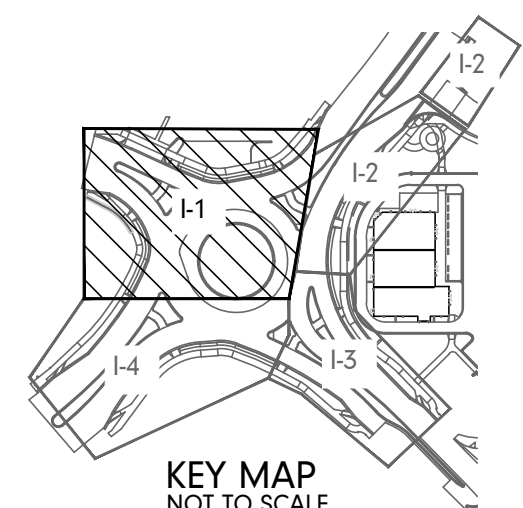
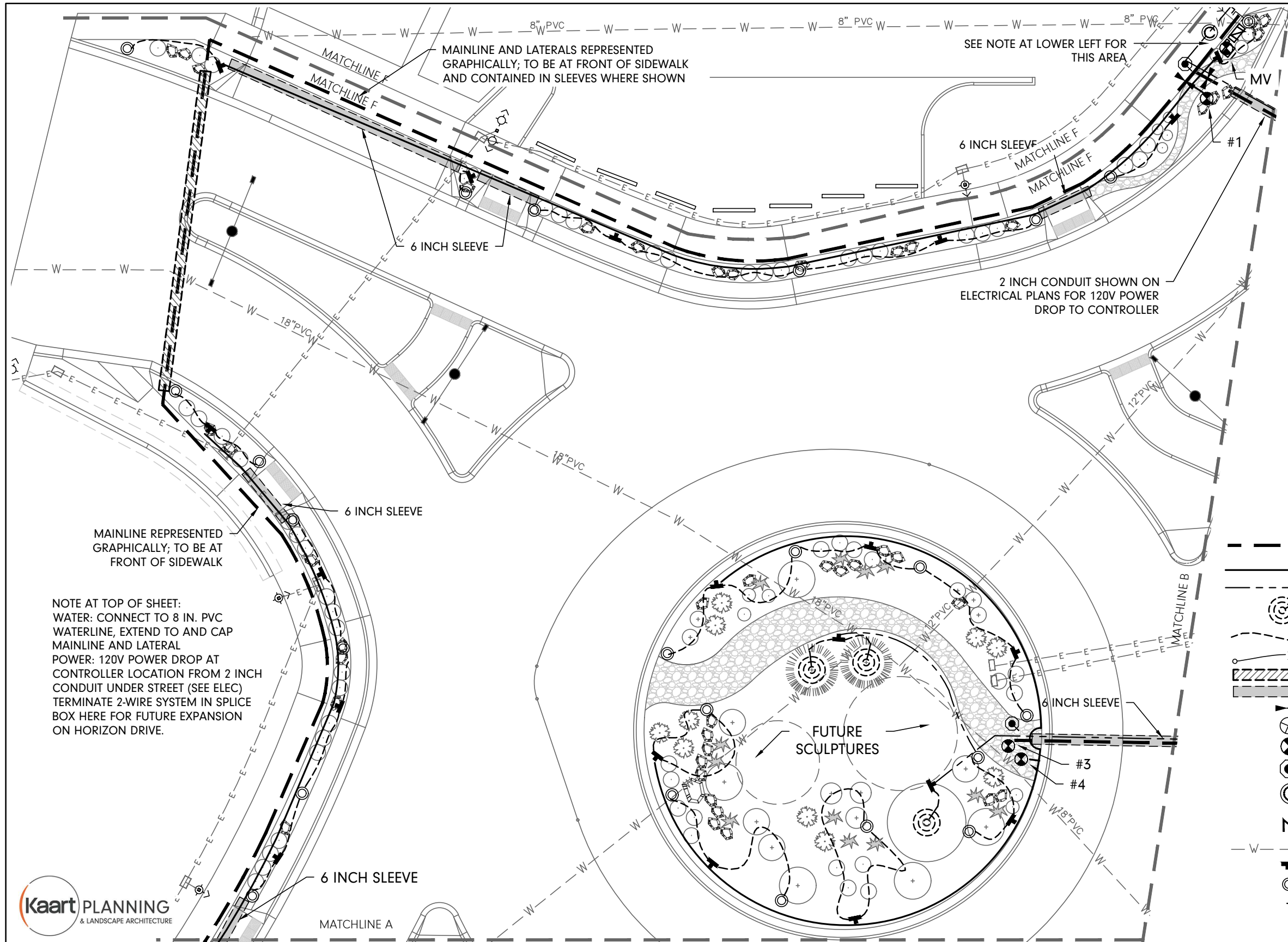


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NOTES:  
 1. SEE SHEET I-5 - I-6 FOR DETAILS, I-7 FOR NOTES AND VALVE SCHEDULE.  
 2. SLEEVE DEPTH TO BE 18 INCHES UNDER SIDEWALKS; 30 INCHES UNDER ROADS.

N

- LEGEND**
- SCHEDULE 40 PVC MAIN, 1-1/2" UNLESS NOTED OTHERWISE
  - LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
  - LATERAL PVC PIPING FOR TREE ZONE, 1" UNLESS NOTED OTHERWISE
  - TREE DRIPPER RING; DETAIL C/I-6 (BID AS PART OF 623-09900)
  - 1/2" DRIP TUBE (DRIP EMITTER TUBING)
  - PIPE SIZING
  - IRRIGATION SLEEVE, 4"
  - IRRIGATION SLEEVE, 6"
  - 1-1/2" BALL VALVE (ISOLATION VALVE); DETAIL D/I-5
  - 3/4" DRAIN (MANUAL) VALVE; DETAIL C/I-5
  - AUTOMATIC CONTROL VALVE, SIZE PER VALVE SCHEDULE ON I-6; DETAIL B/I-6 "MV" ON PLAN INDICATES MASTER VALVE
  - QUICK COUPLER VALVE; DETAIL E/I-5
  - RAINBIRD ESP-LXIVM IRRIGATION CONTROLLER WITH CABINET; DETAIL B/I-5
  - IRRIGATION CONNECTION AND BACKFLOW PREVENTER; DETAIL A/I-5
  - EXISTING UTE WATER MAIN
  - COMPRESSION "T" FITTING
  - DRIP ZONE FLUSH BOX; DETAIL C/I-6
  - PEDESTRIAN LIGHT POLES (SEE ELEC)

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 Horiz. Scale: AS SHOWN Vert. Scale: NA  
 Unit Information: City of GJ Unit Leader Initials: LF

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Region 3 KC

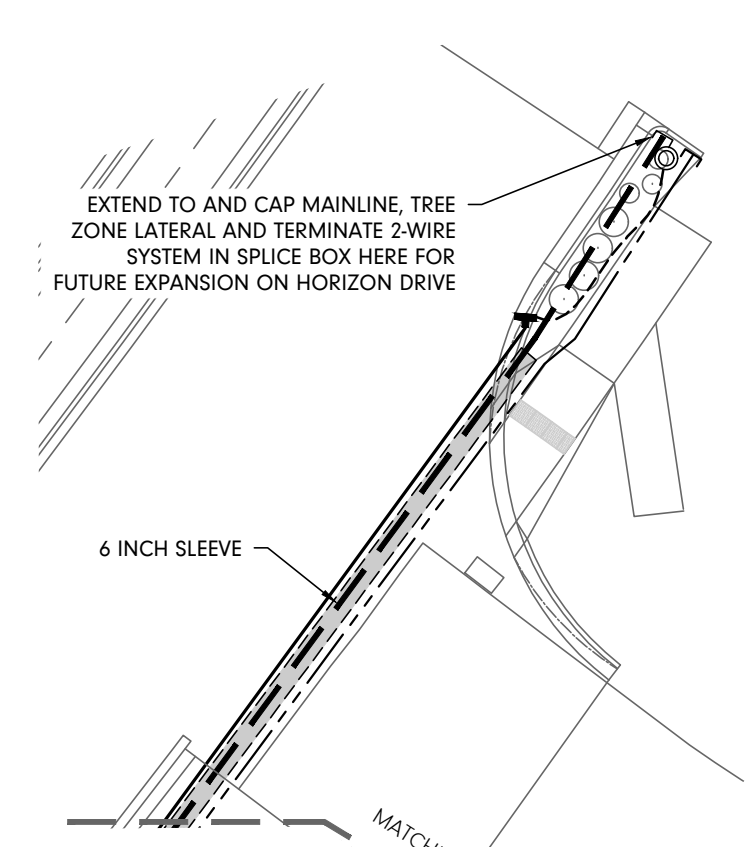
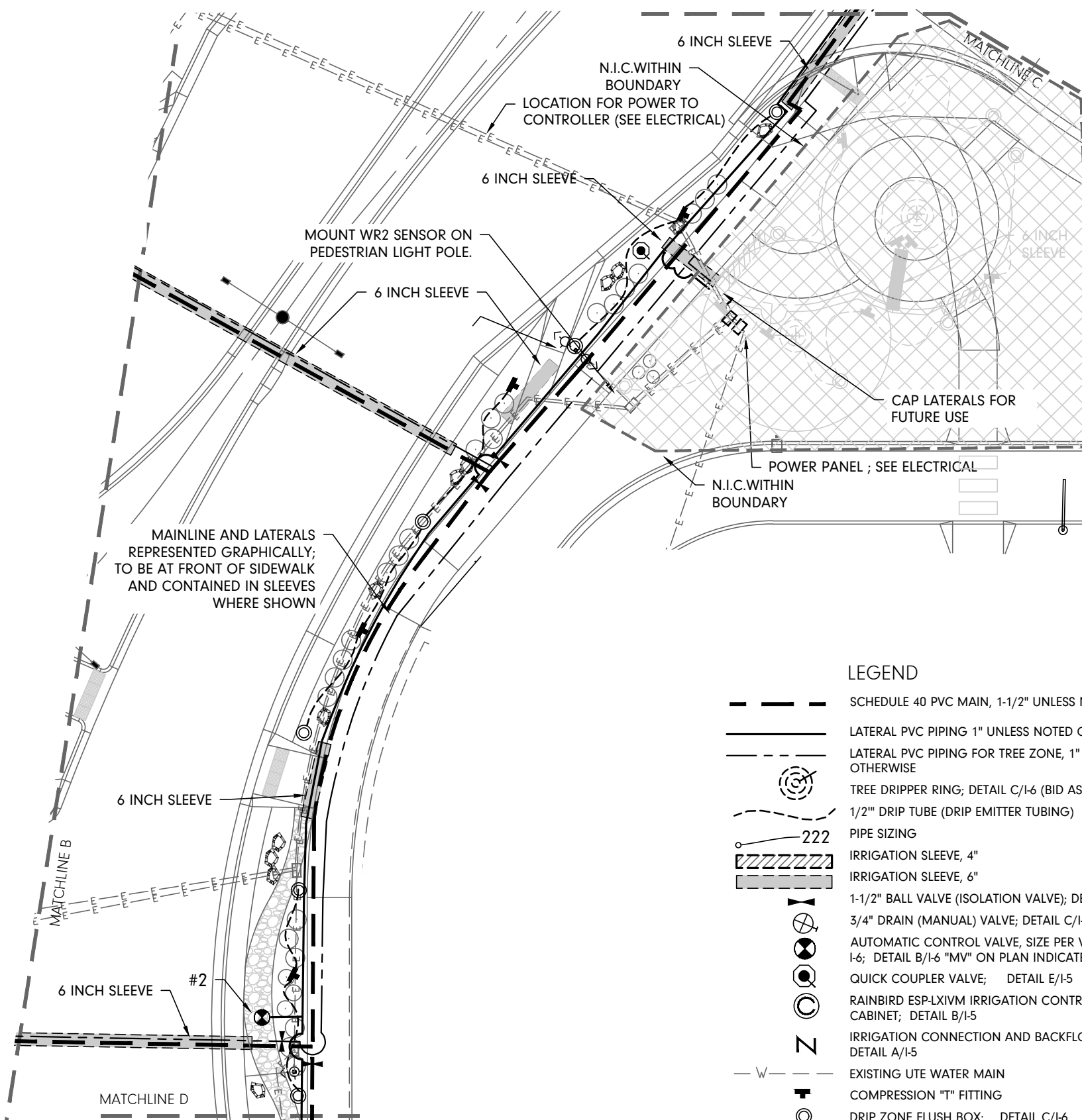
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<b>HORIZON DR AND G ROAD ROUNDABOUT IRRIGATION -1</b>	
Designer: MH/MR	Structure Numbers
Detailer: MH/MR	
Sheet Subset: Landscape	Subset Sheets: 1 of 7

<b>Project No./Code</b>
SHE M555-034
23652
Sheet Number



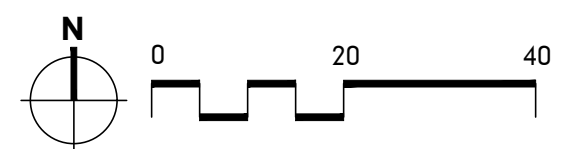
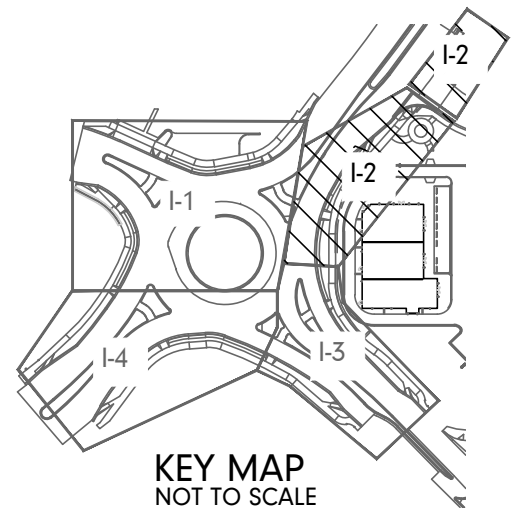
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NOTES:  
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 2. SLEEVE DEPTH TO BE 18 INCHES UNDER SIDEWALKS; 30 INCHES UNDER ROADS.

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- LATERAL PVC PIPING FOR TREE ZONE, 1" UNLESS NOTED OTHERWISE
- TREE DRIPPER RING; DETAIL C/I-6 (BID AS PART OF 623-09900)
- - - 1/2" DRIP TUBE (DRIP EMITTER TUBING)
- 222 PIPE SIZING
- ▨ IRRIGATION SLEEVE, 4"
- ▨ IRRIGATION SLEEVE, 6"
- 1-1/2" BALL VALVE (ISOLATION VALVE); DETAIL D/I-5
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- IRRIGATION CONNECTION AND BACKFLOW PREVENTER; DETAIL A/I-5
- W - EXISTING UTE WATER MAIN
- ⊕ COMPRESSION "T" FITTING
- DRIP ZONE FLUSH BOX; DETAIL C/I-6



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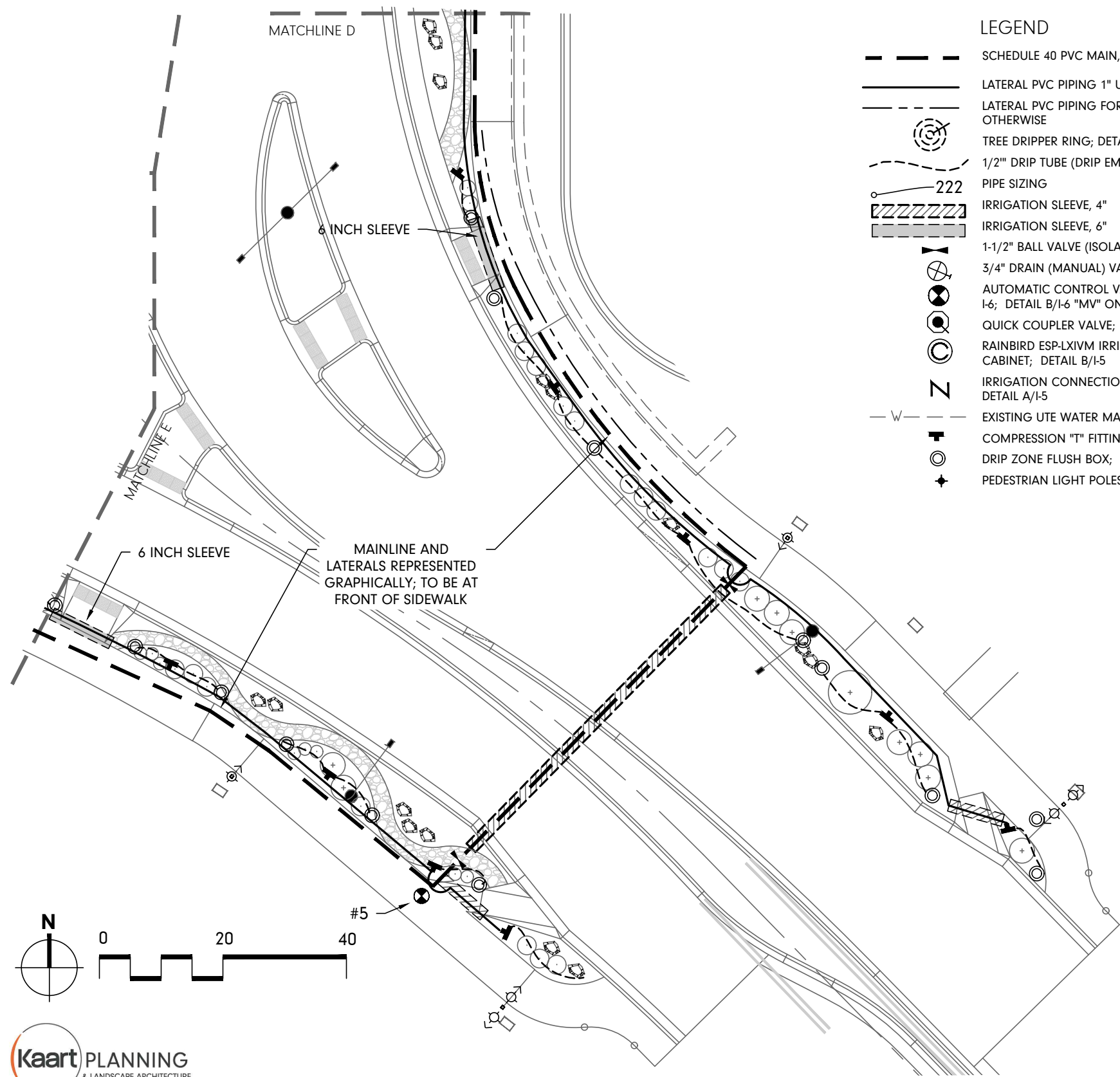
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<b>HORIZON DR AND G ROAD ROUNDABOUT IRRIGATION -2</b>		
Designer: MH/MR	Structure Numbers	
Detailer: MH/MR		
Sheet Subset: Landscape	Subset Sheets:	2 of 7

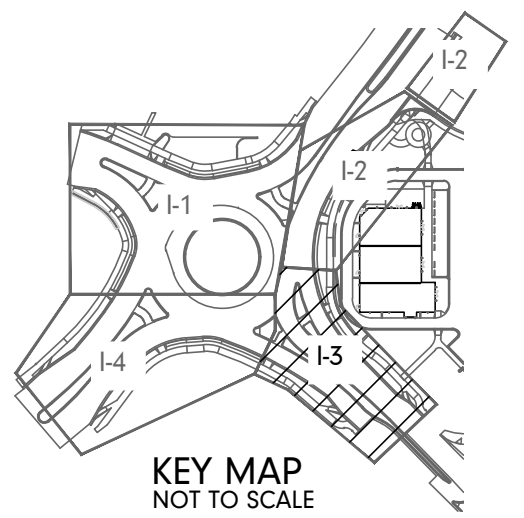
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SHE M555-034
23652
Sheet Number

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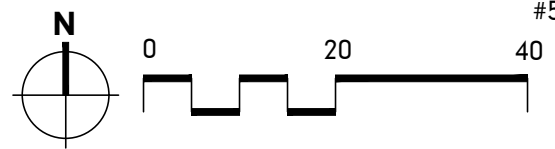


**LEGEND**

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- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
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- 222 PIPE SIZING
- (Symbol) IRRIGATION SLEEVE, 4"
- (Symbol) IRRIGATION SLEEVE, 6"
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- (Symbol) QUICK COUPLER VALVE; DETAIL E/I-5
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- (Symbol) COMPRESSION "T" FITTING
- (Symbol) DRIP ZONE FLUSH BOX; DETAIL C/I-6
- (Symbol) PEDESTRIAN LIGHT POLES (SEE ELEC)

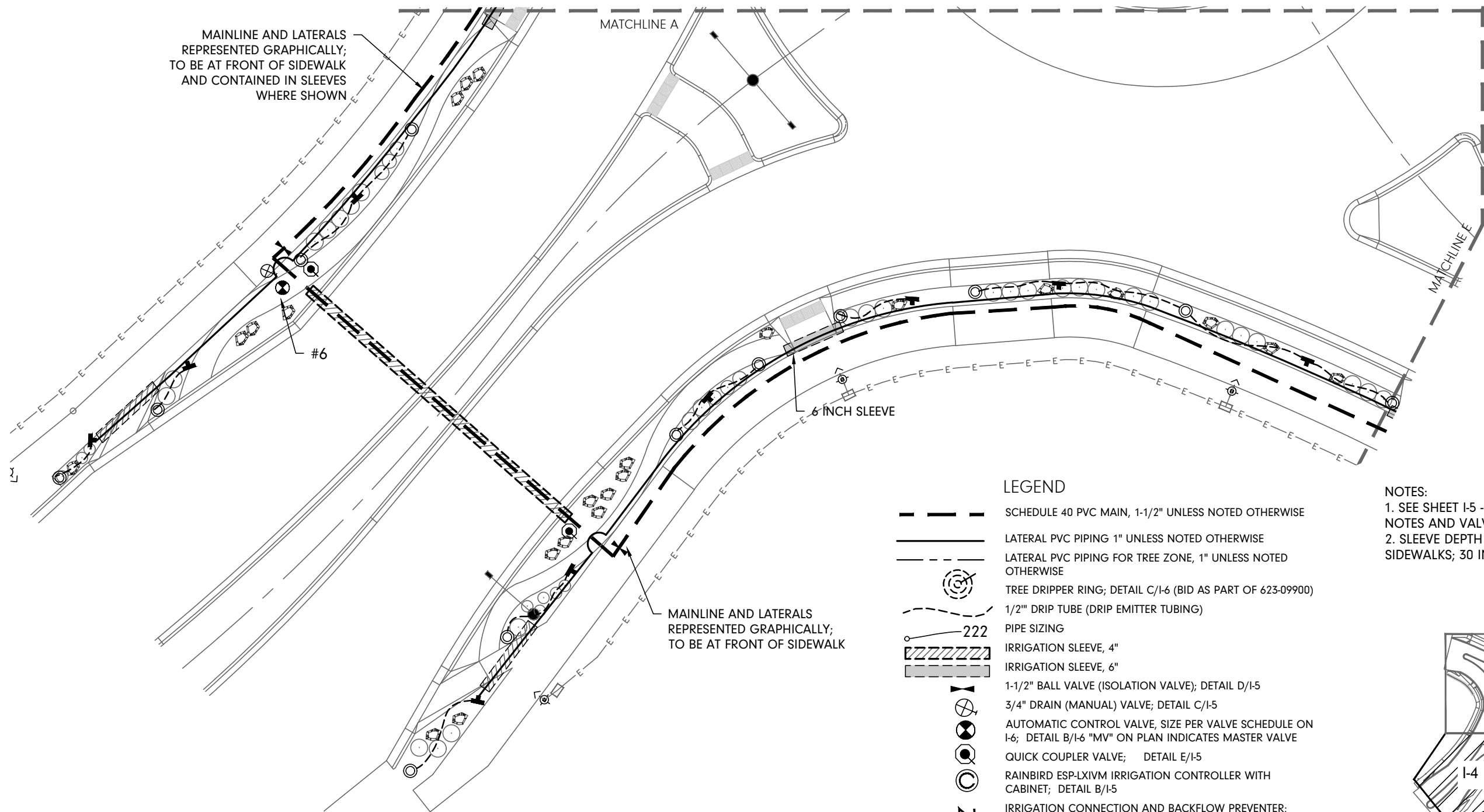


- NOTES:**
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  - SLEEVE DEPTH TO BE 18 INCHES UNDER SIDEWALKS; 30 INCHES UNDER ROADS.



Print Date: © Left	<b>Sheet Revisions</b>			<p>Colorado Department of Transportation 606 South 9th Street Grand Junction, CO, 81501 Phone: 970-683-6351 FAX: 970-683-6369 <b>Region 3</b> <b>KC</b></p>	As Constructed	<b>HORIZON DR AND G ROAD ROUNDABOUT IRRIGATION -3</b>		Project No./Code
File Name:	Date:	Comments:	Init.:		No Revisions:	Designer: MH/MR	Structure Numbers	SHE M555-034
Horiz. Scale: AS SHOWN				Revised:	Detailer: MH/MR		23652	
Unit Information: City of GJ Unit Leader Initials: LF				Void:	Sheet Subset: Landscape	Subset Sheets: 3 of 7	Sheet Number	

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MAINLINE AND LATERALS REPRESENTED GRAPHICALLY; TO BE AT FRONT OF SIDEWALK AND CONTAINED IN SLEEVES WHERE SHOWN

MATCHLINE A

MATCHLINE E

#6

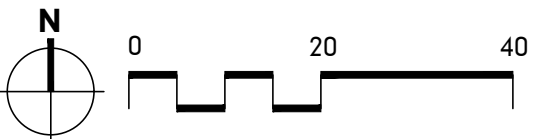
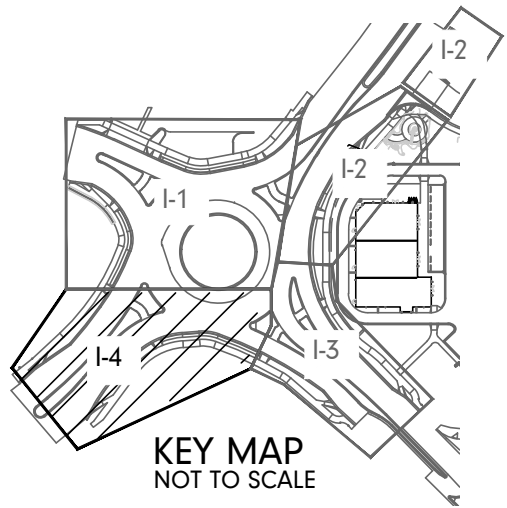
6 INCH SLEEVE

MAINLINE AND LATERALS REPRESENTED GRAPHICALLY; TO BE AT FRONT OF SIDEWALK

**LEGEND**

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Unit Information: City of GJ	Unit Leader Initials: LF

Sheet Revisions		
Date:	Comments	Init.

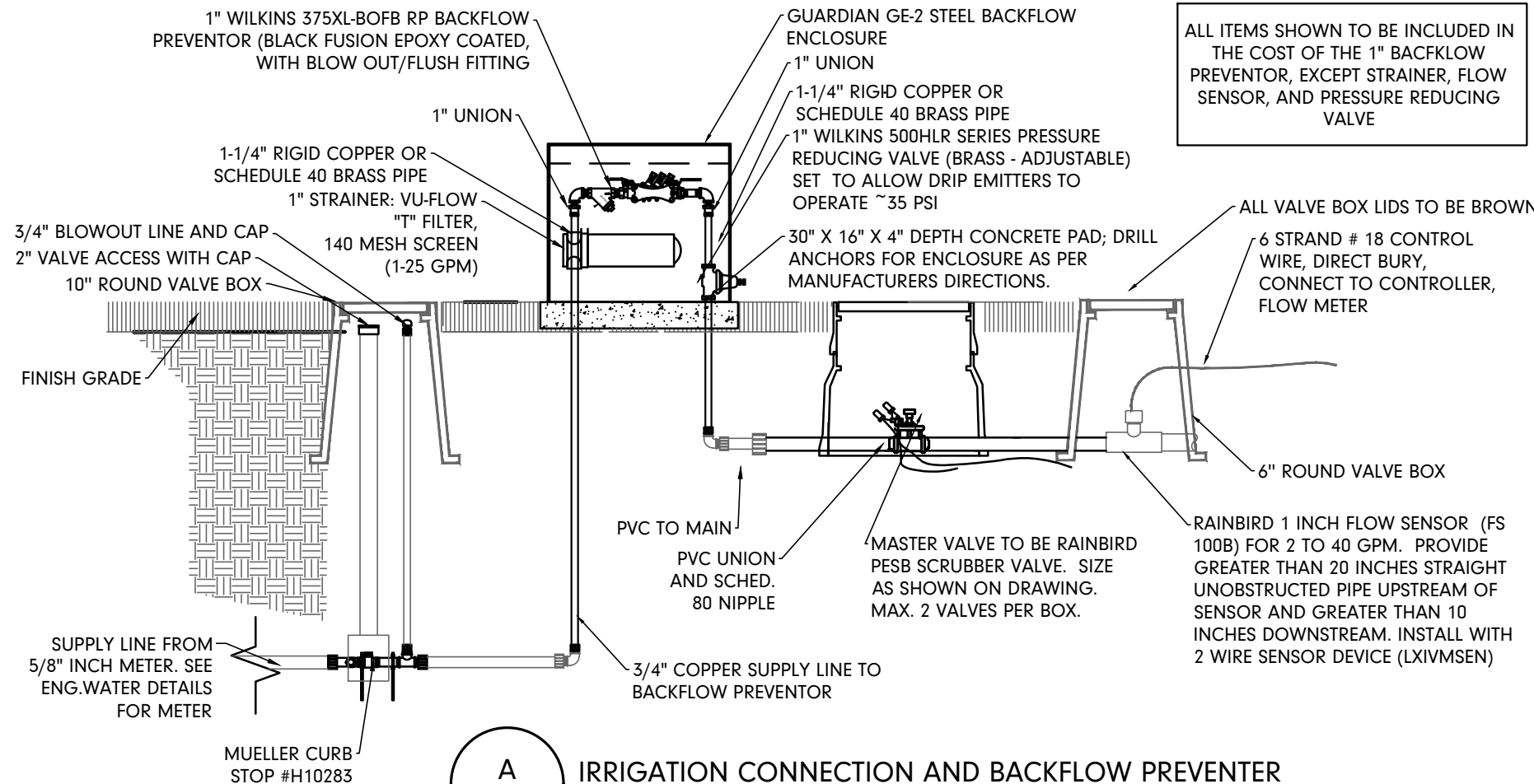
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**Region 3** **KC**

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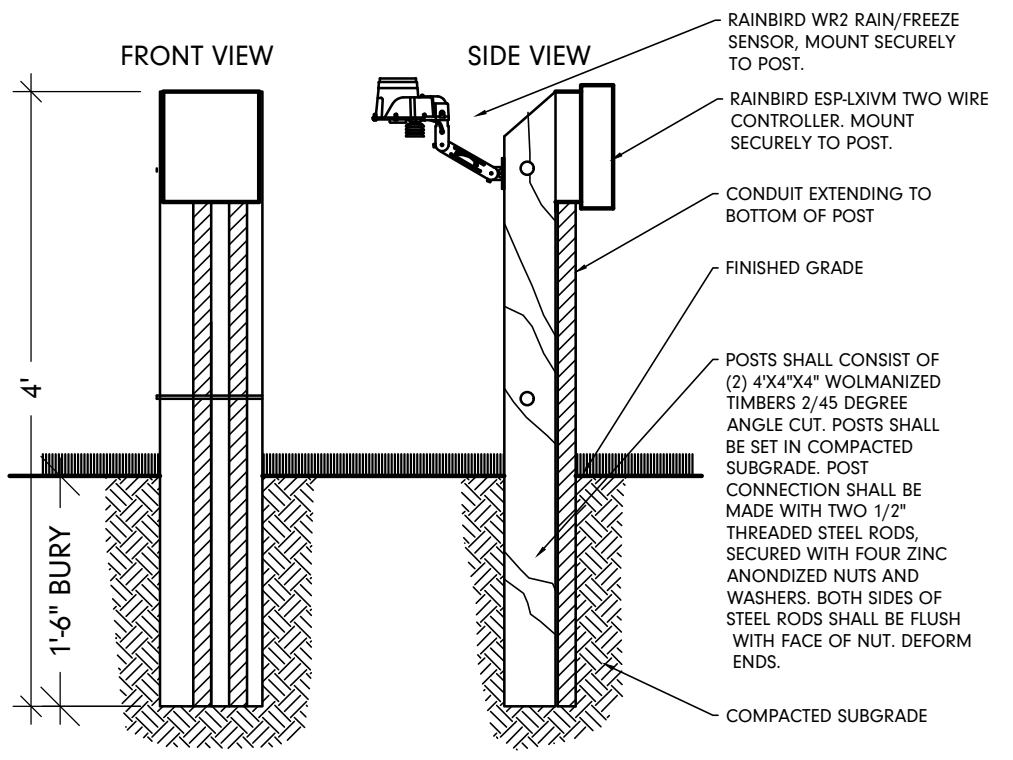
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Designer: MH/MR	Structure Numbers
Detailer: MH/MR	
Sheet Subset: Landscape	Subset Sheets: 4 of 7

<b>Project No./Code</b>
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23652
Sheet Number

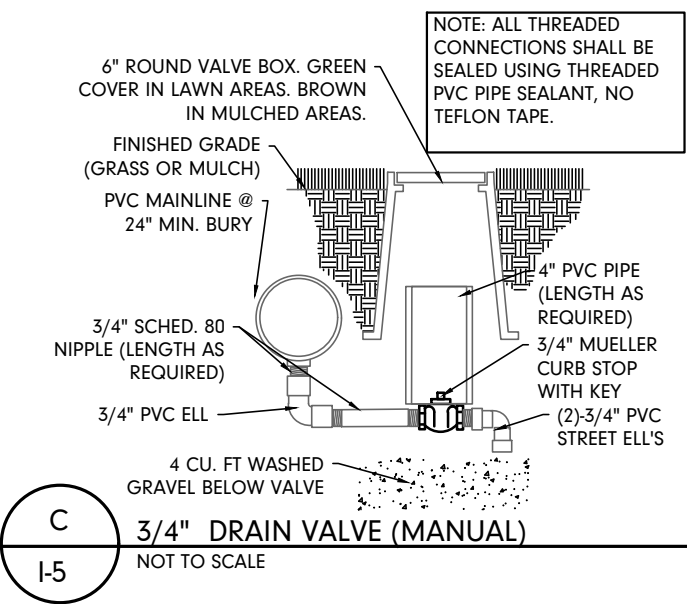
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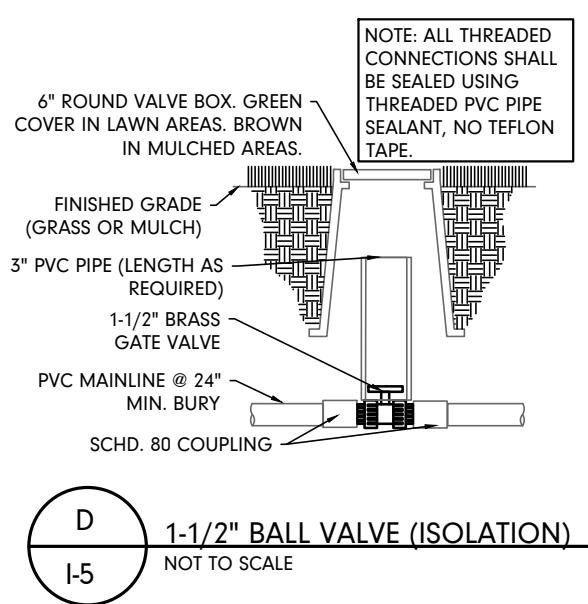
**A**  
1-5  
**IRRIGATION CONNECTION AND BACKFLOW PREVENTER**  
NOT TO SCALE



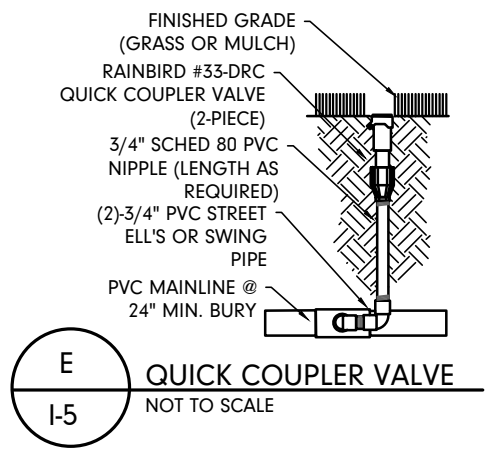
**B**  
1-5  
**CONTROLLER POST**  
NOT TO SCALE



**C**  
1-5  
**3/4" DRAIN VALVE (MANUAL)**  
NOT TO SCALE



**D**  
1-5  
**1-1/2" BALL VALVE (ISOLATION)**  
NOT TO SCALE



**E**  
1-5  
**QUICK COUPLER VALVE**  
NOT TO SCALE



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File Name:
Horiz. Scale: AS SHOWN      Vert. Scale: NA
Unit Information: City of GJ    Unit Leader Initials: LF

Sheet Revisions		
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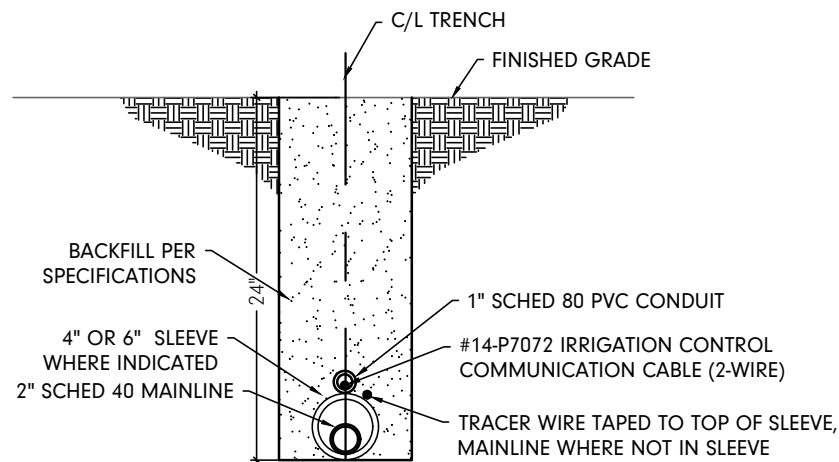
**Region 3**      **KC**

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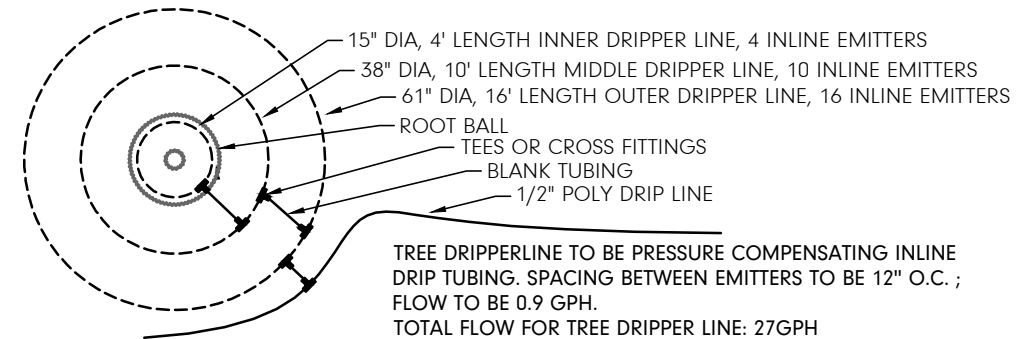
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Designer: MH/MR	Structure Numbers
Detailer: MH/MR	
Sheet Subset: Landscape	Subset Sheets: 5 of 7

<b>Project No./Code</b>
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23652
Sheet Number

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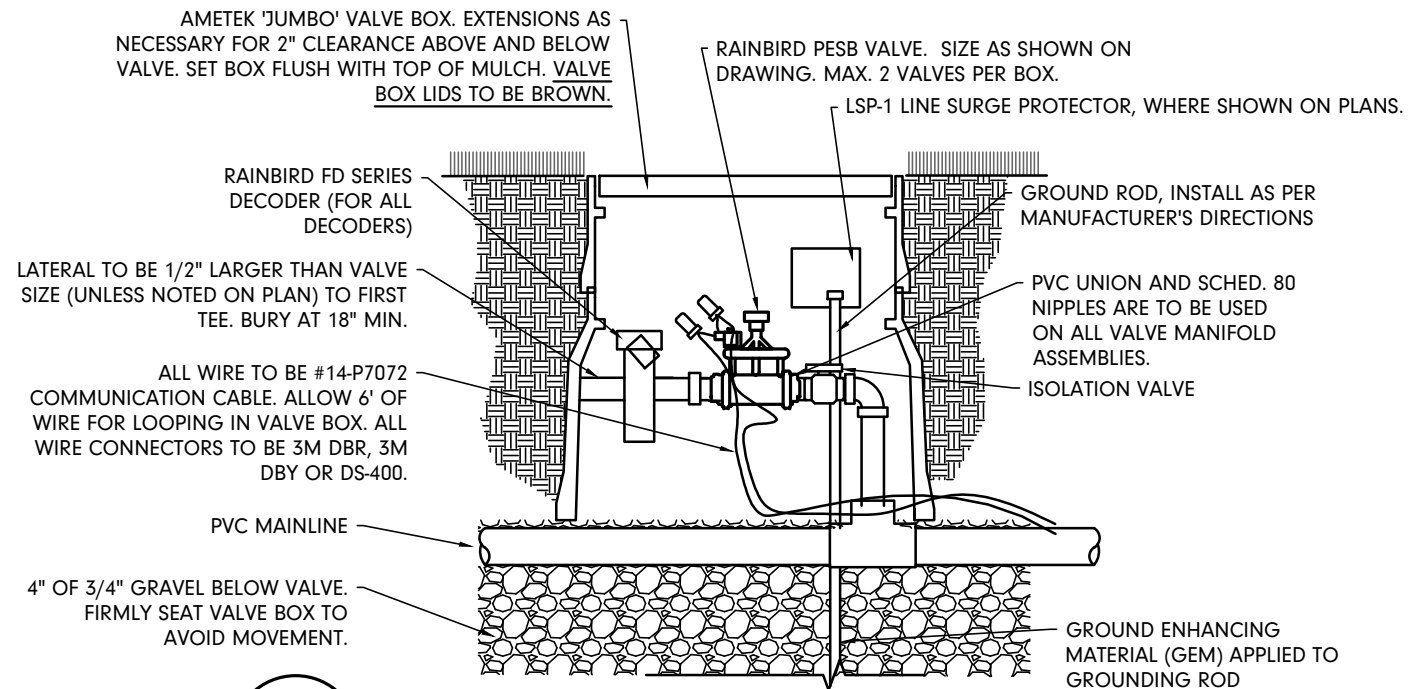


**A**  
1-6  
**IRRIGATION MAINLINE/CONTROL CABLE TRENCH DETAIL**  
NOT TO SCALE

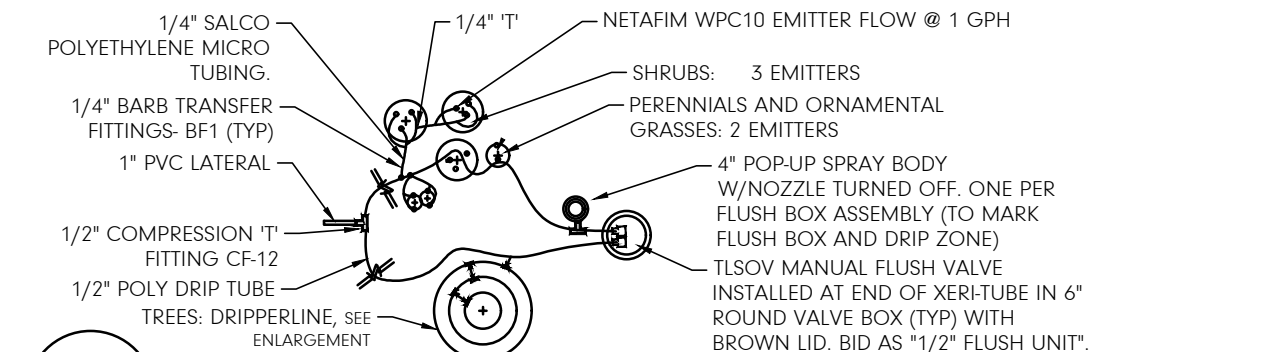


**TREE DRIPPERLINE ENLARGEMENT; BID AS "SPRINKLER SYSTEM"**

TUBING PLACEMENT AND LIMITS	EMITTER PLACEMENT	FLUSHBOX LOCATION
1/2" DISTRIBUTION TUBE: MAX. 200 GPH PER LENGTH (200 EMITTERS) LESS 27 GPH PER TREE, 12.6 PER SHRUB. MAX. 200' LENGTH. EACH BRANCH TO END WITH FLUSH CAP IN 6" ROUND VALVE BOX. 1/4" DISTRIBUTION TUBE: MAX. 12 GPH PER LENGTH (12 EMITTERS). MAX. 10' LENGTH. CONNECTION WITH 1/2" TUBE TO BE 1/4" COUPLER, NOT PC DRIPPER. ALL TUBING TO BE PLACED BELOW WEED CONTROL FABRIC (WHERE FABRIC OCCURS). TUBING TO BE STAKED AT EMITTER AND AT MAX 5' INTERVALS WITH MIN. 8" STAPLES. 1/4" TUBING TO BE SALCO POLYETHYLENE MICRO TUBING.	ALL EMITTERS ARE TO BE PLACED AND STAKED AT PERIMETER OF ROOT BALL. EVENLY SPACE EMITTERS AROUND ROOT BALL <u>PERENNIALS AND ORNAMENTAL GRASSES:</u> TWO (2) PC DRIPPERS PER PLANT <u>SHRUBS:</u> THREE(3) PC DRIPPERS PER PLANT <u>TREES:</u> 3 DRIPPER LINE RINGS: 7-1/2", 19" & 30" FROM CENTER OF ROOTBALL, TUBE IS TECHLINE CV, 12" DRIPPER SPACING, 0.9 GPH INLINE EMITTERS, 27 GPH PER TREE	MINIMIZE NUMBER OF FLUSH BOXES. LOCATE ADJACENT TO WALKS OR DRIVES FOR MAINTENANCE ACCESS. INSTALL 1800 SPRAY W/NOZZLE CLOSED. SPRAY HEAD IS TO INDICATE WHEN ZONE IS ON AND LOCATION OF FLUSH BOX.



**B**  
1-6  
**AUTOMATIC CONTROL VALVE (W/ 2 WIRE CONTROL)**  
NOT TO SCALE



**C**  
1-6  
**NETAFIM PC DRIPPER EMITTER LAYOUT - 1 GPH EMITTER (Bid as "Drip Emitt**  
NOT TO SCALE



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Horiz. Scale: AS SHOWN Vert. Scale: NA	
Unit Information: City of GJ Unit Leader Initials: LF	

Sheet Revisions		
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<b>HORIZON DR AND G ROAD ROUNDABOUT IRRIGATION-6</b>	
Designer: MH/MR	Structure Numbers
Detailer: MH/MR	
Sheet Subset: Landscape	Subset Sheets: 6 of 7

<b>Project No./Code</b>
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Sheet Number

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IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	ZONE TYPE	EMITTERS	GAL/HR	GPM	TREE DRIP RINGS	GAL/HR	TOTAL GAL/MIN
MV	1"	MASTER VALVE						
#1	1"	NORTH SHRUB DRIP	60	60	1.0	---	---	---
#2	1"	EAST SHRUB DRIP	124	124	2.07	---	---	---
#3	1"	TREE DRIP	---	---	---	5	135	2.25
#4	1"	ROUNABOUT SHRUB DRIP	123	123	2.05	---	---	---
#5	1"	SOUTH SHRUB DRIP	98	98	1.63	---	---	---
#6	1"	WEST SHRUB DRIP	64	64	1.07	---	---	---

NOTE: PROGRAM 2 ZONES (EXCLUDING TREE ZONE) TO RUN SIMULTANEOUSLY TO PROVIDE >2 GPM FLOW FOR PROPER OPERATION OF FLOW SENSOR.

IRRIGATION NOTES:

1. ALL WORK SHALL BE PER EXISTING COUNTY OR STATE CODE AND IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRIATE INSPECTORS AND THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. POWER TO IRRIGATION CONTROLLER TO BE PROVIDED BY LICENSED ELECTRICIAN.
4. SOME LATERALS AND MAINLINE MAY BE SHOWN OUTSIDE OF LANDSCAPE AREAS FOR GRAPHICAL REASONS; HOWEVER, ALL LATERAL AND MAIN LINES IN SYSTEM WILL BE CONTAINED IN SLEEVES WHEREVER CONCRETE, ASPHALT PAVEMENTS, OR SIDEWALKS ARE TO BE OVERLAID.
5. CLOCK TO BE MOUNTED ON POST WHERE SHOWN ON DRAWINGS.
6. ALL MAINS SHALL BE BURIED AT A MINIMUM DEPTH OF 24 IN. ALL LATERALS AT A DEPTH OF 18 IN. ALL VALVE WIRING SHALL BE BUNDLED BY TAPING AT 25 FT. INTERVALS AND PLACED BELOW IRRIGATION PIPING FOR PROTECTION.
7. CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT LOW POINT ON ALL MAIN LINES.
8. SEE SHEETS I-5 & I-6 FOR DETAILS.
9. SYSTEM IS DESIGNED TO OPERATE AT 45 PSI, PROVIDING MINIMUM 30 PSI AT EMITTERS.
10. DRIP EMITTERS TO BE NETAFIM PC DRIPPERS, 1 GPH.
11. PIPE FROM CONTROL VALVE TO FIRST " TEE" TO USE 1/2" LARGER THAN VALVE UNLESS NOTED OTHERWISE
12. PIPE SIZE NOTATION INDICATES MINIMUM PIPE SIZE DOWNSTREAM FROM THAT POINT.

TABULATION OF IRRIGATION QUANTITIES


ITEM #	BID ITEM	UNIT	QUANTITY
623-00162	Drip Emitter Tubing (1/2 Inch w/no Emitters)	LF	1,007
623-00164	Drip Emitter	EACH	452
623-00184	1/2 Inch Flush Unit	EACH	55
623-00600	1-1/2 Inch Plastic Pipe (Mainline)	LF	1,420
623-00601	1 Inch Plastic Pipe (Lateral)	LF	1,343
623-00604	4 Inch Plastic Pipe (Irrigation/Sleeve), 18" bury under walks	LF	58
623-00604	4 Inch Plastic Pipe (Irrigation/Sleeve), 30" bury under roadways	LF	182
623-00606	6 Inch Plastic Pipe (Irrigation/Sleeve), 18" bury under walks	LF	162
623-00606	6 Inch Plastic Pipe (Irrigation/Sleeve), 30" bury under roadways	LF	208
623-01708	1 In Backflow Preventor	EACH	1
623-01808	1 In Pressure Reducing Valve	EACH	1
623-01908	1 Inch Strainer	EACH	1
623-02006	3/4 In Drain Valve (Manual Drain)	EACH	1
623-03108	1 Inch Automatic Control Valve	EACH	5
623-03112	1-1/2 Inch Automatic Control Valve (Master Valve)	EACH	1
623-0400	2-wire Control, including decoders, grounding	LS	1
623-04002	Power Source Wire	LF	130
623-04006	3/4 Inch Quick Coupler Valve	EACH	5
623-04520	1-1/2 Inch Ball Valve (Isolation)	EACH	5
623-06900	Valve Box	EACH	5
623-07601	1 Inch Flow Sensor	EACH	1
623-08148	60 Station, 2 Wire Compatible Automatic Controller	EACH	1
623-09900	"Sprinkler System" (Tree Rings)	LS	1

PRESSURE LOSS CALCS

BEFORE METER	~88 PSI (ESTIMATE BASED UPON 96 PSI TEST AT 1460 RACQUET WAY)
5/8" METER	-1 PSI
1" COPPER SERVICE @ ~5gpm	-4 PSI
1" VUFLOW FILTER	-2.5 PSI AT 12 GPM
1" BACKFLOW	-14 PSI
1" PESB SOLENOID VALVE (MASTER VALVE) @ 5 GPM	-1.7 PSI
1-1/2" SCH40 MAINLINE, LENGTH ~375' (ZONE 5) 5 GPM MAX FLOW - 0.1 PSI LOSS PER 100'	-0.4 PSI
ELEVATION PRESSURE LOSS	* ELEVATION PRESSURE LOSS IS NEGLIGIBLE FOR THE ROUNABOUT ONLY
1" SOLENOID VALVE	-1.7 PSI
LATERAL LINE & FITTINGS	-2 PSI
NET WORKING PRESSURE	±60.7 PSI

ADJUST WILKINS PRESSURE REDUCER TO ALLOW FOR OPERATION OF DRIP EMITTERS AT 35 psi



Print Date: © Left	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<b>Sheet Revisions</b>			<b>Colorado Department of Transportation</b>  606 South 9th Street Grand Junction, CO, 81501 Phone: 970-683-6351 FAX: 970-683-6369 <b>Region 3 KC</b>	As Constructed	<b>HORIZON DR AND G ROAD ROUNABOUT IRRIGATION-7</b>		<b>Project No./Code</b>
File Name:		Date:	Comments	Init.		No Revisions:			SHE M555-034
Horiz. Scale: AS SHOWN Vert. Scale: NA						Revised:	Designer: MH/MR	Structure Numbers	23652
Unit Information: City of GJ Unit Leader Initials: LF						Void:	Sheet Subset: Landscape Subset Sheets: 7 of 7		Sheet Number