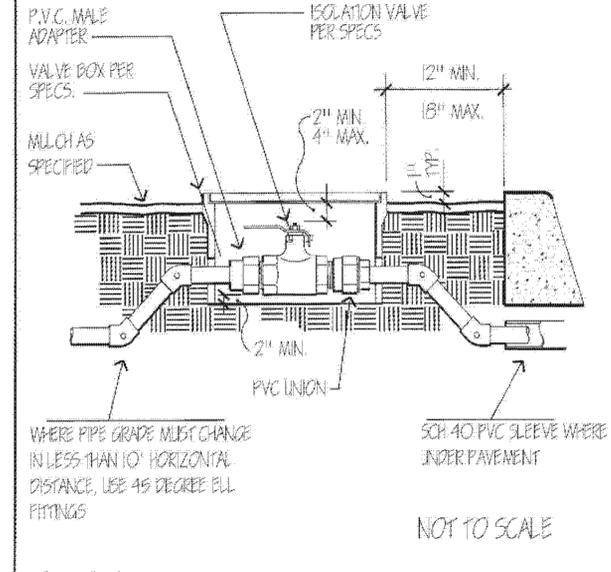
- Construction Notes**
- 1) Each tree shall have a minimum of two deep well irrigators.
 - 2) The deep well irrigators shall be irrigated separately from shrub and turf areas.
 - 3) Use pre-set bubblers only, adjustable flood bubblers will not be accepted.
 - 4) The use of Rainbird RWS-BCG02 Root Watering System in place of drain pipe and rock is acceptable.

Approved P.V. 5/13/08	Date 5/13/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2011
Revised	Date	DEEP WELL IRRIGATOR	



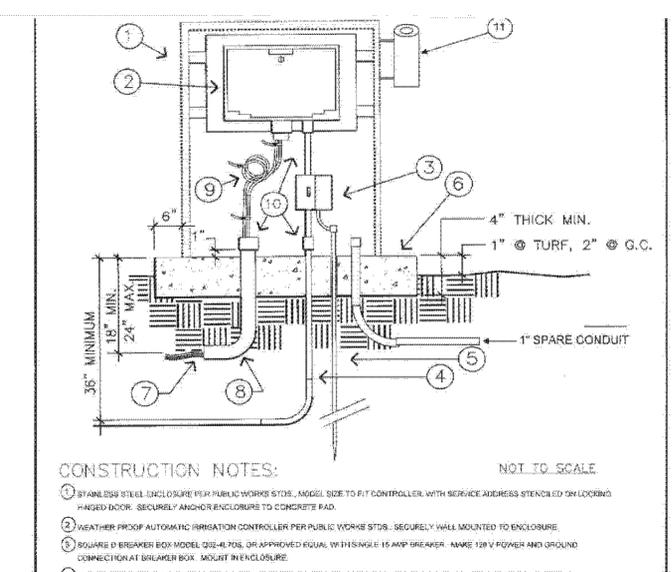
- Construction Notes**
- 1) The contractor shall ensure that the hexagons between the quick lock and the swing joint are aligned.
 - 2) All boxes shall have a minimum 3' foot space between each other.

Approved P.V. 8/27/08	Date 8/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2014
Revised	Date	QUICK COUPLER IN VALVE BOX	



- Construction Notes**
- 1) Isolation valve must be Nilco T-113-K Gate Valve.
 - 2) Where pipe depth must change, use 45 degree elbows.
 - 3) A minimum of 2 CF. of 3/4" gravel rock shall be placed under valve in box.
 - 4) Install valve box so that the box does not rest on any lateral or main lines.
 - 5) Provide minimum 3' clear distance between valve and wire boxes.

Approved P.V. 5/27/08	Date 5/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2015
Revised	Date	ISOLATION VALVE IN BOX	

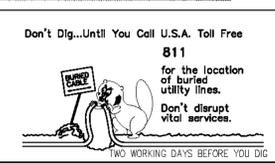


- CONSTRUCTION NOTES:**
- 1) STAINLESS STEEL ENCLOSURE PER PUBLIC WORKS STDS., MODEL SIZE TO FIT CONTROLLER WITH SERVICE ADDRESS STENCILED ON LOCKING HINGED DOOR. SECURELY ANCHOR ENCLOSURE TO CONCRETE PAD.
 - 2) WEATHER PROOF AUTOMATIC IRRIGATION CONTROLLER PER PUBLIC WORKS STDS., SECURELY WALL MOUNTED TO ENCLOSURE.
 - 3) SQUARE D BREAKER BOX MODEL Q2E-475S, OR APPROVED EQUAL WITH SINGLE 15 AMP BREAKER. NAME 120 V POWER AND GROUND CONNECTION AT BREAKER BOX. INSULATE BREAKER ENCLOSURE.
 - 4) 3-#14 CU COPPER WIRES IN MIN. 2" SCH 40 PVC CONDUIT FROM CONTROLLER TO POWER SOURCE; BOND SERVICE TO BREAKER BOX.
 - 5) #14 CU COPPER WIRES AND 5/8" BY 2' LONG DRIVEN COPPER GROUNDING ROD WITHIN ENCLOSURE. DRIVE ROD PRIOR TO INSTALLATION OF ENCLOSURE.
 - 6) CONCRETE PAD: EXTEND SUFFICIENT DISTANCE IN FRONT OF ENCLOSURE TO ALLOW UNOBSTRUCTED AREA FOR DOOR SWING FREE OF PLANTINGS, 6" MIN. BEYOND ENCLOSURE ON ALL SIDES.
 - 7) LOW VOLTAGE DIRECT BURIAL WIRES TO CONTROL VALVES.
 - 8) 90 DEGREE WRAPPED HOSS SWEEP ELL, SIZED TO FIT WIRE FOR NUMBER OF STATIONS ON THE CONTROLLER PLUS SPARES AND COMMON.
 - 9) THREE FOOT EXPANSION LOOP OF CONTROL WIRE NEATLY LACED WITH DR. LOCKS. MAKE CONNECTIONS DIRECTLY TO IRRIGATION CONTROLLER TERMINALS FOR 12 STATION & SMALLER. USE TERMINAL STRIPS FOR CONTROLLERS LARGER THAN 12 STATIONS.
 - 10) PROVIDE INSULATING ELECTRICAL BUSHINGS AT CONTROLLER AND END OF CONDUITS.
 - 11) RAIN GADE: INSTALLED IN PROTECTIVE COVER ON CONTROLLER OR MOUNTING DN. 1/2" HOLE PER PLANS. PROTECT FROM SPRINKLER OVER SPRAY.

Approved P.V. 5/27/08	Date 5/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2017
Revised	Date	NON-CALSENSE IRRIGATION CONTROLLER	



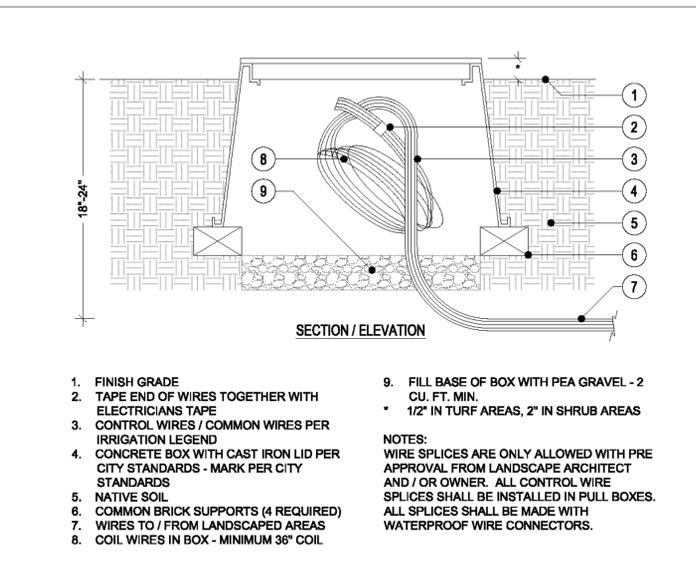
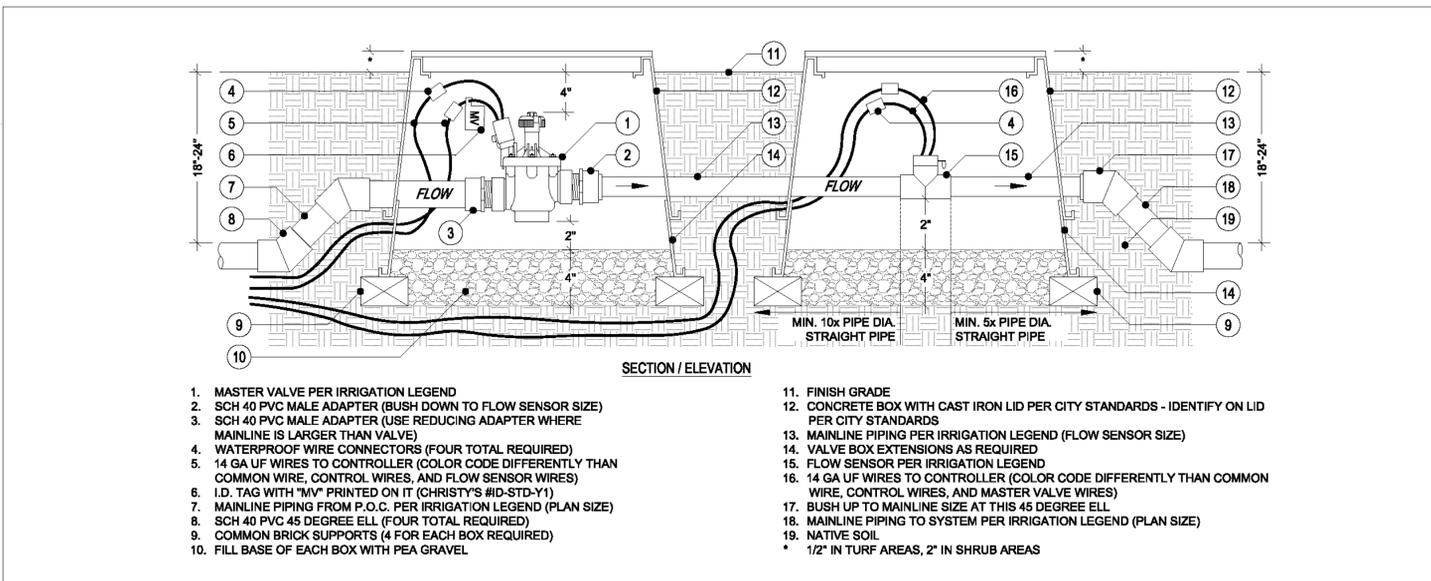
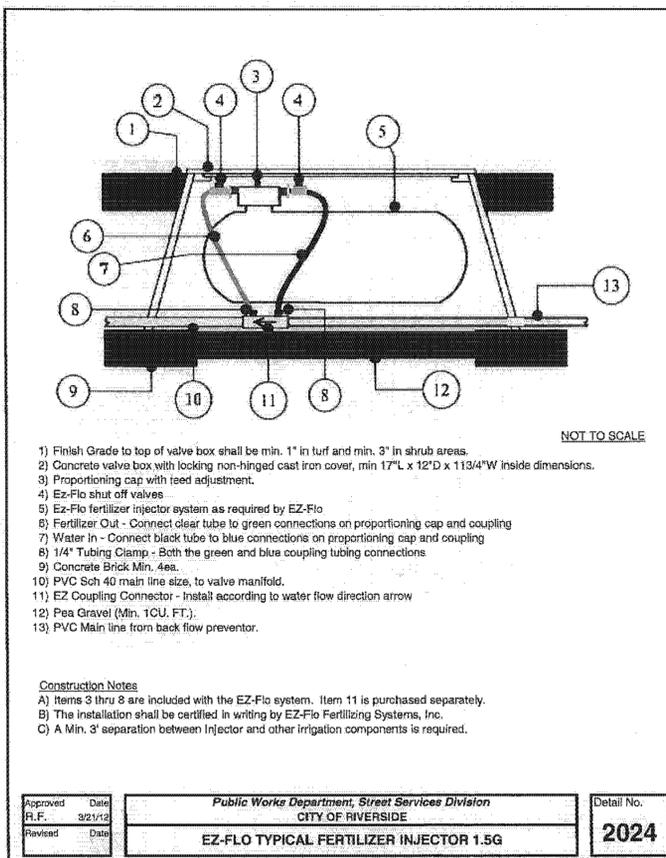
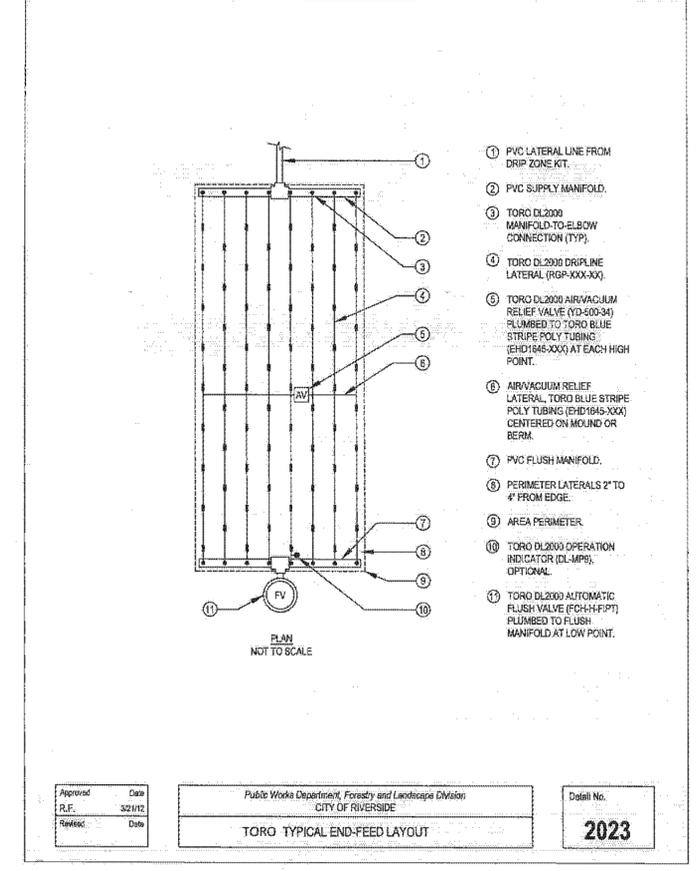
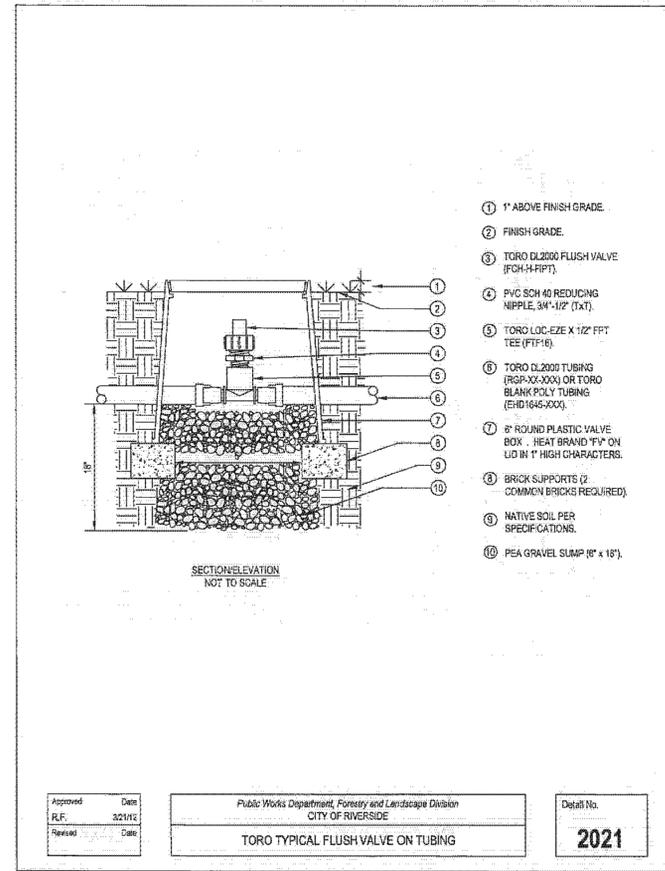
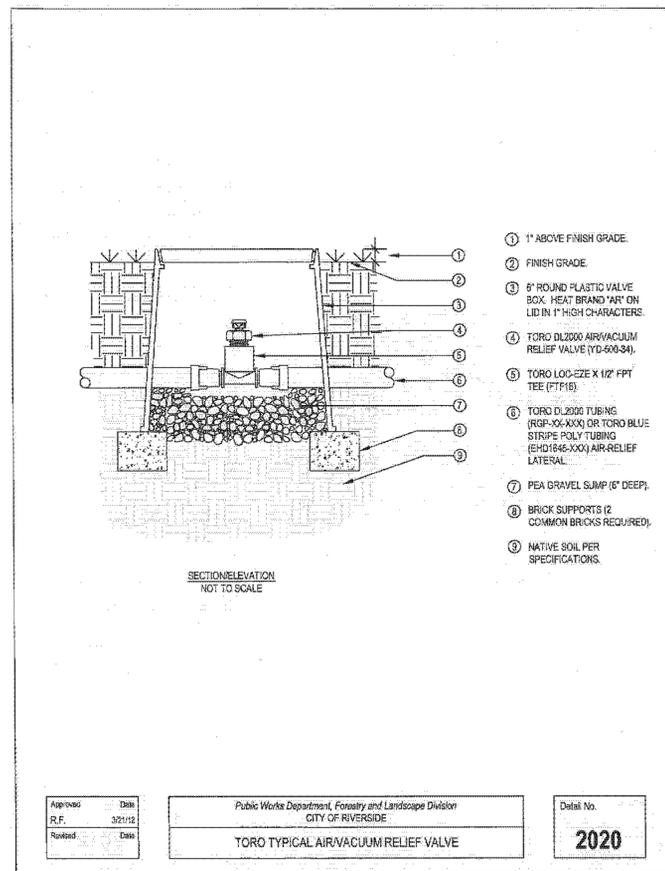
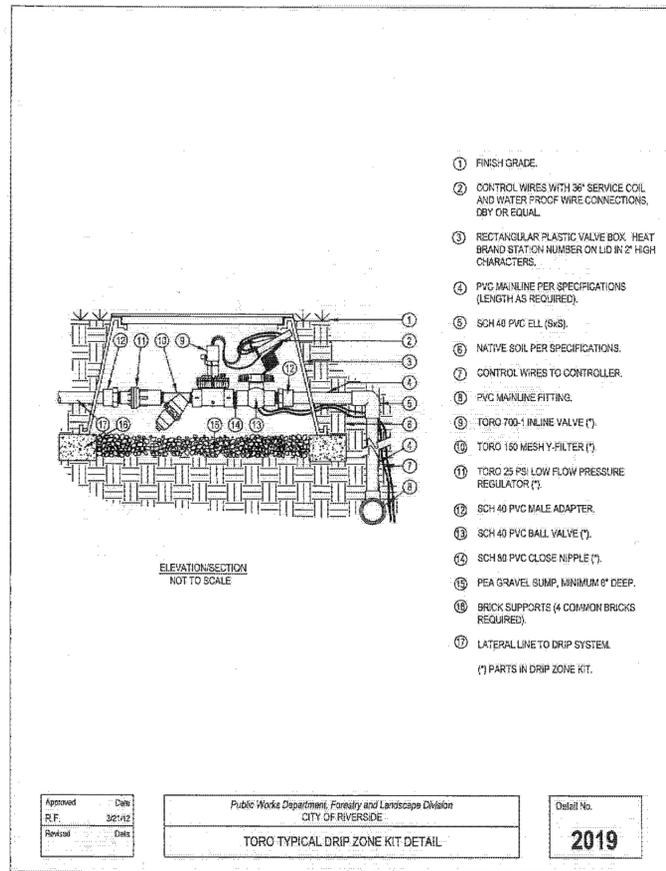
AS-BUILT
for the location of buried utility lines.
NO AS-BUILT CHANGES



MARK	REVISIONS	APPR	DATE
DESIGN BY	DRAWN BY	CHECKED BY	SCALE: AS SHOWN

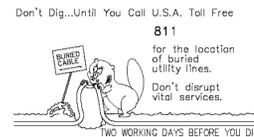
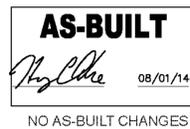
IOWA AVENUE
GRADE SEPARATION
IRRIGATION DETAILS

ACCT. NO. XX-XX-XXX
DWG NO. R-4237L
LS 1.3
SHEET 3 OF 11



A MASTER VALVE / FLOW SENSOR

B SPARE WIRE STUB-OUT



PLANS PREPARED BY:
AECOM
 999 W. TOWN AND COUNTRY ROAD
 ORANGE, CA 92668-4713
 (714) 567-2501



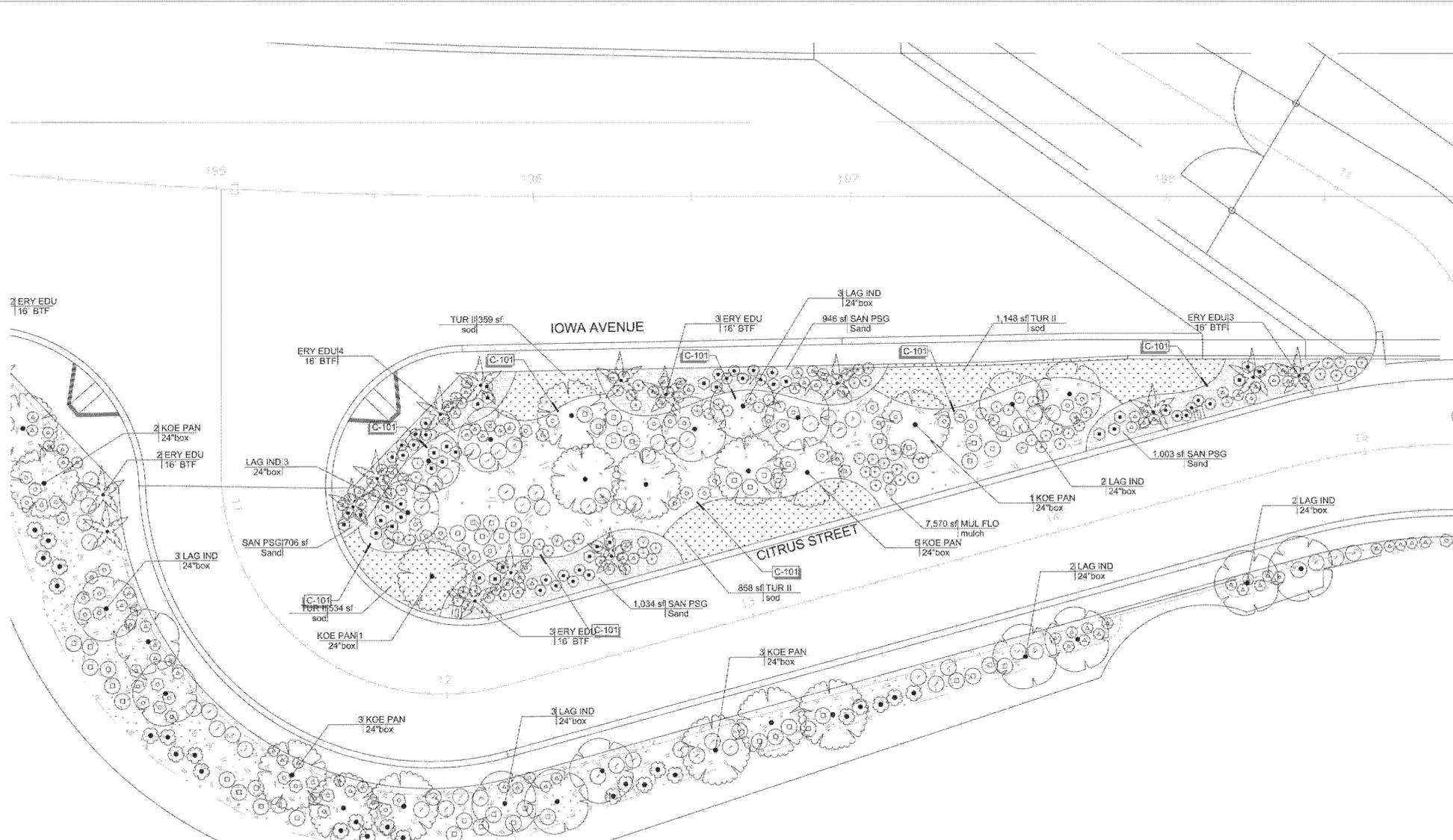
MARK	REVISIONS	APPR	DATE

DESIGN BY _____ DRAWN BY _____ CHECKED BY _____

IOWA AVENUE
 GRADE SEPARATION
 IRRIGATION DETAILS

SCALE: AS SHOWN

ACCT. NO. XX-XX-XXX
 DWG NO. R-4237L
 LS 1.4 AS-BUILT
 SHEET 4 OF 11



PLANT SCHEDULE AREA

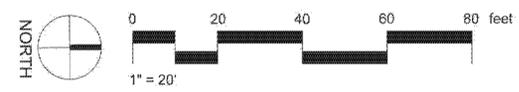
TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL	REMARKS
	Koeleruteria paniculata / Golden Rain Tree	24"box	7	5/LS-2.3	
	Lagerstroemia indica / Crape Myrtle	24"box	8	5/LS-2.3	
PALM TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL	REMARKS
	Erythea adulis / Guadalupe Palm	16'BTF	13	7/LS-2.3	
SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY	DETAIL	REMARKS
	Ceanothus griseus horizontalis 'Yankee Point' / California Lilac	5 gal	26	2/LS-2.3	
	Dietsa bicolor / Fortnight Lily	1 gal	85	2/LS-2.3	
	Dodonaea viscosa / Hopseed Bush	5 gal	27	2/LS-2.3	
	Euryops pectinatus / Euryops	5 gal	26	2/LS-2.3	
	Juniperus conferta 'Blue Pacific' / Blue Pacific Juniper	5 gal	27	2/LS-2.3	
	Lantana montevidensis 'Sunburst' / Yellow Trailing Lantana	5 gal	51	2/LS-2.3	
	Pennisetum advena 'Rubrum' / Fountain Grass	5 gal	30	2/LS-2.3	
	Phormium tenax 'Bronze Baby' / Bronze Baby New Zealand Flax	5 gal	33	2/LS-2.3	
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL	REMARKS
	3" Forest Floor Mulch Available At: Trerra Verde Industries - 949-551-0363	mulch	7,569 sf	9/LS-2.3	
	Marathon II Drought Tolerant Fescue Blend	sod	2,898 sf		
	Sand / Palm Springs Gold Available At: Sepulveda Building Materials - 909-915-1800	Sand	3,688 sf		

REFERENCE NOTES SCHEDULE CITRUS STREET

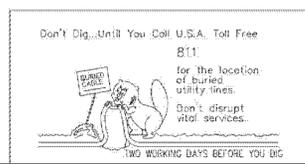
SYMBOL	CURB DESCRIPTION	QTY	DETAIL
	CONCRETE MOW CURB	579 #	8/LS-2.3

- NOTE:**
- NOTIFY LANDSCAPE ARCHITECT IF SPECIFIED PLANT MATERIAL IS NOT AVAILABLE. LANDSCAPE ARCHITECT MUST APPROVE ALL SUBSTITUTIONS PRIOR TO PLANTING.
 - ALL PLANT MATERIAL SHALL MEET ISA INDUSTRY STANDARDS.
 - LANDSCAPE ARCHITECT SHALL APPROVE PLANT MATERIAL AT NURSERY OR IN THE FIELD PRIOR TO PLANTING.
 - GROUND COVER SHALL BE PLANTED IN ALL PLANTER AREAS.
 - SEE CIVIL ENGINEERS PLANS FOR SITE GRADING & DRAINAGE.
 - SEE SHEET LS 1.1 & LS 1.2 FOR IRRIGATION PLAN.
 - SEE SHEET LS 1.3 FOR IRRIGATION DETAILS AND NOTES.
 - SEE SHEET LS 2.1 & LS 2.2 FOR PLANTING PLAN.
 - SEE SHEET LS 2.3 FOR PLANTING DETAILS AND NOTES.
 - SEE SPECIAL PROVISION FOR PLANTING SPECIFICATIONS.
 - PLANT QUANTITIES, IF ANY, ON THE DRAWINGS SHALL BE USED AS A GUIDE ONLY. CONTRACTOR SHALL TAKE-OFF AND VERIFY SIZES AND QUANTITIES BY PLAN CHECK.
 - ALL LANDSCAPE AND IRRIGATION INSTALLATION SHALL BE INSTALLED PER CITY OF RIVERSIDE LATEST PUBLIC LANDSCAPE PLANTING AND IRRIGATION SPECIFICATION GUIDELINES.
 - ALL PUBLIC LANDSCAPE PLANTING WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" CURRENT EDITION, PREPARED BY THE SOUTHERN CALIFORNIA CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION AND SOUTHERN CALIFORNIA DISTRICT OF THE ASSOCIATED GENERAL CONTRACTORS OF CALIFORNIA, PUBLISHED BY BUILDING NEWS, INC., LOS ANGELES, CALIFORNIA, AND ALL AMENDMENTS THERETO, AS ADOPTED BY THE CITY OF RIVERSIDE, AND AS PROVIDED HEREIN.
 - LANDSCAPE CONTRACTOR TO OBTAIN PUBLIC LANDSCAPE CONSTRUCTION PERMIT FROM THE CITY OF RIVERSIDE PRIOR TO CONSTRUCTION.
 - ALL PUBLIC LANDSCAPE CONSTRUCTION PROJECTS SHALL BE COORDINATED BY THE CITY OF RIVERSIDE. LANDSCAPE CONTRACTOR SHALL COORDINATE ALL REQUIRED LANDSCAPE INSPECTION WITH CITY OF RIVERSIDE.

LANDSCAPE CONCEPT
 PROJECT LANDSCAPE CONCEPT WAS DEVELOPED BASED ON THE CITY OF RIVERSIDE HUNTER BUSINESS PARK SPECIFIC PLAN. SPECIFIC PLAN CONCEPT IS TO CREATE A STRONG SENSE OF PROJECT IDENTITY THROUGHOUT THE BUSINESS PARK AREA. LANDSCAPING IS TO BE DESIGNED WITH WATER CONSERVATION AND LOW MAINTENANCE PLANT MATERIAL THAT BLENDS INTO SURROUNDING AREA.
 EXISTING STREETSCAPE THEME OF SURROUNDING BUSINESSES CONSISTS PRIMARY OF TURF AND A CONSISTENT TREE PATTERN OF PALMS AND ALTERNATING EVERGREEN TREES WHICH CREATE VISUAL CORRIDOR THROUGHOUT THE BUSINESS PARK AS PER THIS SPECIFIC PLAN.
 THIS PROJECT LANDSCAPE ENTRY IS DEVELOPED USING THE SAME LANDSCAPE PLANT SPECIES FROM THE ADJACENT BUSINESS DEVELOPMENTS AND AS PER THE PROJECT SPECIFIC PLAN TO ENHANCE THE BUSINESS PARK IDENTITY.
 LANDSCAPE WILL CONSIST OF ACCENT PALM TREES AT CORNER ENTRANCE, BACK DROPPED WITH EVERGREEN TREES AND ACCENT DECIDUOUS TREES TO ENHANCE BUSINESS PARK IDENTITY. SMALL AREAS OF TURF HAS BEEN ADDED AS ACCENT AREAS TO BLEND WITH THE SURROUNDING BUSINESSES BUT KEPT TO A MINIMUM TO CONSERVE WATER. DROUGHT TOLERANT SHRUBS AND GROUNDCOVERS HAVE BEEN ADDED WHICH USE LITTLE WATER AND MINIMAL MAINTENANCE. IRRIGATION SYSTEM IS DESIGNED TO MEET STATE AB1961 WATER EFFICIENCY ORDINANCE.



AS-BUILT
 08/01/14
 NO AS-BUILT CHANGES



PLANS PREPARED BY:
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 999 W. TOWN AND COUNTRY ROAD
 DRANGE, CA 92868-4713
 (714) 567-2501



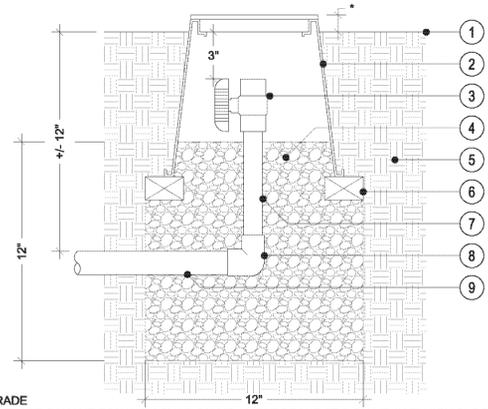
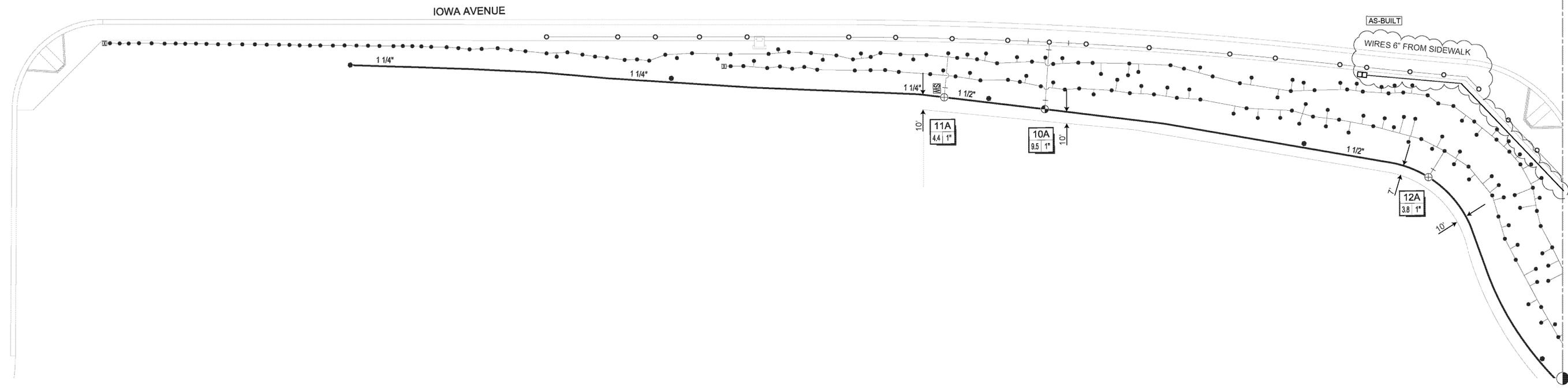
MARK	REVISIONS	APPR.	DATE

DESIGN BY: _____ DRAWN BY: _____ CHECKED BY: _____

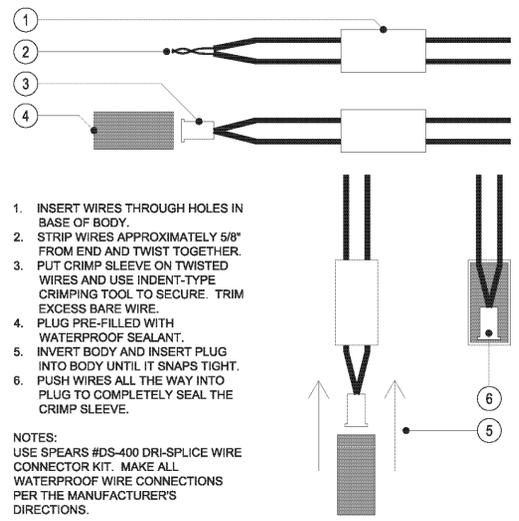
IOWA AVENUE
 GRADE SEPARATION
 PLANTING PLAN

ACCT. NO. XX-XX-XXX
 DWG NO. R-4237L
 LS 2.1 AS-BUILT
 SHEET 5 OF 11

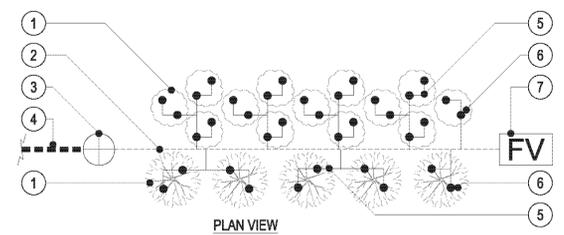
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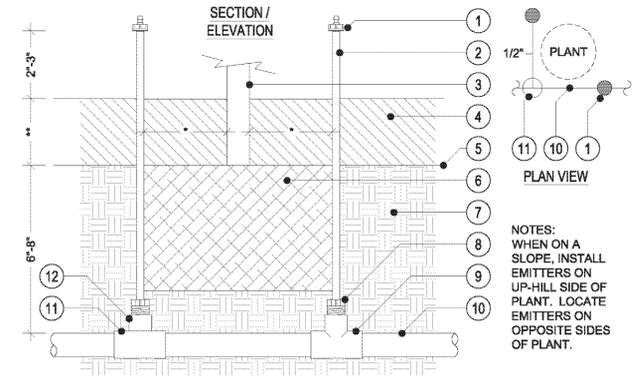
1. FINISH GRADE
2. 6" ROUND PLASTIC VALVE BOX WITH SNAP-ON LID - HEAT BRAND "FV" ON LID IN 2" HIGH BLOCK LETTERS
3. 1/2" COMPACT PVC BALL VALVE S&S OR APPROVED EQUAL
4. FILL BASE WITH 1 CUBIC FOOT OF PEA GRAVEL
5. NATIVE SOIL
6. COMMON BRICK SUPPORTS (2 REQUIRED)
7. 1/2" SCH 40 PVC PIPE (LENGTH AS REQUIRED)
8. SCH 40 PVC ELL S&S WITH 1/2" OUTLET TO BALL VALVE
9. FLUSH HEADER PIPING PER IRRIGATION LEGEND (PLAN SIZE)
- * 1/2" IN MULCH AREAS, 2" IN SHRUB AREAS



1. INSERT WIRES THROUGH HOLES IN BASE OF BODY.
 2. STRIP WIRES APPROXIMATELY 5/8" FROM END AND TWIST TOGETHER. PUT CRIMP SLEEVE ON TWISTED WIRES AND USE INDENT-TYPE CRIMPING TOOL TO SECURE. TRIM EXCESS BARE WIRE.
 3. PLUG PRE-FILLED WITH WATERPROOF SEALANT.
 4. INVERT BODY AND INSERT PLUG INTO BODY UNTIL IT SNAPS TIGHT. PUSH WIRES ALL THE WAY INTO PLUG TO COMPLETELY SEAL THE CRIMP SLEEVE.
- NOTES:
USE SPEARS #DS-400 DRI-SPLICE WIRE CONNECTOR KIT. MAKE ALL WATERPROOF WIRE CONNECTIONS PER THE MANUFACTURER'S DIRECTIONS.



1. TYPICAL SHRUB PER PLANTING PLAN
 2. PVC LATERAL LINE "TRUNK" PER IRRIGATION LEGEND (PLAN SIZE)
 3. DRIP VALVE ASSEMBLY PER IRRIGATION LEGEND
 4. PVC MAINLINE PER IRRIGATION LEGEND (PLAN SIZE)
 5. 1/2" CLASS 315 PVC LATERAL LINE "SPUR" (NOT COMPLETELY SHOWN ON PLAN)
 6. DRIP EMITTER PER IRRIGATION LEGEND
 7. FLUSH VALVE PER IRRIGATION LEGEND OR FLUSH VALVE DETAIL
- NOTES:
RUN LATERAL LINE "TRUNK" THROUGH THE APPROXIMATE CENTER OF PLANTS TO BE IRRIGATED. LOCATE "TRUNK" TO AVOID ANY TREES. TEE OFF "TRUNK" AS NECESSARY TO EXTEND PVC "SPURS" TO DRIP EMITTER LOCATIONS. MAXIMUM NUMBER OF PLANTS TO BE IRRIGATED BY ANY SINGLE "SPUR" SHALL NOT EXCEED 10. INSTALL FLUSH VALVE AT THE TERMINAL END OF "TRUNK". WHEN "TRUNK" RUNS IN MULTIPLE DIRECTIONS, INSTALL A FLUSH VALVE AT THE END OF EACH AND EVERY "TRUNK".



1. DRIP EMITTER PER IRRIGATION LEGEND (THREAD INTO POLYFLEX RISER)
 2. RAIN BIRD PFR-12 POLYFLEX RISER (CUT TO LENGTH IF NECESSARY)
 3. STEM OF PLANT
 4. MULCH LAYER PER PLANTING PLAN
 5. FINISH GRADE
 6. ROOTBALL OF PLANT
 7. NATIVE SOIL
 8. RAIN BIRD FRA-050 POLYFLEX TO 1/2" NPT ADAPTER
 9. SCH 40 PVC LATERAL LINE FITTING WITH 1/2" THREADED OUTLET
 10. PVC LATERAL LINE PIPING PER IRRIGATION LEGEND (PLAN SIZE)
 11. SCH 40 PVC LATERAL LINE FITTING WITH 1/2" SLIP OUTLET (EXTEND 1/2" PVC LATERAL TO EMITTER. SEE PLAN VIEW)
 12. SCH 40 PVC ELL (SXT)
- NOTES:
WHEN ON A SLOPE, INSTALL EMITTERS ON UP-HILL SIDE OF PLANT. LOCATE EMITTERS ON OPPOSITE SIDES OF PLANT.
* LOCATE EMITTER AT EDGE OF ROOTBALL UNLESS INSTRUCTED OTHERWISE BY THE LANDSCAPE ARCHITECT.
** REFER TO PLANTING PLAN FOR DEPTH.

A MANUAL FLUSH VALVE

B WATERPROOF WIRE CONNECTOR

C POINT-SOURCE DRIP SYSTEM TYPICAL LAYOUT

D POINT-SOURCE DRIP EMITTER

IRRIGATION SHEET REFERENCES

1. SEE SHEETS LS 1.1, LS 1.2, LS 3.1 AND LS 3.2 FOR PLANS
2. SEE SHEET LS 1.1 FOR LEGENDS
3. SEE SHEET LS 1.2 FOR GENERAL NOTES
4. SEE SHEET LS 1.3, LS 1.4, AND LS 3.1 FOR DETAILS
5. SEE SHEET LS 1.1 FOR POINT OF CONNECTION INFO
6. SEE SHEET LS 1.1 FOR HYDROZONE INFORMATION MATRIX
7. SEE SHEET LS 1.1 FOR AB-1881 / WATER BUDGET CALCULATIONS
8. SEE SHEET LS 1.1 FOR PRESSURE LOSS CALCULATIONS
9. SEE SHEET LS 3.2 FOR CONTROLLER SCHEDULE GUIDELINES

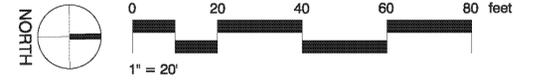


PLANS PREPARED BY:
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999 W. TOWN AND COUNTRY ROAD
ORANGE, CA 92868-4713
(714) 567-2501



MARK	REVISIONS	APPR	DATE

DESIGN BY _____ DRAWN BY _____ CHECKED BY _____

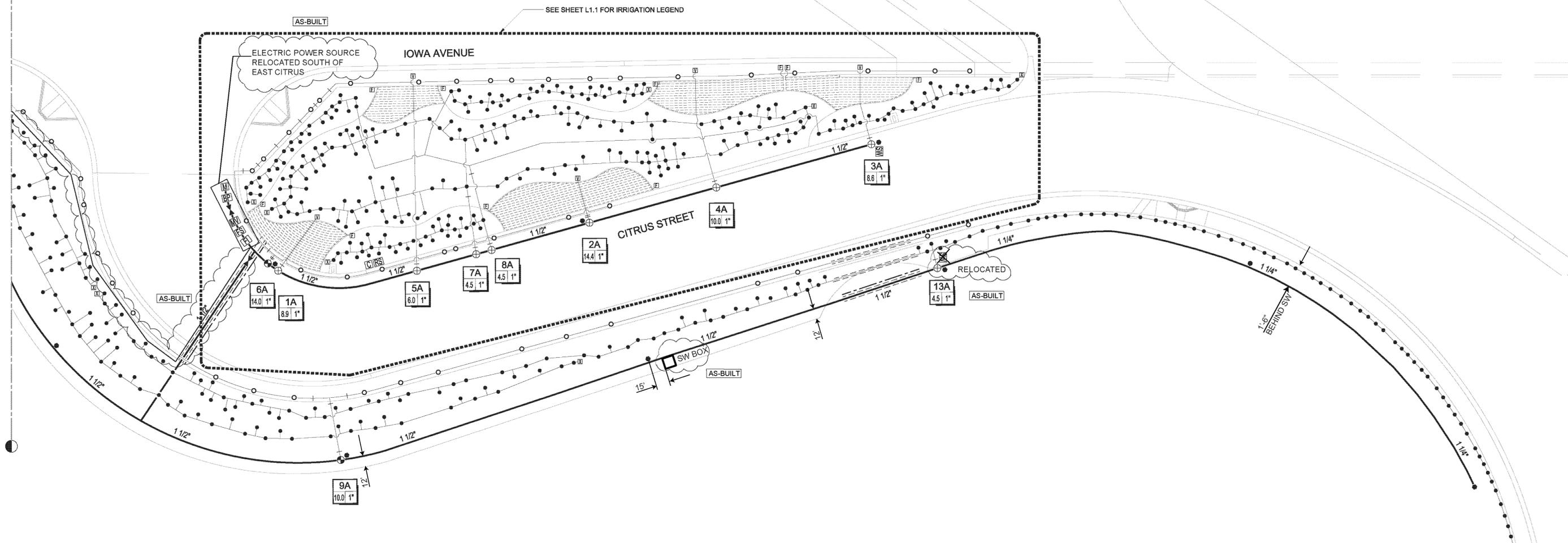


IOWA AVENUE
GRADE SEPARATION
IRRIGATION PLAN

ACCT. NO. XX-XX-XXX
DWG NO. R-4237L
LS 3.1 AS-BUILT
SHEET 8 OF 11

SCALE: AS SHOWN

MATCHLINE LS 3.1



IRRIGATION CONTROLLER SCHEDULE GUIDELINE - PLANT ESTABLISHMENT														
NOTES: IRRIGATION SCHEDULE IS FOR REFERENCE ONLY. ALWAYS APPLY THE APPROPRIATE AMOUNT OF WATER FOR PROPER PLANT HEALTH. ADJUST SCHEDULE AS NECESSARY BASED ON THE ACTUAL SITE CONDITIONS. DIVIDE RUN TIMES AND CYCLE AS NEEDED TO MINIMIZE RUN-OFF. ADJUST THE SCHEDULE AT LEAST ONCE PER MONTH TO REFLECT SEASONAL CHANGES.														
HYDROZONE	HYDROZONE ATTRIBUTES	HYDROZONE SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TURF	PRECIPITATION RATE (in/hr)	1.60	2.5	2.9	4.2	5.3	5.9	6.6	7.2	6.9	5.4	4.1	2.9	2.6
	IRRIGATION DAYS PER MONTH		12	14	20	25	28	30	31	30	25	20	14	12
	STATION RUN TIME (min.)		7.7	7.7	7.8	7.9	7.8	8.1	8.6	8.5	8.0	7.6	7.7	8.0
	CYCLES PER ZONE		1	1	1	1	1	1	1	1	1	1	1	1
SHRUB	PRECIPITATION RATE (in/hr)	0.70	4	5	7	8	9	10	11	11	8	7	5	4
	IRRIGATION DAYS PER MONTH		4	5	7	8	9	10	11	11	8	7	5	4
	STATION RUN TIME (min.)		33.1	30.7	31.7	35.1	34.7	34.9	34.6	33.2	35.7	31.0	30.7	34.4
	CYCLES PER ZONE		2	2	2	2	2	2	2	2	2	2	2	2
TREE	PRECIPITATION RATE (in/hr)	3.00	2	2	3	3	3	4	4	4	3	3	2	2
	IRRIGATION DAYS PER MONTH		2	2	3	3	3	4	4	4	3	3	2	2
	STATION RUN TIME (min.)		15.4	17.9	17.3	21.8	24.3	20.4	22.2	21.3	22.2	16.9	17.9	16.0
	CYCLES PER ZONE		3	3	3	4	4	3	4	4	4	3	3	3

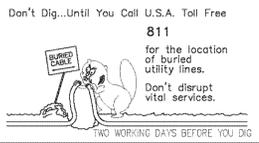
IRRIGATION CONTROLLER SCHEDULE GUIDELINE - ESTABLISHED PLANTS														
NOTES: IRRIGATION SCHEDULE IS FOR REFERENCE ONLY. ALWAYS APPLY THE APPROPRIATE AMOUNT OF WATER FOR PROPER PLANT HEALTH. ADJUST SCHEDULE AS NECESSARY BASED ON THE ACTUAL SITE CONDITIONS. DIVIDE RUN TIMES AND CYCLE AS NEEDED TO MINIMIZE RUN-OFF. ADJUST THE SCHEDULE AT LEAST ONCE PER MONTH TO REFLECT SEASONAL CHANGES.														
HYDROZONE	HYDROZONE ATTRIBUTES	HYDROZONE SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TURF	PRECIPITATION RATE (in/hr)	1.60	2.5	2.9	4.2	5.3	5.9	6.6	7.2	6.9	5.4	4.1	2.9	2.6
	IRRIGATION DAYS PER MONTH		12	14	20	25	28	30	31	30	25	20	14	12
	STATION RUN TIME (min.)		7.7	7.7	7.8	7.9	7.8	8.1	8.6	8.5	8.0	7.6	7.7	8.0
	CYCLES PER ZONE		1	1	1	1	1	1	1	1	1	1	1	1
SHRUB	PRECIPITATION RATE (in/hr)	0.70	2	3	4	4	5	5	6	6	4	4	3	2
	IRRIGATION DAYS PER MONTH		2	3	4	4	5	5	6	6	4	4	3	2
	STATION RUN TIME (min.)		66.1	51.1	55.6	70.1	62.4	69.8	63.5	60.8	71.4	54.2	51.1	68.8
	CYCLES PER ZONE		3	2	2	3	3	3	3	3	3	2	2	3
TREE	PRECIPITATION RATE (in/hr)	3.00	1	1	2	2	2	2	2	2	2	2	1	1
	IRRIGATION DAYS PER MONTH		1	1	2	2	2	2	2	2	2	2	1	1
	STATION RUN TIME (min.)		30.9	35.8	25.9	32.7	36.4	40.7	44.4	42.6	33.3	25.3	35.8	32.1
	CYCLES PER ZONE		5	6	4	5	6	6	7	7	5	4	6	5

IRRIGATION SHEET REFERENCES

- SEE SHEETS LS 1.1, LS 1.2, LS 3.1 AND LS 3.2 FOR PLANS
- SEE SHEET LS 1.1 FOR LEGENDS
- SEE SHEET LS 1.2 FOR GENERAL NOTES
- SEE SHEET LS 1.3, LS 1.4, AND LS 3.1 FOR DETAILS
- SEE SHEET LS 1.1 FOR POINT OF CONNECTION INFO
- SEE SHEET LS 1.1 FOR HYDROZONE INFORMATION MATRIX
- SEE SHEET LS 1.1 FOR AB-1881 / WATER BUDGET CALCULATIONS
- SEE SHEET LS 1.1 FOR PRESSURE LOSS CALCULATIONS
- SEE SHEET LS 3.2 FOR CONTROLLER SCHEDULE GUIDELINES



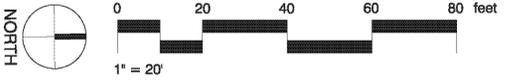
AS-BUILT
Harry Clarke
 08/01/14



PLANS PREPARED BY:
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 999 W. TOWN AND COUNTRY ROAD
 ORANGE, CA 92668-4713
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MARK	REVISIONS	APPR	DATE

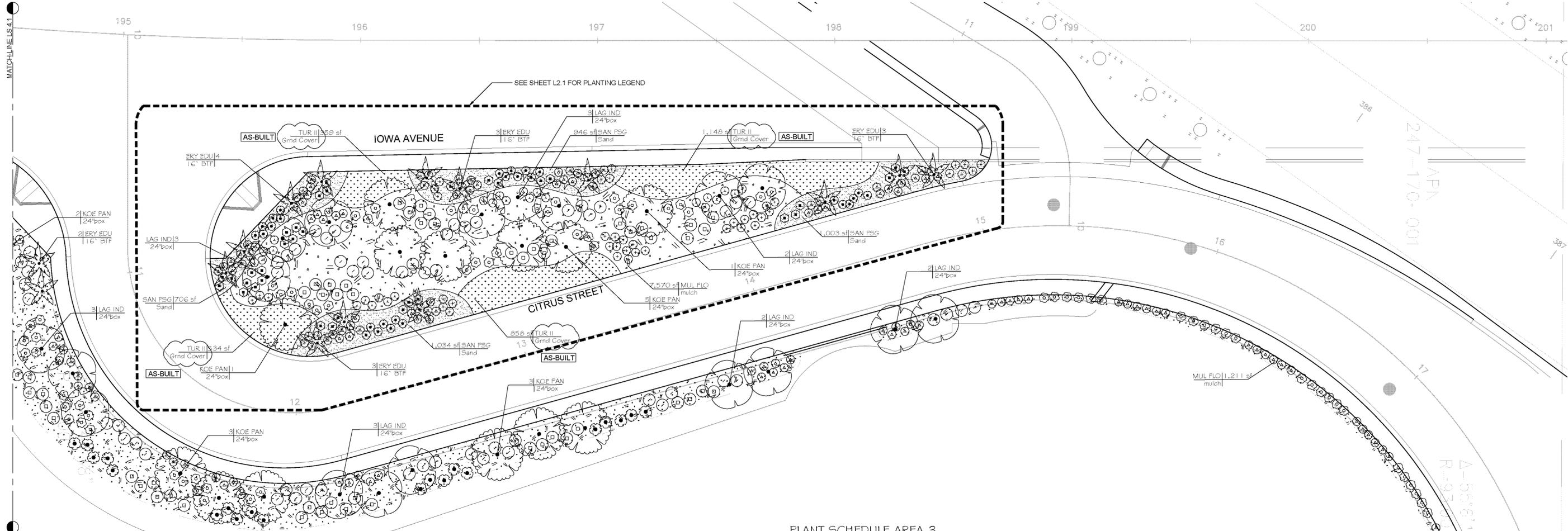


IOWA AVENUE
 GRADE SEPARATION
 IRRIGATION PLAN

ACCT. NO. XX-XX-XXX
 DWG. NO. R-4237L
LS 3.2 AS-BUILT
 SHEET 9 OF 11

DESIGN BY _____ DRAWN BY _____ CHECKED BY _____

SCALE: AS SHOWN



PLANT SCHEDULE AREA 3

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL	REMARKS
	<i>Koelreutera paniculata</i> / Golden Rain Tree	24" box	12	5/LS-2.3	
	<i>Lagerstroemia indica</i> / Crape Myrtle	24" box	16	5/LS-2.3	
PALM TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL	REMARKS
	<i>Erythea Edulis</i> / Guadalupe Palm	16" BTF	9	7/LS-2.3	
SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY	DETAIL	REMARKS
	<i>Bougainvillea</i> x "San Diego Red" / Bougainvillea	5 gal	37	2/LS-2.3	
	<i>Ceanothus griseus horizontalis</i> "Yankee Point" / California Lilac	5 gal	66	2/LS-2.3	
	<i>Dietes bicolor</i> / Fortnight Lily	1 gal	111	2/LS-2.3	
	<i>Dodonaea viscosa</i> / Hopseed Bush	5 gal	64	2/LS-2.3	
	<i>Pennisetum advena</i> "Rubrum" / Fountain Grass	5 gal	101	2/LS-2.3	
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL	REMARKS
	3" Forest Floor Mulch Available At: Tierra Verde Industries - 949-551-0363	mulch	17,460 sf	9/LS-2.3	

- NOTE:**
1. NOTIFY LANDSCAPE ARCHITECT IF SPECIFIED PLANT MATERIAL IS NOT AVAILABLE. LANDSCAPE ARCHITECT MUST APPROVE ALL SUBSTITUTIONS PRIOR TO PLANTING.
 2. ALL PLANT MATERIAL SHALL MEET ISA INDUSTRY STANDARDS.
 3. LANDSCAPE ARCHITECT SHALL APPROVE PLANT MATERIAL AT NURSERY OR IN THE FIELD PRIOR TO PLANTING.
 4. GROUND COVER SHALL BE PLANTED IN ALL PLANTER AREAS.
 5. SEE CIVIL ENGINEERS PLANS FOR SITE GRADING & DRAINAGE.
 6. SEE SHEET LS 1.1 & LS 1.2 FOR IRRIGATION PLAN.
 7. SEE SHEET LS 1.3 FOR IRRIGATION DETAILS AND NOTES.
 8. SEE SHEET LS 2.1 & LS 2.2 FOR PLANTING PLAN.
 9. SEE SHEET LS 2.3 FOR PLANTING DETAILS AND NOTES.
 10. SEE SPECIAL PROVISION FOR PLANTING SPECIFICATIONS.
 11. PLANT QUANTITIES, IF ANY, ON THE DRAWINGS SHALL BE USED AS A GUIDE ONLY. CONTRACTOR SHALL TAKE-OFF AND VERIFY SIZES AND QUANTITIES BY PLAN CHECK.
 12. ALL LANDSCAPE AND IRRIGATION INSTALLATION SHALL BE INSTALLED PER CITY OF RIVERSIDE LATEST PUBLIC LANDSCAPE PLANTING AND IRRIGATION SPECIFICATION GUIDELINES.
 13. ALL PUBLIC LANDSCAPE PLANTING WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" CURRENT EDITION, PREPARED BY THE SOUTHERN CALIFORNIA CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION AND SOUTHERN CALIFORNIA DISTRICT OF THE ASSOCIATED GENERAL CONTRACTORS OF CALIFORNIA, PUBLISHED BY BUILDING NEWS, INC., LOS ANGELES, CALIFORNIA, AND ALL AMENDMENTS THERETO, AS ADOPTED BY THE CITY OF RIVERSIDE, AND AS PROVIDED HEREIN.

LANDSCAPE CONCEPT

PROJECT LANDSCAPE CONCEPT WAS DEVELOPED BASED ON THE CITY OF RIVERSIDE HUNTER BUSINESS PARK SPECIFIC PLAN. SPECIFIC PLAN CONCEPT IS TO CREATE A STRONG SENSE OF PROJECT IDENTITY THROUGHOUT THE BUSINESS PARK AREA. LANDSCAPING IS TO BE DESIGNED WITH WATER CONSERVATION AND LOW MAINTENANCE PLANT MATERIAL THAT BLENDS INTO SURROUNDING AREA.

EXISTING STREETSCAPE THEME OF SURROUNDING BUSINESSES CONSISTS PRIMARY OF TURF AND A CONSISTENT TREE PATTERN OF PALMS AND ALTERNATING EVERGREEN TREES WHICH CREATE VISUAL CORRIDOR THROUGHOUT THE BUSINESS PARK AS PER THIS SPECIFIC PLAN.

THIS PROJECT LANDSCAPE ENTRY IS DEVELOPED USING THE SAME LANDSCAPE PLANT SPECIES FROM THE ADJACENT BUSINESS DEVELOPMENTS AND AS PER THE PROJECT SPECIFIC PLAN TO ENHANCE THE BUSINESS PARK IDENTITY.

LANDSCAPE WILL CONSIST OF ACCENT PALM TREES AT CORNER ENTRANCE, BACK DROPPED WITH EVERGREEN TREES AND ACCENT DECIDUOUS TREES TO BLEND WITH THE SURROUNDING BUSINESSES BUT KEPT TO A MINIMUM TO CONSERVE WATER. DROUGHT TOLERANT SHRUBS AND GROUND COVERS HAVE BEEN ADDED WHICH USE LITTLE WATER AND MINIMAL MAINTENANCE. IRRIGATION SYSTEM IS DESIGNED TO MEET STATE AB1881 WATER EFFICIENCY ORDINANCE.

AS-BUILT

 08/01/14

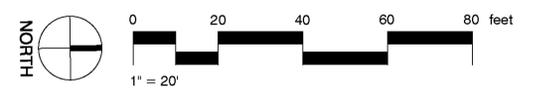


PLANS PREPARED BY:
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 (714) 567-2501



MARK	REVISIONS	APPR	DATE

DESIGN BY _____ DRAWN BY _____ CHECKED BY _____



**IOWA AVENUE
 GRADE SEPARATION
 PLANTING PLAN**

ACCT. NO. XX-XX-XXX
 DWG NO. R-4237L
 LS 4.2 **AS-BUILT**
 SHEET 11 OF 11

SCALE: AS SHOWN