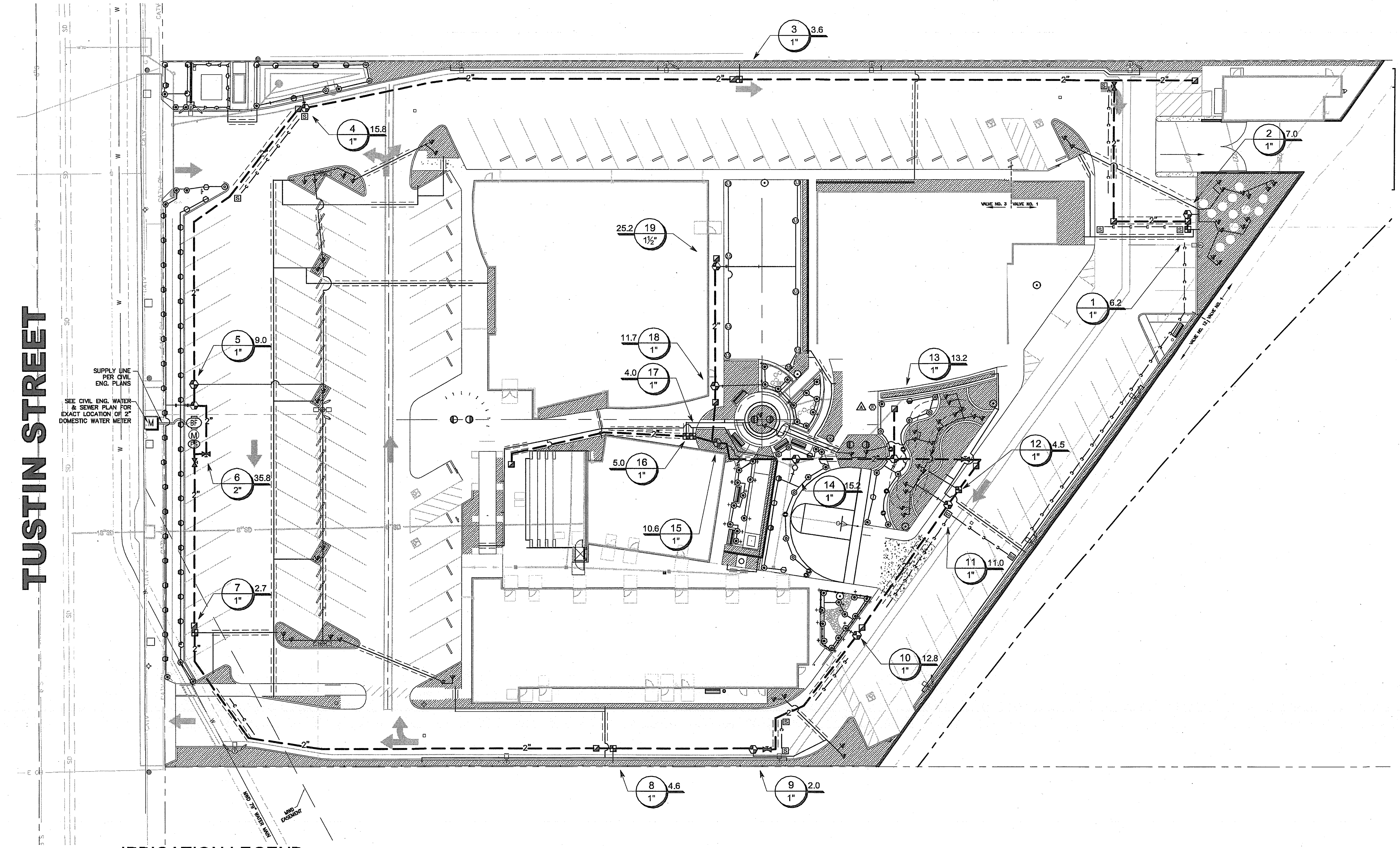


IRRIGATION GENERAL NOTES

1. THIS SYSTEM IS DIAGRAMMATIC. ALL PIPE, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
2. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST AND SHOULD BE BROUGHT TO THE ENGINEER'S ATTENTION. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR REVISIONS NECESSARY. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL FIELD CONDITIONS.
3. CONTRACTOR SHALL NOT LOCATE ANY ITEMS WHERE IT IS OBVIOUS THAT THEY ARE IN DIRECT CONFLICT WITH UNDERGROUND UTILITIES, STRUCTURES, PERMANENT IMPROVEMENTS OR PEDESTRIAN AND VEHICULAR SAFETY CONSIDERATIONS. SPRAY HEADS ARE NOT TO BE SCALED OFF OF THE DRAWINGS, BUT LOCATED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALKS, AND STRUCTURES. DO NOT LOCATE TREES OR TALLER SHRUBS IN LOCATIONS WHERE THEY WILL BLOCK IRRIGATION HEADS AND PREVENT ADEQUATE COVERAGE.
4. SYSTEM DESIGN IS BASED ON MINIMUM OPERATING PRESSURE SHOWN AT EACH POINT OF CONNECTION WITH MAXIMUM GPM DEMAND SPECIFIED. IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO CONSTRUCTION AND GIVEN TO IN WRITING TO THE ENGINEER.
5. MAINLINE FEEDER BETWEEN POINT OF CONNECTION, METER, AND BACKFLOW UNIT TO BE OF MATERIAL AS REQUIRED BY CURRENT WATER DISTRICT.
6. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, CURBS, ETC. HE SHALL COORDINATE HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR LOCATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADS, PAVING AND STRUCTURES DURING BIDDING AND CONSTRUCTION PERIOD.
7. CONTRACTOR SHALL VERIFY IN THE FIELD WITH THE ENGINEER, AND THE LOCAL GOVERNING AGENCY REPRESENTATIVE, ALL LOCATIONS OF POINT OF CONNECTIONS, WATER METERS, MAIN WATER SUPPLY LINE, BACKFLOW PREVENTER, AUTOMATIC CONTROLLER AND VALVES, PRIOR TO CONSTRUCTION.
8. IN ADDITION TO THE SLEEVES SHOWN ON THE PLAN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ADDITIONAL SLEEVES OF SUFFICIENT SIZE UNDER PAVED AREAS PRIOR TO PAVING, AND UPON THE APPROVAL OF THE ENGINEER, IF REQUIRED TO OPERATE THE SYSTEM.
9. CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST ALL HEADS FOR MAXIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO WALKS, STREETS, AND BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST NOZZLE RADIUS TO FIT UNUSUAL SITE CONDITIONS FOR APPROVAL PURPOSES.
10. ALL IRRIGATION CONSTRUCTION AND MATERIALS SHALL BE INSTALLED PER THE MANUFACTURES SPECIFICATIONS, AND ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL AND REGIONAL GOVERNING CODES.
11. CONTRACTOR/OPERATOR SHALL ONLY APPLY SUFFICIENT WATER TO PROMOTE HEALTHY GROWTH OF THE PLANT MATERIAL. AT NO TIME WILL THE CONTRACTOR/OPERATOR APPLY WATER AT A RATE OR FREQUENCY, WHICH CAUSES RUN-OFF OR SOIL SATURATION.
12. SLEEVING – SLEEVES SHALL BE SCH 40 PVC PIPE. SLEEVES SHALL BE PROVIDED UNDER ALL PAVED AREAS (STREET PAVING, SIDEWALKS, DRIVEWAYS, ETC.). SLEEVES TO BE GROUPED WHERE POSSIBLE.
13. INSTALL HEADS WITH BUILT IN CHECK VALVES OR IN LINE CHECK VALVES, ON ALL HEADS THAT DRAIN EXCESSIVELY AND CAUSE SOIL EROSION UPON SYSTEM SHUT DOWN.
14. THE CONTRACTOR SHALL VERIFY THE STATIC PRESSURE TO BE AS STATED ON THE SYSTEM REQUIREMENTS. SHOULD THE STATIC PRESSURE BE LESS THAN THE STATED PRESSURE, NOTIFY THE ENGINEER IMMEDIATELY.
15. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL PLANS FOR 120VAC POWER SUPPLY TO LOCATION OF PROPOSED IRRIGATION CONTROLLERS SHOWN ON PLAN.
16. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS SHOWN ON THE DETAILS AND IN SPECIFICATIONS. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAINLINE TO THE LAST RCV ON EACH OF EVERY LEG OF MAINLINE. LABEL SPARE WIRES AT BOTH ENDS.
17. ALL IRRIGATION WORK SHALL CONFORM TO THE ORANGE COUNTY STANDRAD PLANS (CURRENT EDITION) AND THESE PLANS. IN CASE OF CONFLICT, THE STANDRAD PLANS SHALL PREVAIL.

IRRIGATION LEGEND

SYM	DESCRIPTION	MANF.	MODEL	REMARKS	DET.	SHEET
A	IRRIGATION CONTROLLER	RAIN BIRD	ESP–MC SERIES	24 STATIONS IRRIGATION CONTROLLER ASSEMBLIES INSTALL IN POWDER COATED STEEL WALL MOUNT ENCLOSURE	6	L–4
—c—	CONTROL WIRE CONDUIT	APPROVED	SCH. 40 PVC	SIZE AS REQUIRED – SEE CHART, THIS SHEET	5	L–4
R	RAIN SHUTOFF	HYDROSAVER	RAINGUARD	INSTALL IN VANDAL RESISTANT ENCLOSURE, ON ROOF TOP WALL & WITHIN THE CLOSE VICINITY OF IRRIGATION CONTROLLER	17	L–4
M	POTABLE WATER METER	PER UTILITY	2"	REFER TO CIVIL ENG. PLAN FOR ACTUAL LOCATION & CONNECTION INFORMATION	–	L–4
BF	REDUCED PRESSURE BACKFLOW PREVENTER	FEBCO	825YA (2")	BACKFLOW PREVENTING DEVICE REFER TO CIVIL PLAN FOR ACTUAL LOCATION & CONNECTION INFORMATION	1	L–4
	WYE STRAINER	WILKINS	MODEL S SERIES	LINE SIZE–INSTALL DOWNSTREAM FROM BACKFLOW DEVICE IN SEPARATE VALVE BOX	10	L–4
M	REMOTE CONTROL MASTER VALVE	SUPERIOR	MODEL 3300	LINE SIZE – NORMALLY OPEN MASTER VALVE	7	L–4
FS	FLOW SENSOR(a)	CREATIVE SENSOR TECHNOLOGY	FSI–T15–001 (1.5")	GST FLOW SENSOR ASSEMBLY	7	L–4
	GATE VALVE	HAMMOND	IB–645	LINE SIZE–BRONZE GATE VALVE	2	L–4
	REMOTE CONTROL VALVE	RAIN BIRD	XCZ–LF–100–RBF	DRIP CONTROL ZONE KIT SIZE NOTED ON PLAN	12	L–4
	REMOTE CONTROL VALVE	RAIN BIRD	PEB–SERIES	SIZE NOTED ON PLAN	3	L–4
	QUICK COUPLER	HUNTER	HQ–33D–R	(3/4")	4	L–4
— —	IRRIGATION MAINLINE	APPROVED	CLASS 315 PURPLE PVC: 2" OR GREATER SCH. 40 PURPLE PVC: 1.5" OR SMALLER	SIZE NOTED ON PLAN	5 & 16	L–4
——	IRRIGATION LATERAL	APPROVED	SCH. 40 PURPLE PVC	SIZE NOTED ON PLAN	5 & 16	L–4
= = =	PIPE SLEEVE	APPROVED	SCH. 40 PURPLE PVC	TWICE LINE SIZE	5 & 16	L–4
S	SPLICE BOX	APPROVED	–	–	15	L–4

(a) CONTACT STEVEN KIM @ GENTILE & ASSOCIATES, INC. (760) 214–5734 steven.kim@gentileandassociates.com FOR SALE AND TECHNICAL ASSOSTANCE.

SYM	DESCRIPTION	MANF.	BODY	NOZ.	PSI	RAD	GPM	DET.	SHT.
Q T H F	12" POP–UP SPRAY HEAD	RAIN BIRD	1812–SAM–PRS	5 SERIES	30	5'	0.1–0.41	8	L–4
Q T H F	12" POP–UP SPRAY HEAD	RAIN BIRD	1812–SAM–PRS	8 SERIES	30	8'	0.26–1.05		
Q T H F	12" POP–UP SPRAY HEAD	RAIN BIRD	1812–SAM–PRS	10 SERIES	30	10'	0.39–1.58		
Q T H TT TQ F	12" POP–UP SPRAY HEAD	RAIN BIRD	1812–SAM–PRS	12 SERIES	30	12'	0.65–2.6		
Q T H TT TQ F	12" POP–UP SPRAY HEAD	RAIN BIRD	1812–SAM–PRS	15 SERIES	30	15'	0.92–3.7		
6 8 10 12 15	12" POP–UP SPRAY HEAD	RAIN BIRD	1812–SAM–PRS	VAN SERIES	30	6'–15'	0.6–1.85		
50	6" POP–UP BUBBLER HEAD	HUNTER / RAIN BIRD	– / 1806–SAM–PRS	PCN–50 / –	30	–	0.50	8	L–4
3.5	6" POP–UP ROTOR HEAD	HUNTER	I–20–6P–ADS	3.5–LA	30	29'	2.8	9	L–4
+	6" POP–UP SPRAY HEAD	RAIN BIRD	1806	15VAN	30	5'–15'	0.6–1.9	8	L–4
	LANDSCAPE DRIPPERLINE(b)	NETAFIM	TLDL4–18 Techline Dripperline	–	30	–	4 GPH/ EMITTER	11, 13 & 14	L–4

+ (1) FURNISH & REPLACE RAIN BIRD 1806 POP–UP STEM WITH VALVETTE POP610CK W/ CHECK VALVE, 6" POP–UP STEM REPLACEMENT, AND PRE–INSTALLED LITTLE VALVE MANUFACTURED BY VALVETTE SYSTEMS CORP. CONTACT TED SIRKIN (866) 200–8590 FOR SALE INFO. & TECHNICAL ASSISTANCE. www.valvettesystems.com CONTRACTOR SHALL PROVIDE TO THE OWNER (2) 3/16" T–HANDLE ALLEN WRENCHES FROM THE MFG. (AW7187).

(2) ADJUST THE LITTLE VALVE ON EACH REPLACED STEM RISER USING 3/16" ALLEN WRENCH TO ACHIEVE OPTIMUM ARC COVERAGE AND TO AVOID OVERSRAY.

(3) FLOW (GPM) CALCULATION IS BASED ON CHART BELOW:

FLOW (GPM)	15'	12'	10'	8'	5'
Q –	1.0	0.6	0.5	0.4	0.3
H –	1.9	1.2	1.0	0.8	0.6
A(180°) –	1.9	1.2	1.0	0.8	0.6

(b) IRRIGATION SYSTEM SHALL BE INSTALLED COMPLETE INCLUDING LINE FLUSING VALVE AND AIR RELIEF VALVE PER DETAIL 12, SHEET L–4. PVC HEADER SHALL BE 3/4" SCH 40 PVC PIPE. TECHINE DRIPPER LINE SPACING @ 18" O.C.

PIPING SIZES:

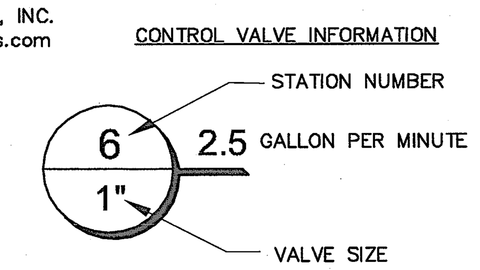
MINIMUM PIPE SIZE SHALL BE 3/4". FOR ALL PIPE SIZES NOT SHOWN USE THE FOLLOWING GUIDELINES:

SYMBOL	G.P.M.	PIPE SIZE	TYPE
——	0–8	¾"	SCH. 40
—+—	9–12	1"	SCH. 40
—++—	13–22	1¼"	SCH. 40
—+++—	23–30	1½"	SCH. 40
—×—	31–50	2"	CLASS 315

IRRIGATION CONTROL WIRE SIZING TABLE

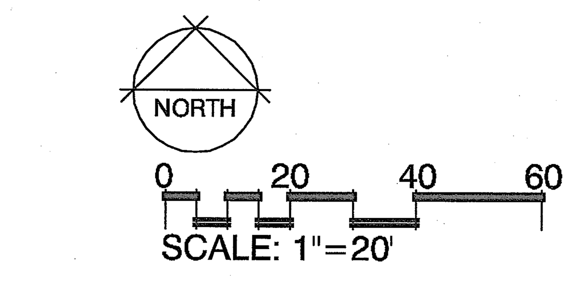
CONDUIT SIZE	MAX. NO. OF WIRES # 14 AWG
½"	2
¾"	4
1"	6
1¼"	10
1½"	14
2"	25

CONTROL VALVE INFORMATION



DOMESTIC WATER P.O.C. DATA

P.O.C. LOCATION:	SEE CIVIL ENG., WATER & SEWER PLAN FOR TECHINCAL INFO. AND EXACT LOCATION.
METER SIZE:	2" DOMESTIC WATER
STATIC PRESSURE @ P.O.C.:	64 PSI
MAX. DEMAND:	35.8 GPM @ VALVE NO. 6
NAME OF WATER SUPPLIER:	CITY OF ORANGE, WATER DIVISION (715) 288–2475



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0742 COUNTY OF ORANGE HEALTH CARE AGENCY 401 SOUTH TUSTIN STREET

County of Orange
OC PUBLIC WORKS
Architecture & Engineering

Revisions: 0742 | Sym. | Descrip. | Date | By

Consultants: WILLDAN Landscape Architecture extending your reach
Drawn BN Chkd. JH Date 11-26-09

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ALEXANDER + HIBBS, AIA, INC. Architecture and Planning 1200 N. JEFFERSON ST. SUITE A ANAHEIM, CALIFORNIA 92807 (714) 630-3686
Design | Chkd. | Date NOV. 26, 2009

Sht Title IRRIGATION PLAN
Project COUNTY OF ORANGE HEALTH CARE AGENCY 401 SOUTH TUSTIN STREET
401 SOUTH TUSTIN STREET ORANGE, CA 92866
PROJ. NO. 100-042-P210-4200

Plan No. 52333-03608

Sheet L-2

Directory Path: S:\jn17531 401 Tustin Wellness Center\Landscape Dwgs\401-Irrigation.dwg, Date: 11/12/09