NOTES:

1. ALL 24 VOLT LEAD AND COMMON VALVE WIRING SHALL BE A MINIMUM OF UF-14 GA. SINGLE CONDUCTOR. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR PROPER WIRE SIZE. WIRE SPLICES SHALL BE 3M-DBY PERMANENT AND WATERPROOF PER THE SPECIFICATIONS.
2. COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LANDSCAPE CONTRACTOR TO ENSURE ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
3. PIPING AND VALVES IN PAVING SHOWN FOR CLARITY, INSTALL IN ADJACENT PLANTING BED OR LAWN AREA.
4. LATERAL PIPING SHALL HAVE A MINIMUM OF 12" OF COVER. MAINLINE AND PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18" OF COVER. ALL FITTINGS TO BE SCHEDULE 40 PVC. USE WELD-ON #705 SOLVENT AND #P-68 PRIMER FOR PVC CONNECTIONS PER THE SPECIFICATIONS.
5. ALL MAINLINE TO BE 2-1/2" CLASS 200 PVC. SIZE ALL LATERAL PIPING PER MANUFACTURER'S RECOMMENDATIONS OF NOT EXCEEDING 5 FPS. REFERENCE PIPE SIZE CHART.
6. CONNECT DRIP INDICATOR HEADS TO LATERAL PIPING WITH 1/2" FLEXIBLE PVC AND 1/2" SCHEDULE 40 PVC FITTINGS AS REQUIRED, PER DETAIL SHOWN. USE WELD-ON #795 SOLVENT AND #P-68 PRIMER ON THESE CONNECTIONS PER THE SPECIFICATIONS.
7. CONNECT ROTARY HEADS TO LATERAL PIPE WITH LASCO "UNITIZED", O-RING SWING JOINTS PER DETAIL SHOWN, #T722 SERIES.
8. INSTALL QUICK COUPLING VALVES IN TWELVE BY SEVENTEEN (12"x17") INCH HIGHLINE VALVE BOX PER DETAIL SHOWN. CONNECT QUICK COUPLING VALVES TO MAINLINE PIPE WITH LASCO "UNITIZED", O-RING SWING JOINTS PER DETAIL SHOWN, #T722-212. SUPPLY OWNER WITH THREE (3) COUPLER KEYS WITH SWIVEL HOSE BIBB EACH, #33DK-10 AND #SH-0 RESPECTIVELY. VALVES TO BE INSTALLED SO THAT TOP OF QUICK COUPLER IS 2" BELOW BOTTOM OF VALVE BOX TOP. PURPLE LID READS "NON-POTABLE, NOT SAFE FOR DRINKING" IN ENGLISH AND SPANISH. INSTALL EVERY 150'-0" ON CENTER ALONG ENTIRE LENGTH OF MAINLINE.
9. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO INSTALL THE RAINMASTER CONTROLLER PER THE MANUFACTURER'S RECOMMENDATIONS. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH LOCAL BUILDING CODE. POWER (120V) SHALL BE LOCATED IN A JUNCTION BOX AND HARDWIRED WITHIN FIVE (5') FEET OF CONTROLLER LOCATION BY GENERAL CONTRACTOR.
10. ROUTE COMMON WIRE FROM CONTROLLER TO REMOTE SENSORS IN SERIES PRIOR TO CONNECTING TO REMOTE CONTROL VALVES.
11. INSTALL REMOTE CONTROL VALVES AND WIRE SPLICES IN TEN (10") INCH ROUND HIGHLINE VALVE BOXES PER DETAIL SHOWN.
12. INSTALL SLEEVES UNDER ALL HARDSCAPE SURFACES SUCH AS ROADS, DRIVES, WALKS, ETC. WHETHER SHOWN OR NOT. SLEEVES SHALL BE CLASS 200 PVC, SIZED AS NOTED ON PLANS AND INSTALLED BY LANDSCAPE IRRIGATION CONTRACTOR.
13. ADJUST NOZZLES FOR SITUATIONS THAT REQUIRE LESS THAN 90° DEGREE RADIUS SPRAY. NO OVERSPRAY ALLOWED ON ANY HARDSCAPE SURFACES.
14. DESIGN PRESSURE IS 62.0 PSI. STATIC PRESSURE IS 70 PSI. TEN DAYS PRIOR TO START OF CONSTRUCTION, VERIFY STATIC PRESSURE. IF STATIC PRESSURE IS LESS THAN STATED DO NOT START WORK UNTIL NOTIFIED TO PROCEED BY OWNER.
15. MINIMUM DISTANCE BETWEEN MAIN LINE AND LATERAL LINE FITTINGS (EXCEPT FOR REDUCER BUSHINGS) TO BE EIGHTEEN (18") INCHES AND MINIMUM HORIZONTAL DISTANCE OF TWENTY-FOUR (24") INCHES BETWEEN ANY VALVES THAT ARE INSTALLED SIDE BY SIDE.
16. STAKE TREE BUBBLER LOCATIONS AND RECEIVE APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
17. INSTALL REMOTE CONTROL DRIP ZONE KIT VALVES IN TWELVE BY SEVENTEEN (12"x17") INCH HIGHLINE VALVE BOXES PER DETAIL SHOWN.
18. INSTALL DRIPLINE MINIMUM OF 2" AND A MAXIMUM OF 4" FROM HARDSCAPE SURFACES. STAKE DRIPLINE AND RECEIVE APPROVAL FROM OWNER'S REPRESENTATIVE BEFORE INSTALLATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDATIONS OF 5'-0" PER SECOND IN DRIPLINE.
19. PROVIDE AND INSTALL DISTRIBUTION TUBING, STAKES, EMITTERS, TRANSFER FITTINGS, DIFFUSER BUG CAP, CONTROL ZONE KITS, ETC. NECESSARY FOR PROPER INSTALLATION OF THE BEDS. ALL PVC HEADER PIPING TO BE CLASS 200 PVC SOLVENT WELD PIPE. INSERT ALL RAINBIRD XF DRIPLINE INSERT FITTINGS PER MANUFACTURER'S RECOMMENDATIONS.
20. INSTALL ONE DRIP INDICATOR HEAD FOR EACH DRIP ZONE. INDICATOR HEAD TO BE A RAINBIRD 1812-SAM-PRS POP-UP SPRAY WITH 5 SERIES VAN NOZZLE TURNED TO OFF POSITION.
21. AIR RELIEF VALVE TO BE RAINBIRD AR VALVE KIT INSTALLED IN A SIX-INCH (6") HIGHLINE ROUND VALVE BOX WITH BLACK LID AND 6" OF GRAVEL SUMP. FLUSH VALVES TO BE 1/2" LASCO BALL VALVE ON IPS FLEXIBLE PIPE AND 1/2" SCHEDULE 40 FITTINGS INSTALLED IN A SIX-INCH (6") HIGHLINE ROUND VALVE BOX WITH BLACK LID AND 6" OF GRAVEL SUMP.
22. ALL PLANTING BED XFD DRIPLINE AND DISTRIBUTION TUBING TO BE INSTALLED AT GRADE BELOW MULCH LAYER PER MANUFACTURER'S RECOMMENDATIONS. ALL DRIPLINE TO BE INSTALLED MINIMUM OF 1'-4" AND MAXIMUM OF 1'-8" ROW SPACING UNLESS INSTRUCTED OTHERWISE. L.I.C. IS RESPONSIBLE TO VERIFY THE EXACT EMITTER FLOW, EMITTER SPACING, AND ROW SPACING WITH MANUFACTURER PRIOR TO INSTALLING TO PROVIDE PROPER PRECIPITATION RATE BASED ON PLANT MATERIAL AND SOIL TYPE. TUBING TO BE STAKED WITH RAINBIRD 12 GA. GALVANIZED TIE DOWNS. INSTALL STAKES EVERY 3'-0" ALONG ENTIRE LENGTH OF TUBING AND A MINIMUM OF 24" FROM ANY FITTINGS.
23. ALL TURF SOD XFS DRIPLINE AND DISTRIBUTION TUBING TO BE INSTALLED BELOW FINISH GRADE APPROXIMATELY 3" TO 4" PER MANUFACTURER'S RECOMMENDATIONS. ALL TURF DRIPLINE TO BE INSTALLED MINIMUM OF 1'-4" AND MAXIMUM OF 1'-8" ROW SPACING UNLESS INSTRUCTED OTHERWISE. L.I.C. IS RESPONSIBLE TO VERIFY THE EXACT EMITTER FLOW, EMITTER SPACING, AND ROW SPACING WITH MANUFACTURER PRIOR TO INSTALLING TO PROVIDE PROPER PRECIPITATION RATE BASED ON TURF AND SOIL TYPE. TUBING TO BE STAKED WITH RAINBIRD 12 GA. GALVANIZED TIE DOWNS. INSTALL STAKES EVERY 3'-0" ALONG ENTIRE LENGTH OF TUBING AND A MINIMUM OF 24" FROM ANY FITTINGS.
24. INCLUDE THE FOLLOWING ALLOWANCES FOR PROVIDING AND INSTALLING AIR RELIEF VALVES AND FLUSH VALVES FOR THE DRIP SYSTEM. EXACT QUANTITY AND LOCATION OF THESE DEVICES WILL BE DETERMINED AT THE TIME OF INSTALLATION. IN GENERAL, ALL AIR RELIEF VALVES WILL BE INSTALLED AT THE HIGH POINTS AND FLUSH VALVES WILL BE INSTALLED AT THE LOW POINTS OF EXHAUST HEADER. ALLOW FOR APPROXIMATELY ONE (1) AIR RELIEF VALVE AND APPROXIMATELY ONE (1) FLUSH VALVE FOR EACH DRIP ZONE KIT.
25. WHERE POSSIBLE LOCATE ALL MAINLINES, VALVES, OR CONTROL WIRES SHALL BE LOCATED AND INSTALLED OUTSIDE RIGHT-OF-WAY.
26. THIS PROJECT MAY REQUIRE THE "STACKING" OF DRIP ZONES IN THE CONTROLLER TO ACHIEVE THE MORE RUNTIME. DO NOT EXCEED 55 GALLONS PER MINUTE BASED ON THE DESIGN HYDRAULICS OF THE SYSTEM.
27. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO HAND DIG WITHIN ALL EXISTING TREE ROOT ZONES. CONTRACTOR MUST STAKE DITCHES AND RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO ANY TRENCHING OR DIGGING.
28. PROVIDE TEMPORARY IRRIGATION TO ALL DISTURBED AREAS THAT DO NOT HAVE PERMANENT IRRIGATION. PROVIDE ALL MATERIAL AND LABOR NECESSARY TO INSTALL AND OPERATE THE TEMPORARY SYSTEM. TEMPORARY SYSTEM TO BE LEFT IN PLACE UNTIL PLANT MATERIAL IS ESTABLISHED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. SHOULD IT BECOME NECESSARY TO REMOVE AND REPLACE THE TEMPORARY SYSTEM FOR MOWING AND MAINTENANCE OPERATIONS, THE LANDSCAPE IRRIGATION CONTRACTOR SHALL CONSIDER THIS PART OF HIS SCOPE OF WORK. EXACT METHOD OF PROVIDING AND OPERATING THE TEMPORARY SYSTEM WILL BE THE LANDSCAPE IRRIGATION CONTRACTOR'S RESPONSIBILITY. OPERATION OF THE TEMPORARY SYSTEM MUST BE COORDINATED WITH THE PERMANENT SYSTEM TO INSURE PROPER HYDRAULIC OPERATION OF BOTH SYSTEMS. CONTRACTOR IS RESPONSIBLE TO REFERENCE THE LANDSCAPE PLANS FOR THE SCOPE OF THIS WORK.
29. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO REPAIR THE EXISTING IRRIGATION SYSTEM IN THIS AREAS SO THAT IT IS 100% OPERABLE AND AUTOMATED UPON COMPLETION OF THE PROJECT. THIS WORK TO INCLUDE BUT NOT LIMITED TO CUTTING AND CAPPING, ADJUSTING, BLENDING, ADDING COMPONENTS TO ACHIEVE THIS WORK. REVIEW THE EXISTING IRRIGATION PLANS FOR ANY QUESTIONS REGARDING THE EXISTING IRRIGATION. CONTRACTOR MUST COORDINATE THIS WORK WITH ALL DISCIPLINES PRIOR TO BIDDING AND INSTALLATION.
30. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO CONNECT THE PROPOSED REMOTE CONTROL VALVES TO THE EXISTING IRRIGATION MAINLINE AT THIS APPROXIMATE LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING MAINLINE. CONTRACTOR MUST COORDINATE THIS WORK WITH ALL DISCIPLINES PRIOR TO BIDDING AND INSTALLATION. REFERENCE NOTE 31 FOR WIRES.
31. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO CONNECT THE PROPOSED IRRIGATION WIRES TO THE EXISTING FOUR (4) IRRIGATION WIRES AT THIS APPROXIMATE LOCATION. VERIFY EXACT NUMBER AND LOCATION OF EXISTING WIRES. CONTRACTOR MUST COORDINATE THIS WORK WITH ALL DISCIPLINES PRIOR TO BIDDING AND INSTALLATION.
32. ALL STATE OF TEXAS LAWS/RULES AND ALL LOCAL CODES/ORDINANCES ARE MADE PART OF THESE PLANS AND SPECIFICATIONS WHETHER SHOWN OR NOT. THESE LAWS AND ORDINANCES WILL SUPERCEDE THE PLANS, DETAILS, AND/OR SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS CAUTIONED THAT HE IS TO INCLUDE ANY AND ALL COST NECESSARY TO MEET OR EXCEED THE LAWS OF THE STATE OF TEXAS OR LOCAL CODES CONCERNING LANDSCAPE IRRIGATION.
33. A LICENSED IRRIGATOR OR LICENSED IRRIGATION TECHNICIAN SHALL BE ON-SITE AT ALL TIMES WHILE THE LANDSCAPE IRRIGATION SYSTEM IS BEING INSTALLED PER CITY OF ADDISON REQUIREMENTS.
34. IT IS THE INTENT OF THESE PLANS TO PROVIDE THE OWNER WITH A FULLY AUTOMATED AND OPERATIONAL IRRIGATION SYSTEM UPON COMPLETION OF THE PROJECT.

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO,
●	LAWN SPRAY HEAD	RAINBIRD (30 PSI)	1804 WITH MPR PLASTIC NOZZLES UNLESS NOTED OTHERWISE
⊕	BUBBLER HEAD	RAINBIRD (30 PSI)	#1402 NOZZLE ON 1/2" FLEX PVC UNLESS OTHERWISE NOTED
◔	BUBBLER HEAD	RAINBIRD (30 PSI)	#1404 NOZZLE ON 1/2" FLEX PVC UNLESS OTHERWISE NOTED
◎	ROTARY HEAD PART-CIRCLE	RAINBIRD (40 PSI)	3504 W/ #1.5 NOZZLE ON 1/2" LASCO SWING JOINT UNLESS OTHERWISE NOTED
◑	ROTARY HEAD PART-CIRCLE	RAINBIRD (40 PSI)	5004 W/ #1.5 NOZZLE ON 3/4" LASCO SWING JOINT UNLESS OTHERWISE NOTED
◎	ROTARY HEAD FULL-CIRCLE	RAINBIRD (40 PSI)	5004 W/ #3.0 NOZZLE ON 3/4" LASCO SWING JOINT UNLESS OTHERWISE NOTED
◍	ROTARY HEAD PART-CIRCLE	RAINBIRD (40 PSI)	5004 W/ #4.0 NOZZLE ON 3/4" LASCO SWING JOINT UNLESS OTHERWISE NOTED
◉	ROTARY HEAD FULL-CIRCLE	RAINBIRD (40 PSI)	5004 W/ #8.0 NOZZLE ON 3/4" LASCO SWING JOINT UNLESS OTHERWISE NOTED
▲	QUICK COUPLING VALVE	RAINBIRD	#33-DNP WITH LASCO BALL VALVE, PURPLE LID READS "RECLAIMED WATER, DO NOT DRINK" IN ENGLISH AND "NO TOME" IN SPANISH.
⧈	REMOTE CONTROL VALVE	RAINBIRD	PEB SERIES WITH PRS-D PRESSURE REGULATOR, REFER TO PLANS FOR SIZE
●	BALL VALVE	LASCO	COMPACT, LINE SIZE
▬	NEW CONTROLLER	RAINMASTER	DX48-SPED-T SERIES W/ DX-PH, DX-FLOW, PHONE DROP, AND RAIN/FREEZE SENSOR
⊠	EXISTING CONTROLLER	RAINMASTER	DX48-SPED-T SERIES, VERIFY LOCATION AND CONTROLELR SIZE
———	EXISITNG MAINLINE	REFER TO SPEC.	REFER TO PLANS
— —	MAINLINE PIPING	REFER TO SPEC.	CLASS 200 PVC
———	LATERAL PIPING	REFER TO SPEC.	3/4" & LARGER - CLASS 200 PVC 1/2" - CLASS 315 PVC
= = = =	EXISTING SLEEVES	REFER TO SPEC.	REF REFERENCE ORIGINAL DESIGN
⧈	REMOTE CONTROL DRIP VALVE	RAINBIRD	XCZ-100-PRB-COM CONTROL ZONE KIT VALVE, REFER TO PLAN FOR SIZE
———	DRIP HEADER PIPING	REFER TO SPEC.	CLASS 200 PVC UNLESS OTHERWISE NOTED
┈┈┈	PLANTING BED DRIPLINE TUBING	RAINBIRD	XFD-06-18 WITH XF INSERT FITTINGS TDS-050 GALVANIZED TUBING STAKES, AND DRIP INDICATOR HEAD
┈┈┈	TURF SOD DRIPLINE TUBING	RAINBIRD	XFS-06-18 WITH XF INSERT FITTINGS, TDS-050 GALVANIZED TUBING STAKES, AND DRIP INDICATOR HEAD
Ⓦ	WATER METER	REFER TO SPEC.	PER LOCAL BUILDING CODE
Ⓘ	ISOLATION VALVE	NIBCO	#T-29, REFER TO PLAN FOR SIZE
Ⓨ	WYE STRAINER	FEBCO	#650, REFER TO PLAN FOR SIZE
⋀⋀	BACKFLOW PREVENTER	FEBCO	#850BV, REFER TO PLAN FOR SIZE
Ⓜ	MASTER VALVE	RAINBIRD	PEB, REFER TO PLAN FOR SIZE
○	EXISTING WIRE SPLICE VALVE BOX	REF. NOTE 31	4 EXISTING VALVE WIRES
▭ ▭ ▭	STATION NUMBER VALVE SIZE GPM (APPROX.)		

FLOW CHART

SPRAY HEADS:

NOZZLE	RADIUS	GPM
18F	18'	6.5
18F	18'	4.5
18Q	18'	2.5
15F	15'	4.1
15E	15'	3.1
15C	15'	2.7
15H	15'	2.0
15B	15'	1.4
15Q	15'	1.0
12F	12'	2.9
12E	12'	2.2
12C	12'	1.9
12H	12'	1.4
12B	12'	1.0
12Q	12'	.7
10F	10'	1.7
10H	10'	.9
10B	10'	.6
10Q	10'	.4
8F	8'	1.7
8H	8'	.9
8B	8'	.6
8Q	8'	.4
6V	6'	.5

FLOW CHART

ROTARY HEADS:

30' PART-CIRCLE	1.5
30' FULL-CIRCLE	3.0
40' PART-CIRCLE	4.0
40' FULL-CIRCLE	8.0

PIPE SIZE CHART

FLOW/GPM:	PIPE SIZE:
0 - 4.0	1/2"
4.1 - 9.5	3/4"
9.6 - 14.5	1"
14.6 - 27.0	1-1/4"
27.1 - 35.0	1-1/2"
35.1 - 55.0	2"
55.1 - 70.0	2-1/2"

STATE OF TEXAS
SETH A. HEIDMAN
5881
LICENSED IRRIGATOR
10-13-2016

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PAVING, DRAINAGE & UTILITY IMPROVEMENTS

VITRUVIAN PARK PUBLIC INFRASTRUCTURE BLOCK 200

TOWN OF ADDISON, TEXAS

IRRIGATION DETAILS

MARSH LANE

DESIGN	DRAWN	DATE	SCALE	NOTES	Sheet No.
SAH	SAH	OCT 13, 2016	AS NOTED		90

VITRUVIAN PARK BLOCK 200 PUBLIC INFRASTRUCTURE – PROJECT NO. 16071