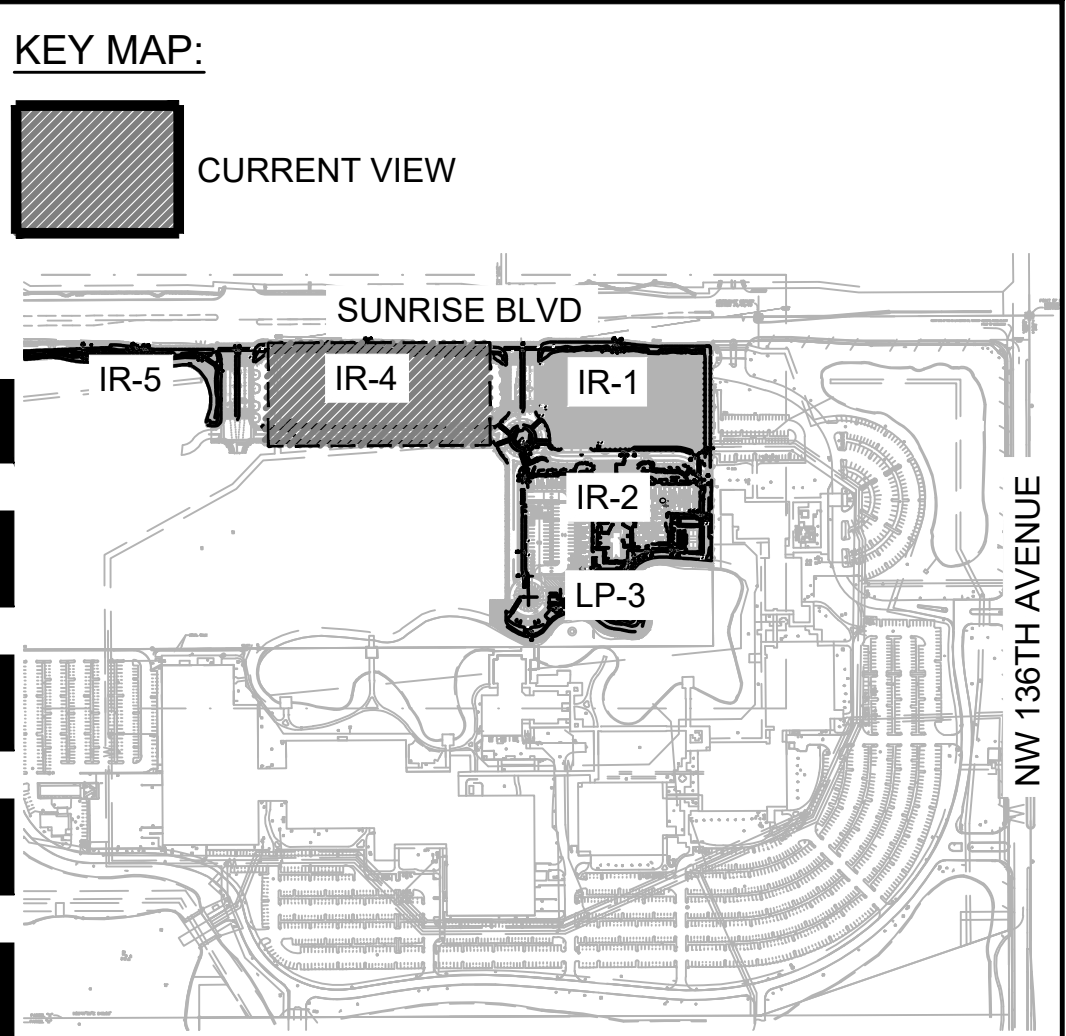
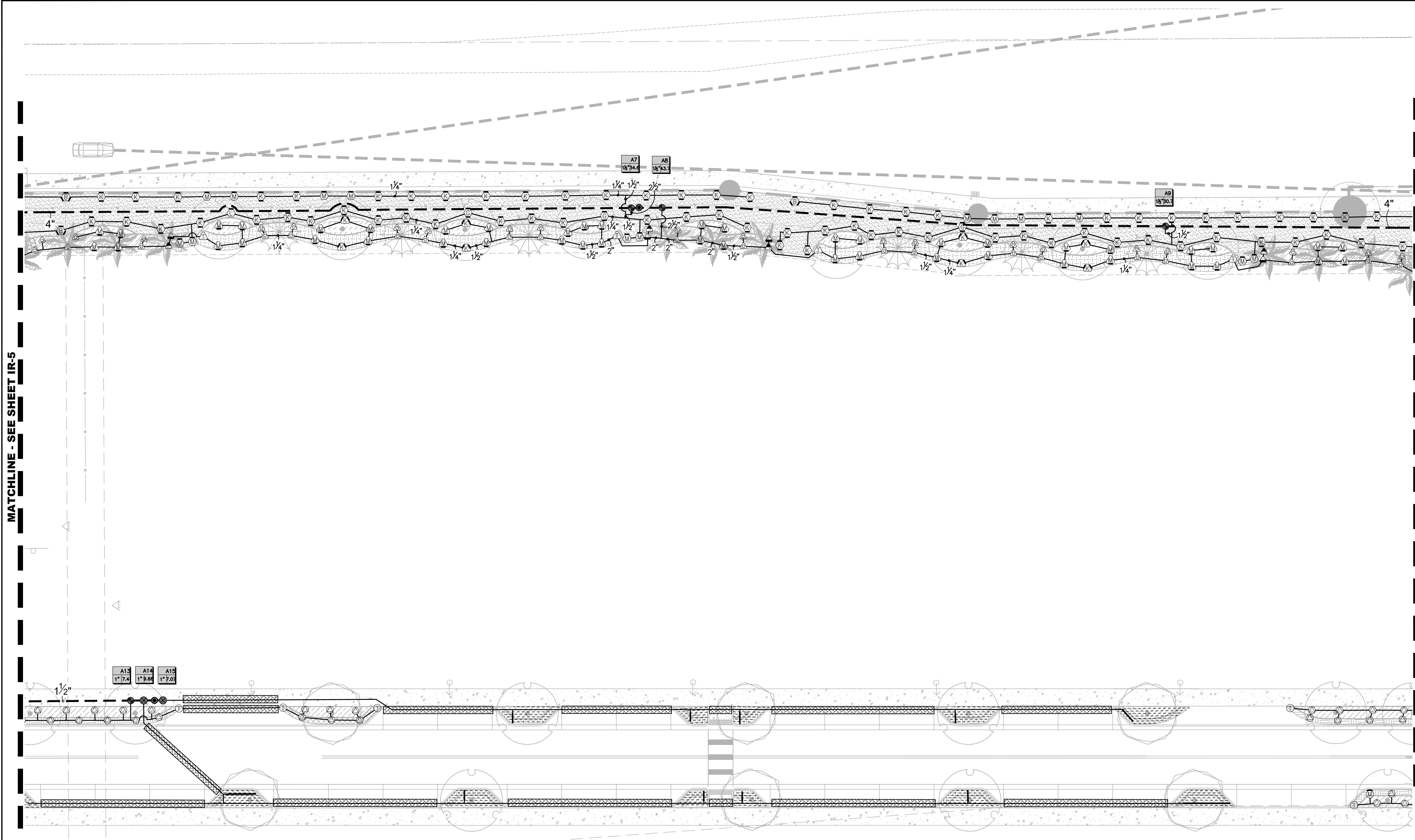
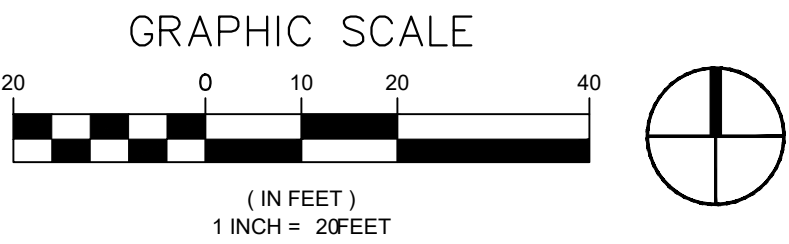




GENERAL NOTE: WHERE DISCREPANCIES EXIST, THE MORE RESTRICTIVE OF THE CITY OF SUNRISE LAND DEVELOPMENT CODE ARTICLE VIII OR THE DESIGN STANDARDS IDENTIFIED IN THE DEVELOPMENT AGREEMENT WILL GOVERN.



NON-VEHICULAR SLEEVING SCHEDULE	
PIPE SIZE	SLEEVING PIPE SIZE
3/4"	2"
1"	2"
1-1/4"	3"
1-1/2"	3"
2"	4"
3"	6"
4"	8"
6"	12"
8"	16"

- SLEEVING NOTES:
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 - NON-VEHICULAR SLEEVES ARE SHOWN BUT NOT SIZED.
 - SIZE ALL NON-VEHICULAR SLEEVES ACCORDING TO THE ADJACENT CHART.
 - MAINLINE CROSSINGS MUST ALSO INCLUDE A 2" CONDUIT SLEEVE FOR CONTROL WIRE.
 - CONTRACTOR TO DUCT TAPE END OF SLEEVES TO KEEP SLEEVE CLEAN AND CLEAR.
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SLEEVE LABEL:
12"/6"/2" SLEEVES MEANS TO INSTALL ONE 12", ONE 6" AND ONE 2" SLEEVE.

MAINLINE LOCATION/ROUTING NOTE:
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GENERAL NOTE: ALL HEADS & ROTORS TO HAVE 100% COVERAGE AND 50% OVERLAP MUST BE PROVIDED.



No.	REVISIONS	DATE	BY	TP/MW



CRAVEN THOMPSON AND ASSOCIATES, INC.

ENGINEERS • PLANNERS • SURVEYORS

3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309

PAK: (954) 739-6409 TEL.: (954) 739-6400

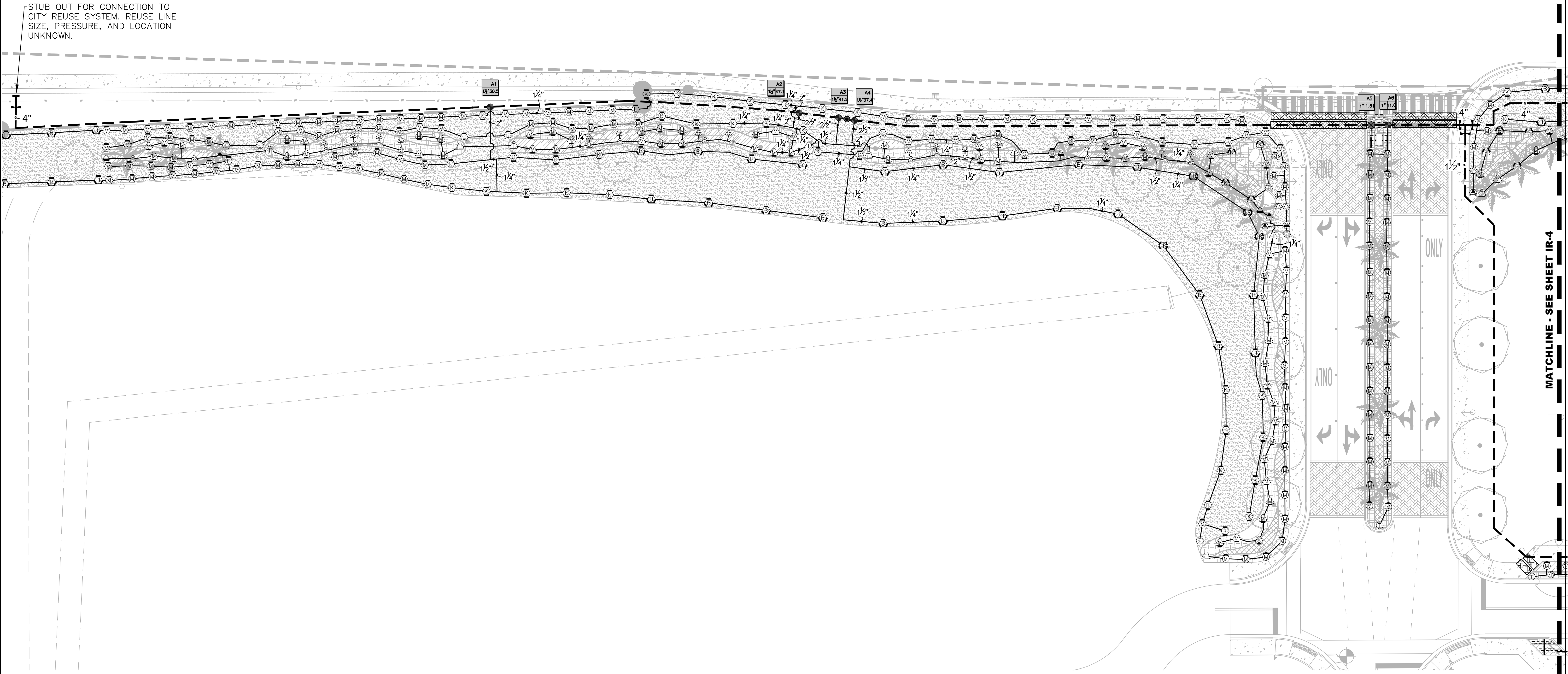
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS NO. 271

FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. 000114

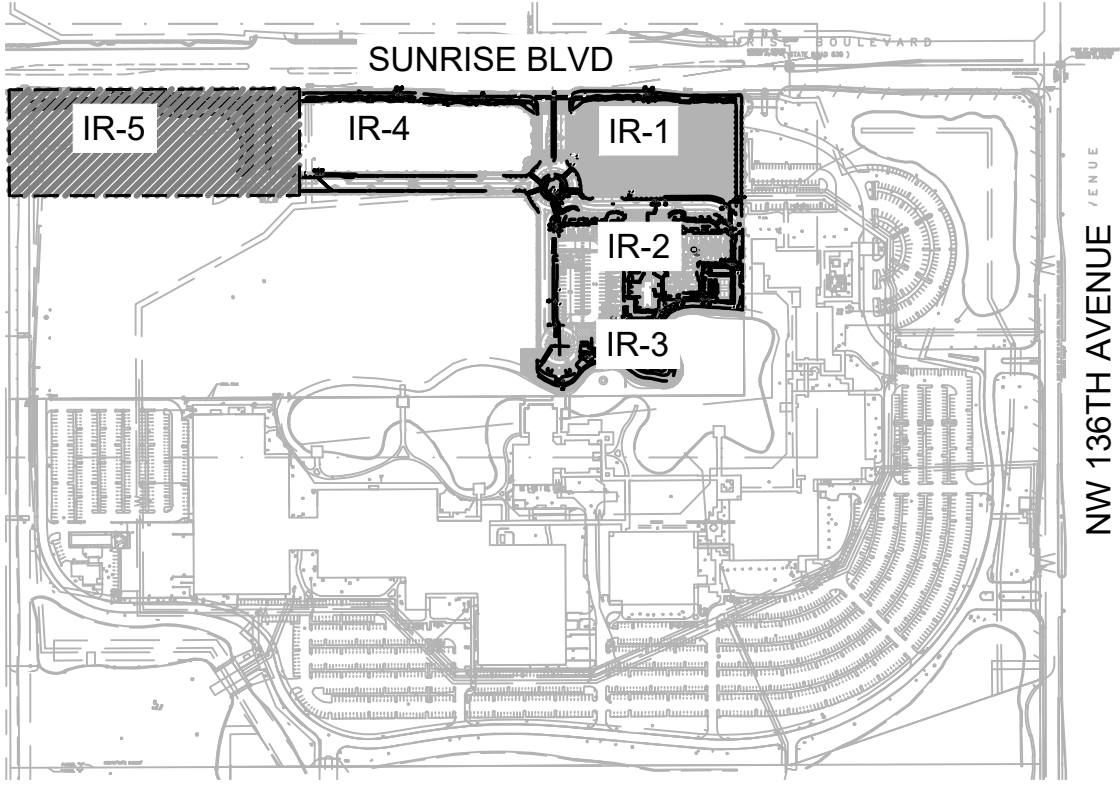
WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

IRRIGATION PLAN

SEAL:  ERIK W. SCHOFIELD Florida R.L.A. No. 6667682	DATE: 04/10/2026
PROJECT NO. 21-0061-001-02	DRAWING NO. IR-4



KEY MAP:



NON-VEHICULAR SLEEVING SCHEDULE	
PIPE SIZE	SLEEVING PIPE SIZE
3/4"	2"
1"	2"
1-1/4"	3"
1-1/2"	3"
2"	4"
3"	6"
4"	8"
6"	12"
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SLEEVING NOTES:

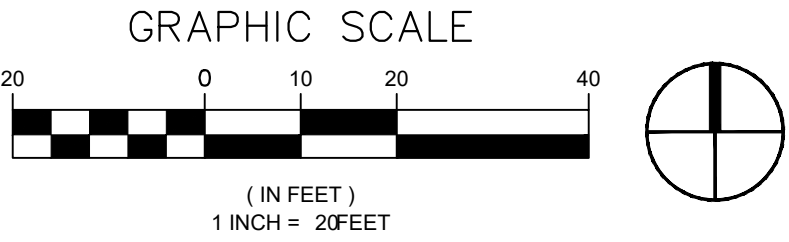
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No.	REVISIONS	DATE	BY

SCALE:	
DESIGNED BY:	MO
DRAWN BY:	HF
CHECKED BY:	TP/MW

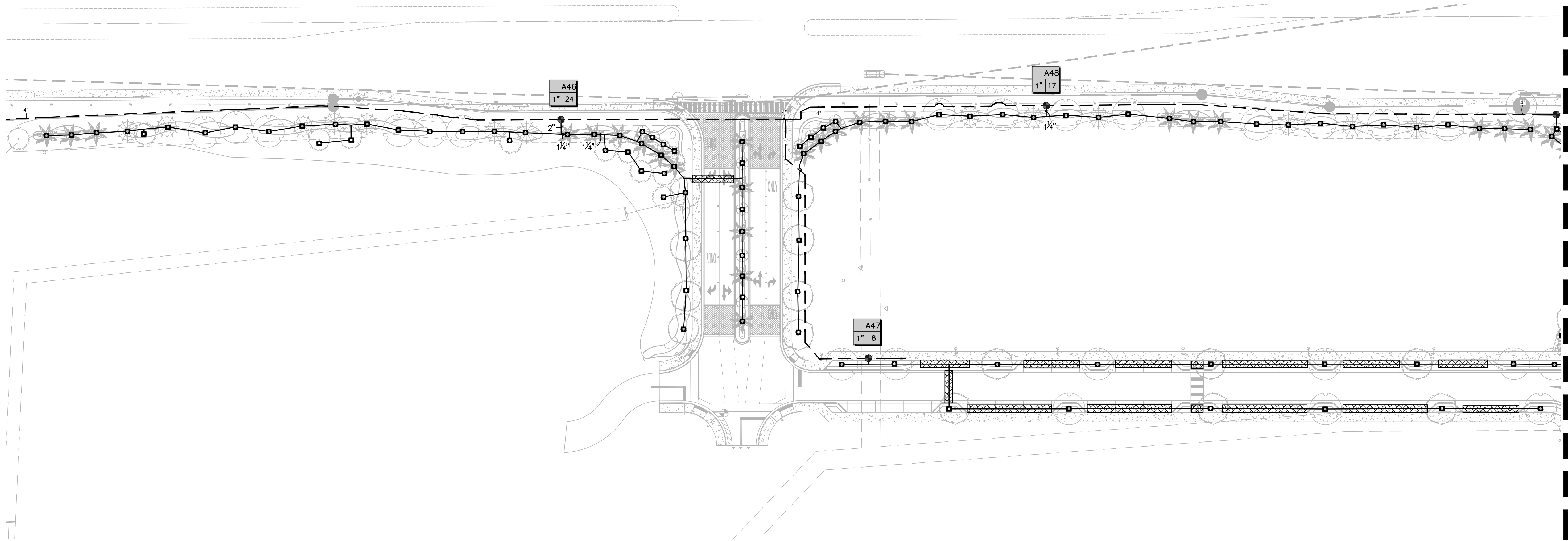
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WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

IRRIGATION PLAN

SEAL:	
DATE:	04/10/2026
PROJECT NO.	21-0061-001-02

DRAWING NO.	IR-5
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MATCHLINE - SEE SHEET IR-7

NON-VEHICULAR SLEEVING SCHEDULE	
PIPE SIZE	SLEEVING PIPE SIZE
3/4"	2"
1"	2"
1-1/4"	3"
1-1/2"	3"
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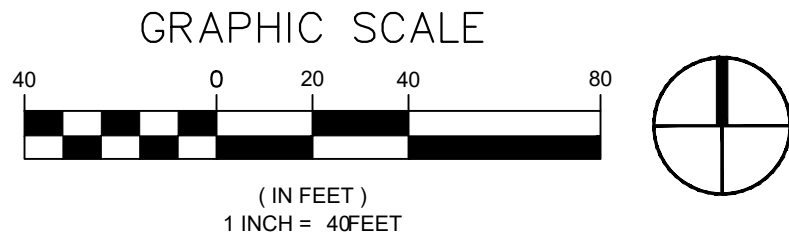
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				DRAWN BY:
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				TP/MW
No.	REVISIONS	DATE	BY	

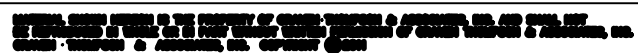


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WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

BUBBLER
IRRIGATION PLAN

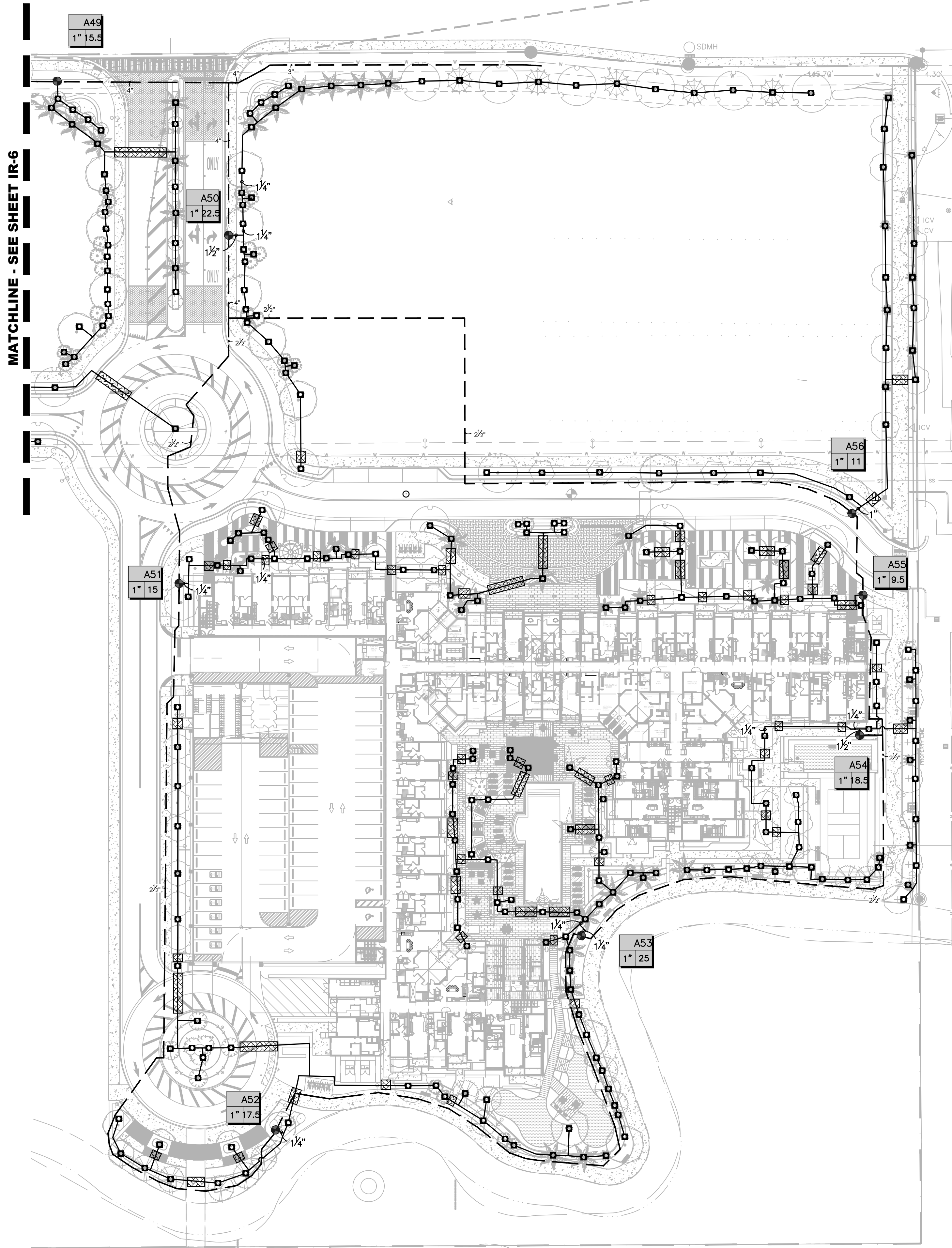
SEAL: 

ERIK W. SCHOFIELD
Florida R.L.A. No. 6667682

PROJECT NO.
21-0061-001-02

DATE:
04/10/2026

DRAWING NO.
IR-6



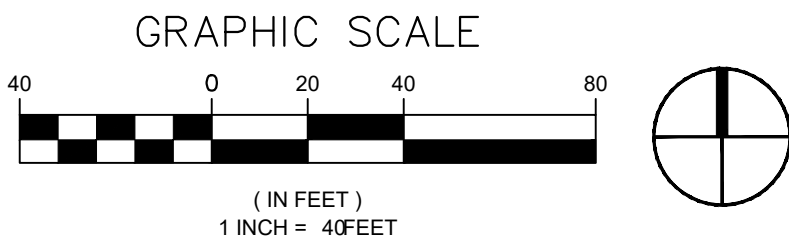
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No.	REVISIONS	DATE	BY

SCALE:
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DRAWN BY: HF
CHECKED BY: TP/MW

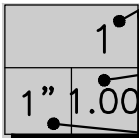
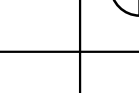
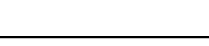
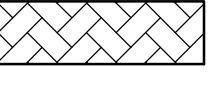


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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. 000114

WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

BUBBLER
IRRIGATION PLAN

SEAL:	DATE: 04/10/2026
ERIK W. SCHOFIELD Florida R.L.A. No. 6667682	DRAWING NO. IR-7
PROJECT NO. 21-0061-001-02	

IRRIGATION LEGEND				
QTY	SYM	DESCRIPTION	DET.	
		CONTROLLER – STATION NUMBER		
		GALLONS PER MINUTE–CATALOG FLOW		
		VALVE SIZE		
TBD		RAIN BIRD PESB SERIES REMOTE CONTROL VALVE (SIZED PER PLAN) WITH A RAIN BIRD FD–101 DECODER, NIBCO T–113 GATE VALVE IN A CARSON 1220 JUMBO VALVE BOX WITH PURPLE BOLT DOWN LID	B1 B4	
TBD		RAIN BIRD PEB SERIES REMOTE CONTROL VALVE WITH A SENNINGER #PRL303F3F OR #PR30–HF PRESSURE REGULATOR (BASED ON FLOW**), NIBCO T–113 GATE VALVE AND NETAFIM MANUAL DISC FILTER MODEL DF100/150/200 (PER MFG DIRECTION)–140, EACH IN A SEPARATE CARSON 1220 JUMBO VALVE BOX WITH PURPLE BOLT DOWN LID	B1 B2 B3 B4	
1		RAIN BIRD ESP–LXD 2–WIRE (50 STATION) CONTROLLER WITH LXMM METAL CASE, IQ4G–USA CELLULAR MODULE (FOR IQ4 CLOUD SOFTWARE W/GLOBAL WEATHER AND ET), AND GROUNDING GRID	C1	
1		EAVE MOUNTED RAIN BIRD RSD–Cex SENSOR, WIRE TO BE CONNECTED TO CONTROLLER VIA 1" CONDUIT	C2	
1		IRROMETER WATERMARK MODEL #200SS SOIL MOISTURE SENSOR WITH RAIN BIRD SD210 SENSOR DECODER	C3	
7		AQUAFUSE CONTROLFLO DUCTILE IRON HDPE WELD–ON GATE VALVE WITH POLYETHYLENE ENDS (LINE SIZE) IN A CARSON 1419 VALVE BOX WITH PURPLE BOLT DOWN LID.	D	
		PANTONE PURPLE CLASS 200 PVC LATERAL LINE W/ SCH 40 SOLVENT WELD PVC FITTINGS (1" UNLESS OTHERWISE INDICATED, MINIMUM PIPE SIZE SHALL BE 1")	L	
		GASKETED CLASS 200 PVC PURPLE MAINLINE PIPE (SIZE PER PLANS), WITH A PARALLEL RUN OF 2" ELECTRICAL CONDUIT WITH LONG–RADIИ SWEEPS FOR CONTROL WIRE	L	
		SCH 40 GRAY PVC ELECTRICAL CONDUIT, WITH SCH 40 PVC FITTINGS (SIZE PER PLAN)	L	
		NETAFIM TLHCVXR–RW–077–12 PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH PURPLE STRIPE, CHECK VALVE, ANTI–SIPHON FEATURE AND 0.77 GPH EMITTERS AT 12" O.C. SPACING. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR GRID EMITTER PATTERN. DRIP ZONES INSTALLED WITH MANUAL FLUSH VALVES AND DRIP OPERATION INDICATORS. REFER TO PLAN DETAILS	M,N	
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		PANTONE PURPLE CLASS 200 PVC HEADER W/SCH 40 SOLVENT–WELD PVC FITTINGS (SIZE PER PLAN)	M,N	
		CLASS 200 PVC SLEEVES W/SCH 40 SOLVENT–WELD PVC FITTINGS (SIZE PER PLAN)	O	
QUANTITIES GIVEN ARE FOR CONTRACTOR CONVENIENCE ONLY. THE ACCURACY IS NOT GUARANTEED. ALL QUANTITIES SHALL BE VERIFIED.				
*DET (ON THE LEGEND) – THE LETTER IN THIS COLUMN DENOTES THE CORRESPONDING DETAIL SHOWN ON THE DETAIL SHEET.				
** SENNINGER PRESSURE REGULATORS: PRL30: 0.5–8.0 GPM PR30HF: 10.0–32.0 GPM PRU: 20.0–100.0 GPM				
RECLAIM WATER SOURCE NOTE: ALL IRRIGATION EQUIPMENT INSTALLED WILL CONFORM TO STANDARDS AND SPECIFICATIONS FOR THE USE OF RECLAIM WATER.				

CONTRACTOR IS RESPONSIBLE TO PROVIDE GROUNDING PER THE FOLLOWING MFG DIRECTION:

- THE ESP–LXD 2–WIRE DECODER CONTROLLER AND THE 2–WIRE PATH MUST BE PROPERLY SURGE PROTECTED AND GROUNDED. DOING SO CAN HELP PREVENT DAMAGE TO THE CONTROLLER AND IRRIGATION SYSTEM AND ALSO SIGNIFICANTLY REDUCE TROUBLESHOOTING, REPAIR TIME AND EXPENSE. FAILURE TO DO SO COULD RESULT IN FAILURE OF YOUR CONTROLLER AND VOIDING THE WARRANTY. TO COMPLY WITH PROPER INSTALLATION SPECIFICATIONS, THE FOLLOWING COMPONENTS SHALL BE GROUNDED:
ESP–LXD 2–WIRE DECODER CONTROLLER
ESPLXD–M50 2–WIRE DECODER MODULE
LSP–1 LIGHTNING SURGE PROTECTOR
SD–210 SENSOR DECODER
FD–101 FIELD DECODER
FD–X01 FIELD DECODER (AS REQUIRED)
- THE LSP–1 LINE SURGE PROTECTOR PROVIDES SURGE PROTECTION FOR THE ESP–LXD CONTROLLER AND THE 2–WIRE PATH AND SHOULD BE SPLICED INTO THE 2–WIRE PATH IN THREE DISTINCT AREAS: ESP–LXD 2–WIRE DECODER CONTROLLER –THE LSP–1 LINE SURGE PROTECTOR PROVIDES SURGE PROTECTION FOR THE ESP–LXD CONTROLLER AGAINST ELECTRICAL SURGES ORIGINATING FROM EACH 2–WIRE PATH UTILIZED. THE LSP–1 LINE SURGE PROTECTOR SHALL BE SPLICED INTO EACH 2–WIRE PATH IN CLOSE PROXIMITY TO THE ESP–LXD CONTROLLER.
2–WIRE PATH –THE LSP–1 LINE SURGE PROTECTOR PROVIDES SURGE PROTECTION FOR THE FOLLOWING:
FD–SERIES FIELD DECODERS INSTALLED ON THE 2–WIRE PATH:
FD–101
FD–X0X (AS REQUIRED)
NOTE: THE 2–WIRE PATH SHALL BE SURGE PROTECTED AND GROUNDED WITH ONE LSP–1 LINE SURGE PROTECTOR EVERY 500 FEET OR EVERY 8 DECODERS, WHICHEVER IS SMALLER.
TERMINATION OF 2–WIRE PATH –AN LSP–1 LINE SURGE PROTECTOR SHALL BE INSTALLED AT THE END OF THE 2–WIRE PATH IN A STAR CONFIGURATION.
- CONTRACTOR IS RESPONSIBLE TO ENSURE THE CONTROL SYSTEM/DECODERS ARE PROPERLY GROUNDED PER RAIN BIRD SPECIFICATIONS.

FLORIDA RECLAIM/REUSE WATER NOTE:

THE IRRIGATION WATER SOURCE IS RECLAIMED WATER. ALL IRRIGATION MATERIAL SHALL BE COLOR CODED 'PANTONE PURPLE' AS REQUIRED BY FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION ADMINISTRATIVE CODE 62–610. WHEN CONNECTED TO A RECLAIM SOURCE, PROPER WARNING SIGNS SHALL BE POSTED AROUND THE SITE AND AT ALL ENTRANCE POINTS TO THE AREA ADVISING REUSE WATER IS BEING UTILIZED FOR IRRIGATION. CONTRACTOR RESPONSIBLE FOR ENSURING THE PROPER SIGNAGE, COLOR, SIZE, VERBIAGE (ENGLISH AND SPANISH), AND LOCATIONS ARE UTILIZED, AS REQUIRED.

NON–VEHICULAR SLEEVING SCHEDULE	
PIPE SIZE	SLEEVING PIPE SIZE
3/4"	2"
1"	2"
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RECLAIM/REUSE IRRIGATION HEAD LEGEND

SYMBOL	SYMBOL	DESCRIPTION	DETAIL	DESIGN PSI	DESIGN GPM PER	SYMBOL
328		EACH SYMBOL DENOTES TWO (2) RAIN BIRD RD–04–S–NP WITH 1401 FLOOD BUBBLERS	Q	30	0.50	
23		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MPCORNER NOZZLE ADJ ARC 0–90	R	30	VAR	
32		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPCORNER NOZZLE ADJ ARC 0–90	S	30	VAR	
24		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPCORNER NOZZLE ADJ ARC 0–90 ON SCH 40 RISER	T	30	VAR	
275		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP1000 NOZZLE MAROON ADJ ARC 90–210	R	30	VAR	
24		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP1000 NOZZLE LIGHT BLUE ADJ ARC 210–270	R	30	VAR	
243		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP1000 NOZZLE MAROON ADJ ARC 90–210	S	30	VAR	
2		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP1000 NOZZLE LIGHT BLUE ADJ ARC 210–270	S	30	VAR	
178		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP1000 NOZZLE MAROON ADJ ARC 90–210 ON SCH 40 RISER	T	30	VAR	
3		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP1000 NOZZLE LIGHT BLUE ADJ ARC 210–270 ON SCH 40 RISER	T	30	VAR	
1		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP1000 NOZZLE OLIVE ADJ ARC 360 ON SCH 40 RISER	T	30	0.65	
123		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP2000 NOZZLE BLACK ADJ ARC 90–210	R	30	VAR	
9		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP2000 NOZZLE GREEN ADJ ARC 210–270	R	30	VAR	
2		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP2000 NOZZLE RED ARC 360	R	30	1.27	
15		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP2000 NOZZLE BLACK ADJ ARC 90–210	S	30	VAR	
31		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP2000 NOZZLE BLACK ADJ ARC 90–210 ON SCH 40 RISER	T	30	VAR	
19		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP3000 NOZZLE BLUE ADJ ARC 90–210	R	30	VAR	
3		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP3000 NOZZLE YELLOW ADJ ARC 210–270	R	30	VAR	
2		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP3000 NOZZLE GRAY ARC 360	R	30	3.15	
11		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MP3500 NOZZLE LT. BROWN ADJ ARC 90–210	R	30	VAR	
4		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP3500 NOZZLE LT. BROWN ADJ ARC 90–210	S	30	VAR	
2		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP3000 NOZZLE BLUE ADJ ARC 90–210 ON SCH 40 RISER	T	30	VAR	
1		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MP3000 NOZZLE GRAY ARC 360 ON SCH 40 RISER	T	30	3.15	
37		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MPCORNER NOZZLE RST	R	30	VAR	
38		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MPCORNER NOZZLE LST	R	30	VAR	
149		RAIN BIRD RD–06–S–P30–NP W/ HUNTER MPCORNER NOZZLE SST	R	30	VAR	
38		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPCORNER NOZZLE RST	S	30	VAR	
37		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPCORNER NOZZLE LST	S	30	VAR	
118		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPSTRIP NOZZLE SST	S	30	VAR	
16		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPCORNER NOZZLE LST ON SCH 40 RISER	T	30	VAR	
15		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPCORNER NOZZLE RST ON SCH 40 RISER	T	30	VAR	
121		RAIN BIRD RD–12–S–P30–NP W/ HUNTER MPSTRIP NOZZLE SST ON SCH 40 RISER	T	30	VAR	

GENERAL NOTE: ALL HEADS & ROTORS TO HAVE 100% COVERAGE AND 50% OVERLAP MUST BE PROVIDED.

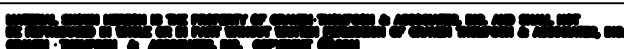


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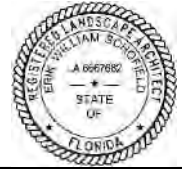
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. 000114



WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

IRRIGATION
LEGENDS

SEAL:



ERIK W. SCHOFIELD
Florida R.L.A. No. 6667682

PROJECT NO.

21-0061-001-02

DATE:

04/10/2026

DRAWING NO.

LEGD

HIGH DENSITY POLYETHYLENE PIPE AND FITTINGS
(DR 11 4710)

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The contractor shall provide solid wall high density polyethylene pipelines which conform to AWWA, and ASTM standards and other reference documents listed under Section 1.02 with flanged and thermal butt fusion joints complete in place.

1.2 REFERENCES

- A. To the extent referenced in this specification section, the standards and documents listed below are included, and made a part of this specification.
- B. In the event of a conflict, the requirements of this specification section prevail.
- C. Unless otherwise specified, references to documents shall mean the latest published edition of the referenced document in effect at the bid date of the project.
- D. ANSI/AWWA (www.awwa.org)
1. ANSI/AWWA C901-08 Polyethylene (PE) Pressure Pipe and Tubing, ½ In. (13 mm) Through 3 In. (76 mm) for Water Service
 2. ANSI/AWWA C906-07 Polyethylene (PE) Pressure Pipe and Fittings, 4 In. (100 mm) Through 63 In. (1,600 mm), for Water Distribution and Transmission
 3. AWWA M55 Manual of Water Supply Practices, PE Pipe–Design and Installation
- E. Plastics Pipe Institute, PPI (www.plasticpipe.org)
1. PPI Handbook of Polyethylene Pipe – 2009 (2ndEdition)
 2. PPI TR-33 Generic Butt Fusion Joining Procedure for Polyethylene Gas Pipe
 3. PPI TR-34 Disinfection of Newly Constructed Polyethylene Water Mains
 4. PPI TR-41 Generic Saddle Fusion Joining Procedure for Polyethylene Gas Piping
 5. PPI TN-42 Recommended Minimum Training Guidelines for PE Pipe Butt Fusion Joining Operators for Municipal and Industrial Projects (2009)
- F. ASTM (www.astm.org)
1. ASTM F 714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
 2. ASTM F905 Standard Practice for Qualification of Polyethylene Saddle-Fused Joints
 3. ASTM F 1055 Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing
 4. ASTM F 1290 Standard Practice for Electrofusion Joining Polyolefin Pipe and Fittings
 5. ASTM F 1412 Standard Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems
 6. ASTM F1417 Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air/4 December 2009
 7. ASTM F 2164 Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
 8. ASTM F2206 Standard Specification for Fabricated Fittings of Butt-Fused Polyethylene (PE) Plastic Pipe, Fittings, Sheet Stock, Plate Stock, or Block Stock
 9. ASTM D 2239 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter
 10. ASTM D 2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
 11. ASTM F 2620 Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
 12. ASTM D 2683 Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
 13. ASTM D 2737 Standard Specification for Polyethylene (PE) Plastic Tubing
 14. ASTM D 2774 Standard Practice for Underground Installation of Thermoplastic Pressure Piping
 15. ASTM D 3261 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
 16. ASTM D 3350-08 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials

1.3 SYSTEM DESIGN PARAMETERS

- A. The polyethylene system working pressure rating accommodates the normal operating pressure and the repetitive surges. The pressure rating applies at 80°F or less. Piping installed under this project may experience operating temperatures up to 95°F. Associated pressure rating at this elevated temperature shall not be less than 80% of the pressure rating at 90°F.
- B. Per AWWA 901 and C906, the repetitive surge pressure allowance is one half the pressure class of the pipe, and the occasional surge over pressure allowance is equal to the pressure class of the pipe. Allowable Total Pressure during Recurring Surge conditions equals 1.5 times the pipe's pressure class. Allowable Total Pressure during Occasional Surge conditions equals 2.0 times the pipe's pressure class.

Table 1 gives the Pressure Class per AWWA C906, Pressure Rating and Allowable Total Pressure during Recurring and Occasional Surge for PE4710 pipe at 80°F or less.

1.4 SUBMITTALS

- A. Quality Assurance / Control Submittals
1. Affirmation that product shipped meets or exceeds the standards set forth in this specification. This shall be in the form of a written document from the manufacturer attesting to the manufacturing process meeting the standards.
 2. Manufacturers recommended fusion procedures for the products.

1.5 DELIVERY – STORAGE – HANDLING

- A. Handle the pipe in accordance with the PPI Handbook of Polyethylene Pipe (2nd Edition), Chapter 2 using approved strapping and equipment rated for the loads encountered. Do not use chains, wire rope, forklifts or other methods or equipment that may gouge or damage the pipe or endanger persons or property. Field storage is to be in compliance with AWWA Manual of Practice M55 Chapter 7, B. If any gouges, scrapes, or other damage to the pipe results in loss of 10% of the pipe wall thickness, cut out that section or do not use.

PART 2 – PRODUCTS FOR 4 INCH THROUGH 54 INCH PIPE PER AWWA C906

2.1 PIPE

- A. Polyethylene pipe shall be made from HDPE material having a material designation code of PE4710. The material shall meet the requirements of ASTM D 3350. The pipe segments shall be joined using flanges or the thermal butt fusion method.
- B. The pipe and fittings shall meet the requirements of AWWA C906.
- C. Approved manufacturers are: One of the following, or approved equal:
1. Performance Pipe
 2. Flying W
 3. J.M. Eagle
 4. Pipeline Plastics
 5. WL Plastics

2.2 FITTINGS

- A. Butt Fusion Fittings - Fittings shall be made of HDPE material with a minimum material designation code of PE4710 and with a minimum Cell Classification as noted in 2.01A. Butt Fusion Fittings shall meet the requirements of ASTM D3261. Molded and fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans. All fittings shall meet the requirements of AWWA C906. Markings for molded fittings shall comply with the requirements of ASTM D 3261. Fabricated fittings shall be marked in accordance with ASTM F 2206. Socket fittings shall meet ASTM D 2683.
- B. Electrofusion Fittings - Fittings shall be made of HDPE material with a minimum material designation code of PE4710 and with a minimum Cell Classification as noted in 2.01A. Electrofusion Fittings shall have a manufacturing standard of ASTM F1055. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans. All electrofusion fittings shall be suitable for use as pressure conduits, and have nominal burst values of four times the Working Pressure Rating (WPR) of the fitting. Markings shall be according to ASTM F 1055.
- C. Flanges and Mechanical Joint Adapters (MJ Adapters) – Flanges and Mechanical Joint Adapters shall have a material designation code of PE4710 and a minimum Cell Classification as noted in 2.01A. Flanged and Mechanical Joint Adapters can be made to ASTM D 3261 or if machined, must meet the requirements of ASTM F 2206. Flanges and MJ Adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. Markings for molded or machined flange adapters or MJ Adapters shall be per ASTM D 3261. Fabricated (including machined) flange adapters shall be per ASTM F 2206.

VanStone style, metallic (including stainless steel), convoluted or flat-plate, back-up rings and bolt materials shall follow the guidelines of Plastic Pipe Institute Technical Note # 38, and shall have the bolt-holes and bolt-circles conforming to one of these standards: ASME B-16.5 Class 150, ASME B-16.47 Series A Class 150, ASME B-16.1 Class 125, or AWWA C207 Class 150 Series B, D, or E. The back-up ring shall provide a long-term pressure rating equal to or greater than the pressure-class of the pipe with which the flange adapter assembly will be used, and such pressure rating shall be marked on the back-up ring. Flange assemblies shall be assembled and torqued according to PPI TN-38 "Bolt Torque for Polyethylene Flanged Joints."

2.3 PIPE AND FITTING IDENTIFICATION

- A. The pipe shall be marked in accordance with the standards to which it is manufactured.
- B. Color identification by the use of stripes on pipe to identify pipe service shall be required. If used, stripes or colored exterior pipe product shall be blue for potable water, or green for wastewater/sewage, or purple (lavender) for reclaimed water.

PART 3 – EXECUTION

3.1 JOINING METHODS

- A. Butt Fusion: The pipe shall be joined by the butt fusion procedure outlined in ASTM F 2620 or PPI TR-33. All fusion joints shall be made in compliance with the pipe or fitting manufacturer's recommendations. Fusion joints shall be made by qualified fusion technicians per PPI TN-42.
- B. Saddle Fusion: Saddle fusion could be used to fuse branch saddles, tapping tees, and other HDPE constructs onto the wall of the main pipe. Saddle fusion shall be done in accordance with ASTM F 2620 or TR-41 or the fitting manufacturer's recommendations and PPI TR-41.
41. Saddle fusion joints shall be made by qualified fusion technicians. Qualification of the fusion technician shall be demonstrated by evidence of fusion training within the past year on the equipment to be utilized on this project (ASTM F905).
- C. Socket Fusion: Socket fusion is not allowed on this project.
- D. Electrofusion: Electrofusion joining shall be done in accordance with the manufacturers recommended procedure. Other sources of electrofusion

joining information are ASTM F 1290 and PPI TN 34. The process of electrofusion requires an electric source , a transformer, commonly called an electrofusion box that has wire leads, a method to read electronically (by laser)or otherwise input the barcode of the fitting, and a fitting that is compatible with the type of electrofusion box used. The electrofusion box must be capable of reading and storing the input parameters and the fusion results for later download to a record file. Qualification of the fusion technician shall be demonstrated by evidence of electrofusion training within the past year on the equipment to be utilized for this project.

E. Mechanical:

1. Mechanical connection of HDPE to auxiliary equipment such as valves, pumps, and fittings shall use mechanical joint adapters and other devices in conformance with the PPI Handbook of Polyethylene Pipe, Chapter 9 and AWWA Manual of Practice M55, Chapter 6.
 2. Mechanical connections on small pipe under 3" are available to connect HDPE pipe to other HDPE pipe, or a fittings, or to a transition to another material. The use of stab-fit style couplings is allowed, along with the use of metallic couplings of brass and other materials. When a compression type or mechanical type of coupling is used, the use of a rigid tubular insert stiffener inside the end of the pipe is recommended.
 3. Mechanical couplings that wrap around the pipe and act as saddles are made by several manufacturers specifically for HDPE pipe. All such saddles, tapping saddles, couplings, clamps etc. shall be recommended by the manufacturer as being designed for use with HDPE pipe at the pressure class listed in this section.
 4. Unless specified by the fitting manufacturer, a restraint harness or concrete anchor is recommended with mechanical couplings to prevent pullout.
 5. Mechanical coupling shall be made by qualified technicians. Qualification of the field technician shall be demonstrated by evidence of mechanical coupling training within the past year. This training shall be on the equipment and pipe components to be utilized for this project.
- F. Flanged: Flanged connections shall consist of the following:
1. A polyethylene flange shall be thermally butt-fused to the stub end of the pipe.
 2. A back-up ring shall mate with another back-up ring or flange, as required.
 3. Connections shall be made with bolts and nuts.
 4. Flanged connections shall be provided with a full-face neoprene gasket.
 5. All materials shall be compatible to the application.
- G. Joint Recording - The critical parameters of each fusion joint, as required by the manufacturer and these specifications, shall be recorded either manually or by an electronic data logging device. All fusion joint data shall be included in the Fusion Technician's joint report.

3.2 INSTALLATION

- A. Buried HDPE pipe and fittings shall be installed in accordance with ASTM D2321 or ASTM D2774 for pressure systems and AWWA Manual of Practice M55 Chapter 7.
- B. For pipe buried in normal (dry) soils:
- a. Pipe embedment - Embedment material should be Class I, Class II, or Class III, materials as defined by ASTM D-2321 Section 6. The use of Class IV and Class V materials is not recommended, however it may be used only with the approval of the engineer and appropriate compaction.
 - b. Bedding: Pipe bedding shall be in conformance with ASTM D2321 Section 8. Compaction rates should be as specified in ASTM D2321. Deviations shall be approved by the engineer.
 - c. Haunching and backfill shall be as specified in ASTM D 2321 Section 9 with Class I, II, or III materials. Compaction shall be in excess of 95% Proctor.
- C. For pipe buried in saturated (wet) soils:
- a. Pipe embedment - Embedment material shall be #57 stone compacted in excess of 95% Proctor.
 - b. Bedding: Bedding material shall be #57 stone compacted in excess of 95% Proctor.
 - c. Haunching and backfill shall be rip-rap or shot-rock from blasting activities compacted in excess of 95% Proctor.

3.3 INSPECTION

- A. Inspect the pipe for defects before installation and fusion. Defective, damaged or unsound pipe will be rejected.

3.4 TESTING

- A. Pressure testing shall be conducted in accordance with ASTM F2164, Field Leak Testing of Polyethylene Pressure Piping Systems Using Hydrostatic Pressure. The HDPE pipe shall be filled with water, raised to test pressure and allowed to stabilize. The test pressure shall be 1.5 times the operating pressure at the lowest point in the system. In accordance with section 9.8, the pipe shall pass if the final pressure is within 5% of the test pressure for 1 hour. For safety reasons, hydrostatic testing only will be used.

- B. Quality Control Testing (On Site Bend Back Test)

Prior to HDPE pipe being installed in the trench, at the beginning of the job, the contractor shall cut out the first butt fusion of each pipe size. The contractor shall prepare the sample for the test in accordance with the "Job Aid / Bend Back Testing" procedure document prepared by ISCO Industries, LLC dated Oct. 26, 06 or as revised, and in accordance with ASTM D 2657. The samples shall be tested in the presence of the owner's representative and / or the irrigation consultant, all in accordance with testing procedures outlined in the ISCO document. All samples shall be labeled and saved. Testing must be done at 73 degrees F plus or minus 5 degrees. The test temperature and sample size are critical to testing. The purpose of the test is to determine if a good weld was made. A pass means no failures during the bend back test. This means a good weld. A break means a bad weld. Any failure shall require additional testing.

C. Contractor Qualifications

The contractor shall have successfully installed high density polyethylene pipe in golf/turf irrigation projects. References will be required. These reference(s) must provide a satisfactory response or the experience will not be accepted.

If a contractor has not previously successfully installed HDPE pipe for golf/turf irrigation projects, he will be required to have a qualified fusion technician from the pipe supplier for a period of three to five day (at the expense of the contractor). The length of time required for HDPE pipe (fusion and mechanical) training shall be determined by the owner or his representative. The technician must have been trained and have fusion certification. The training must have been completed within the past twelve months. A designated person or persons will be trained by the technician. The training will include the following:

1. butt fusion
2. socket fusion
3. electrofusion
4. attachment of mechanical saddles.
5. If electrofused or side wall fusion is required, this training must also be complete while the technician is on site.

D. Contractor Equipment Qualifications

If the contractor owns butt fusion equipment, the equipment must be serviced prior to use for this project. The machine must be environmental friendly and satisfactory working order. The hydraulic system must be leak free. The pressure gage must be checked for accuracy and the thermometer checked.

If a butt fusion machine is rented, it must be rented from company that has a fusion machine service center or centers certified by the butt fusion machine manufacturer. The machine must arrive with certification that the pressure gage and heater thermometer were accurate when shipped.

3.5 CONTRACTOR WARRANTY

LIMITED WARRANTY: Contractor warrants that, for a period of five years from the date of installation, it will re-fuse or repair a fusion connection that is defective in workmanship, provided that Buyer, upon discovery of a defect, promptly notifies Contractor of the defect and, allows the Contractor to inspect at the place of installation. If it is determined the fused connection to be defective, Contractor will re-fuse or repair the connection at the jobsite. Contractor does not warrant the product itself, only the fused connection. This warranty does not cover labor or other costs, only the fused connection. Buyer's sole remedy for defective connection shall be to receive replacement fusion of the pipe or fitting as provided in this Limited Warranty.

Other than the above limited warranty, Contractor makes no warranty and expressly disclaims all other warranties, express or implied, including, but not limited to, the warranties of merchantability and fitness for a particular purpose.

Contractor's liability arising out of or related to this contract or any product or service supplied by contractor (whether such liability is alleged as a breach of contract, breach of liability or otherwise) shall in no even exceed the original purchase price of the defective connection plus applicable freight costs actually paid by buyer. Contractor will not be liable for any consequential, incidental, special, indirect or punitive damages, loss of profits, loss of business opportunity or other loss even if contractor knew or should have known of the possibility of such damages or losses.

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ERIK W. SCHOFIELD
Florida R.L.A. No. 6667682

PROJECT NO.

21-0061-001-02

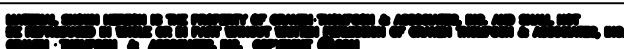
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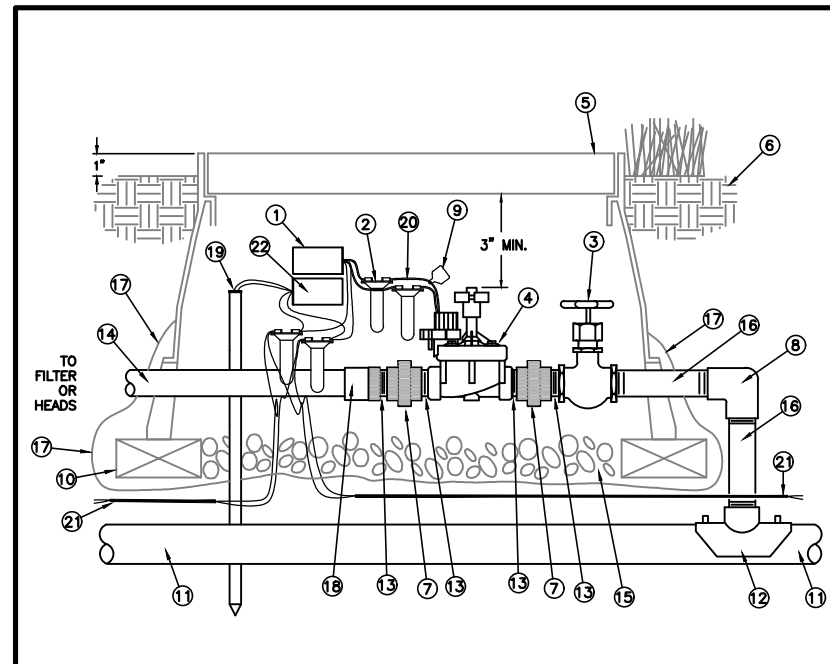
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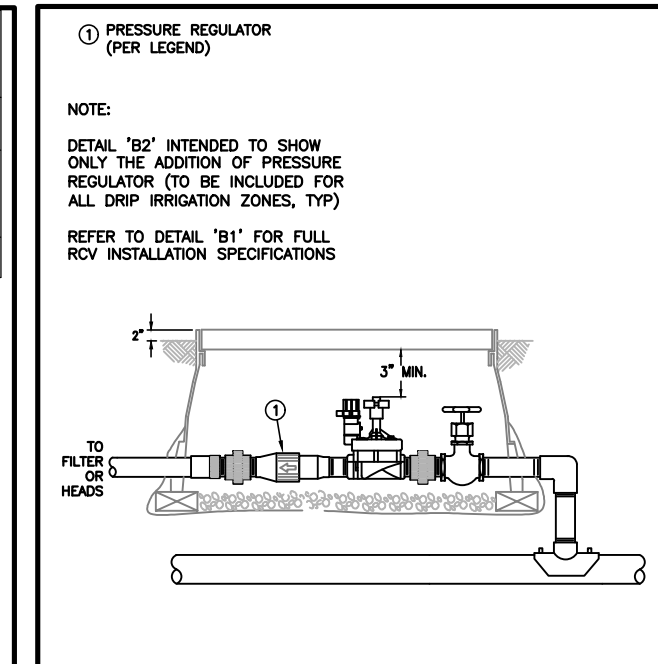
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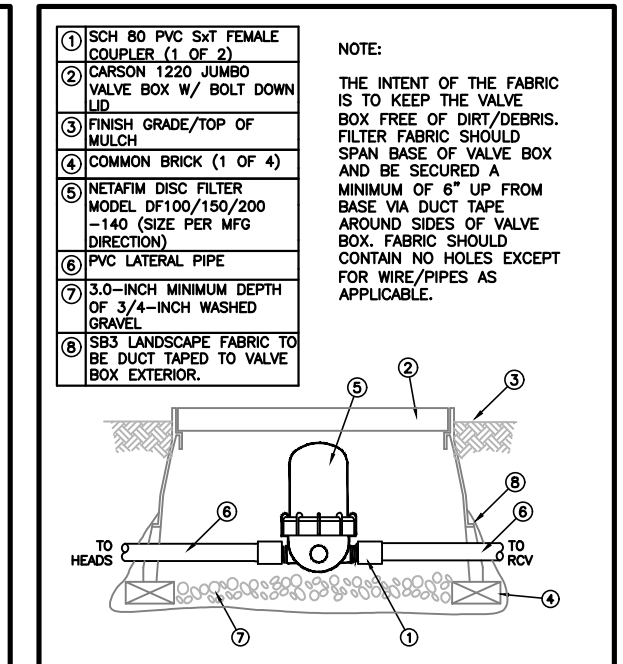


B1 RAIN BIRD RCV W/ GATE VALVE + DECODER

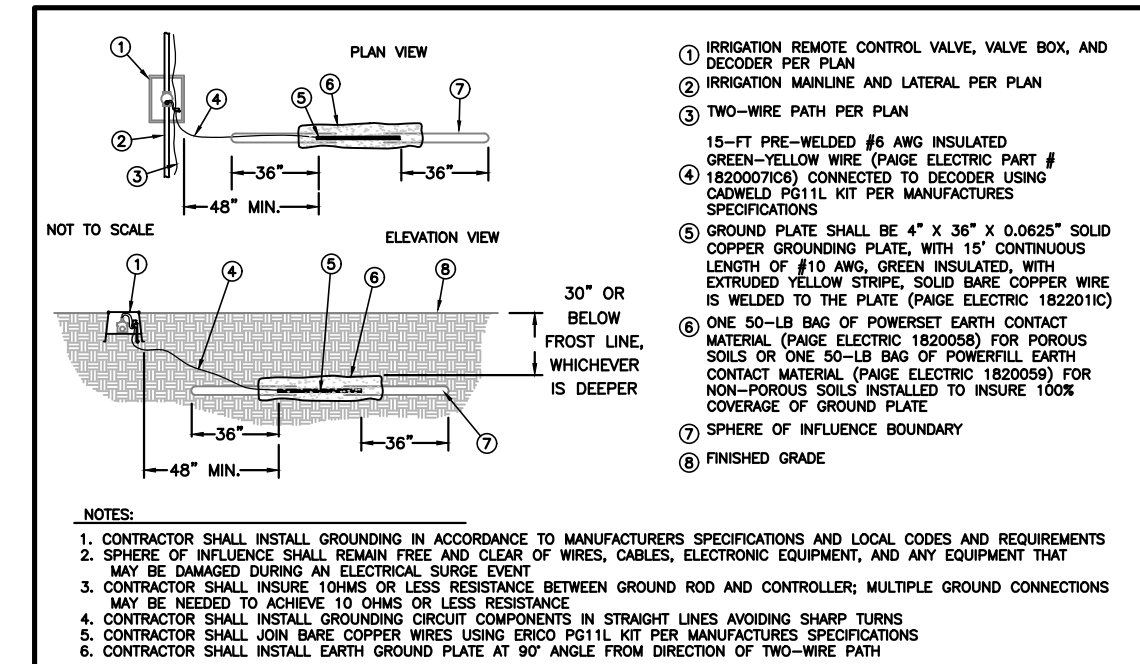
- RAINBIRD RD-101 DECODER
- 3M-DBV-R CONNECTORS (1 OF 2)
- NEC2 1-113 BRONZE
- RAIN BIRD PRESS. SIZE PER PLAN
- CARSON 1220 JUMBO VALVE BOX W/ BOLT DOWN LID
- FINISH GRADE/TOP OF MULCH
- 1/2" SCH 40 PVC UNION
- PVC SCH 80 ELL
- CHERRY 1/2" TAP (STATION/CONTROLLED)
- COMMON BRICK (1 OF 4)
- IRRIGATION MAINLINE (SIZE AND TYPE AS REQUIRED)
- TRANSITION SADDLE ELECTROFUSION FITTING
- PVC SCH 80 GLOBE NIPPLE
- 1/2" SCH 40 GLOBE NIPPLE
- US SET LANDSCAPE FABRIC



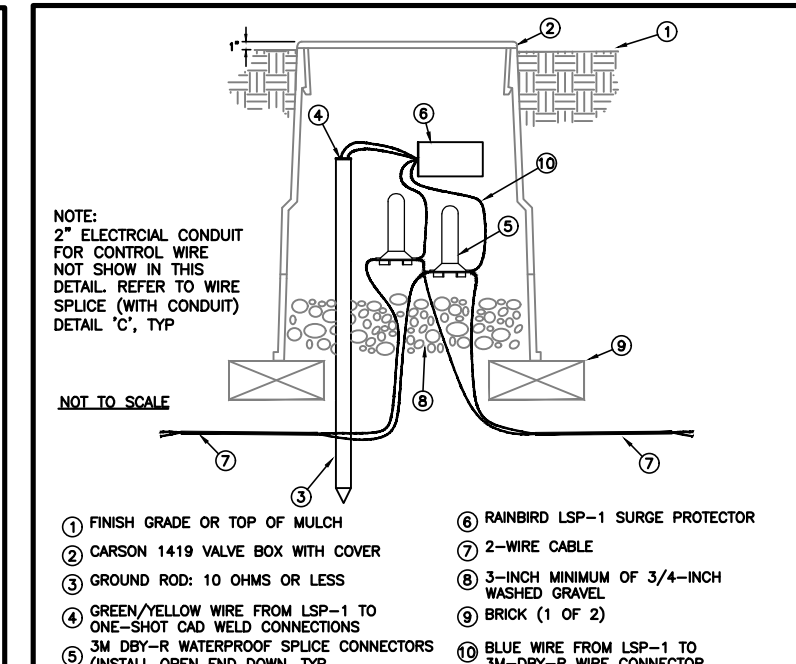
B2 PRESSURE REGULATOR (DRIP ZONES)



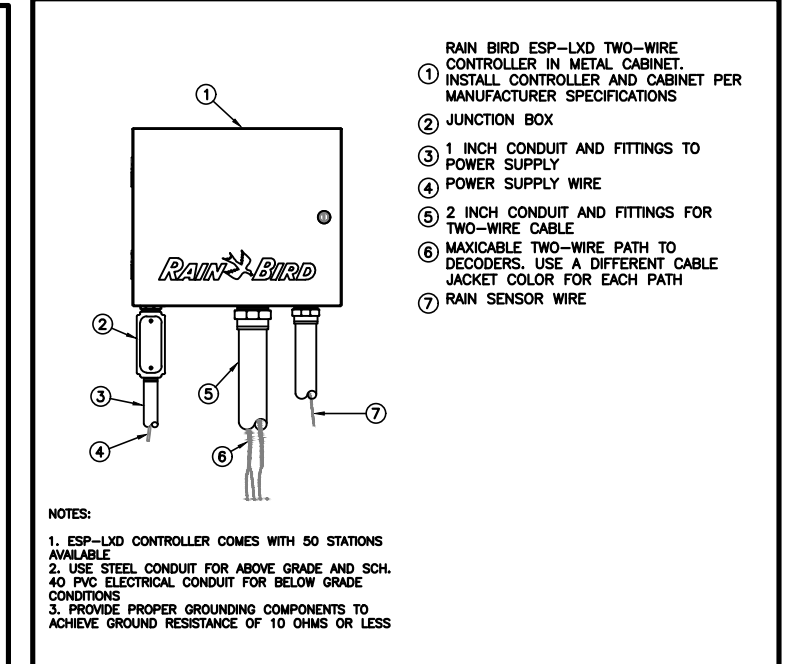
B3 NETAFIM FILTER



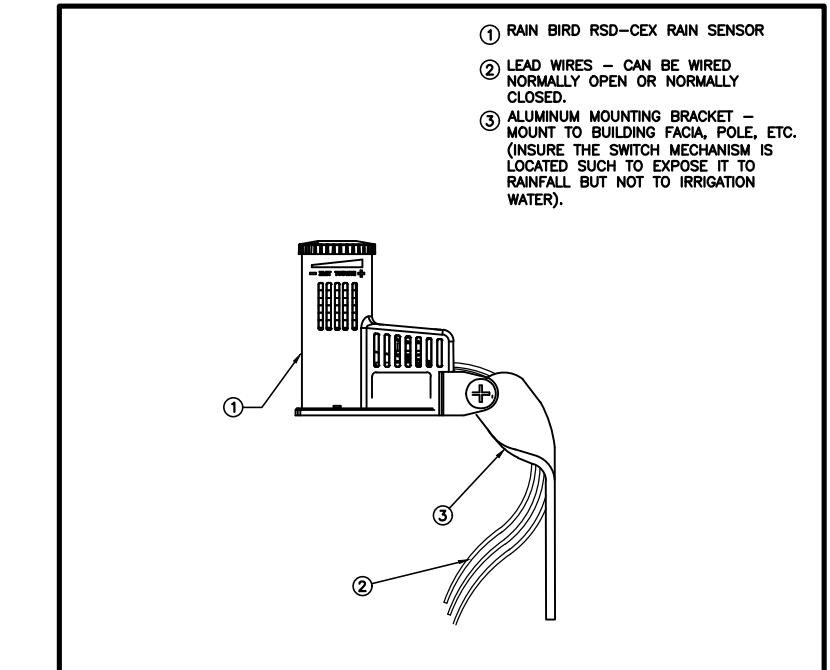
B4 GROUND PLATE AT DECODER



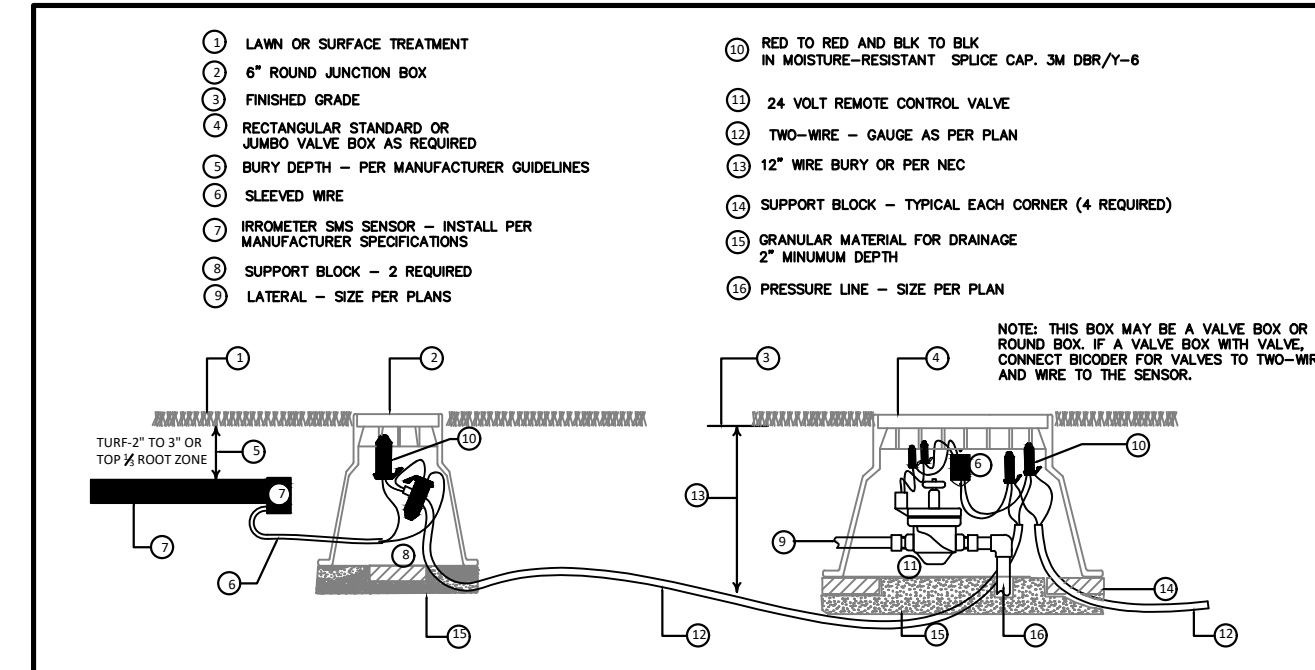
C 2-WIRE GROUNDING DETAIL



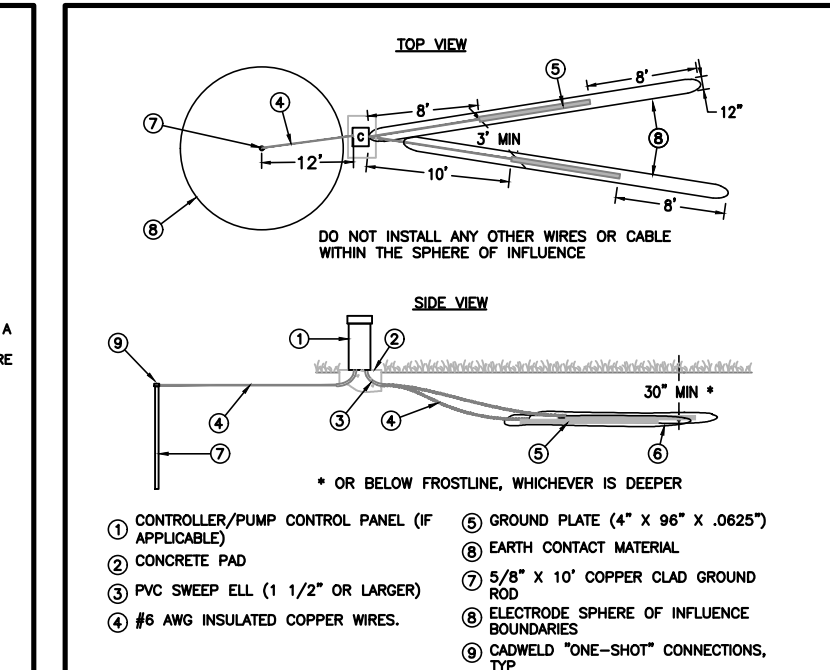
C1 ESP-LXD 2-WIRE DECODER CONTROLLER



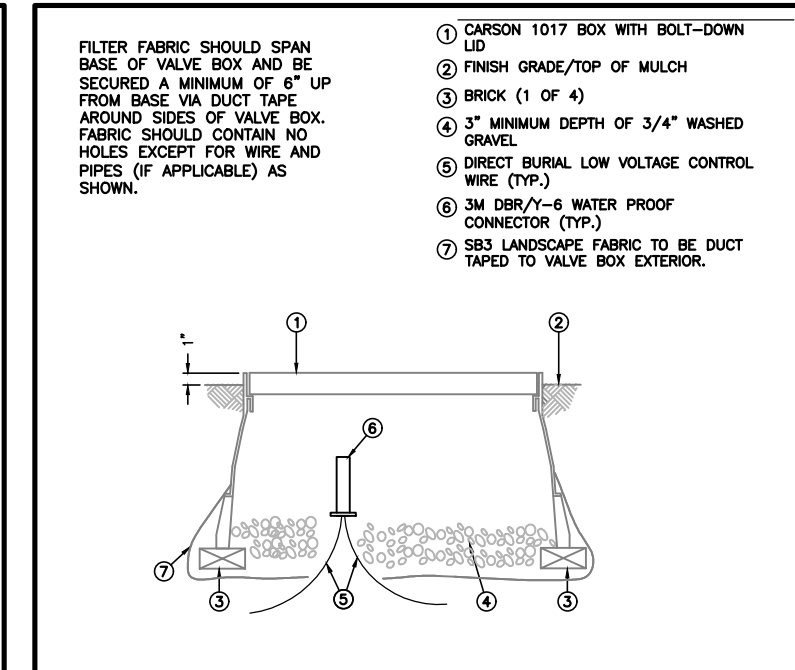
C2 RSD-CEX RAIN SENSOR



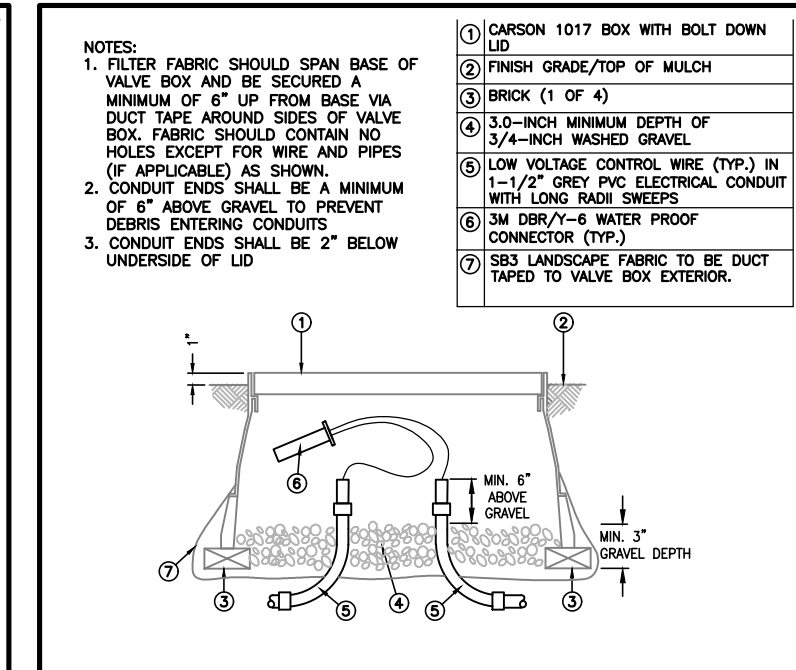
C3 SOIL MOISTURE SENSOR ON TWO WIRE PATH



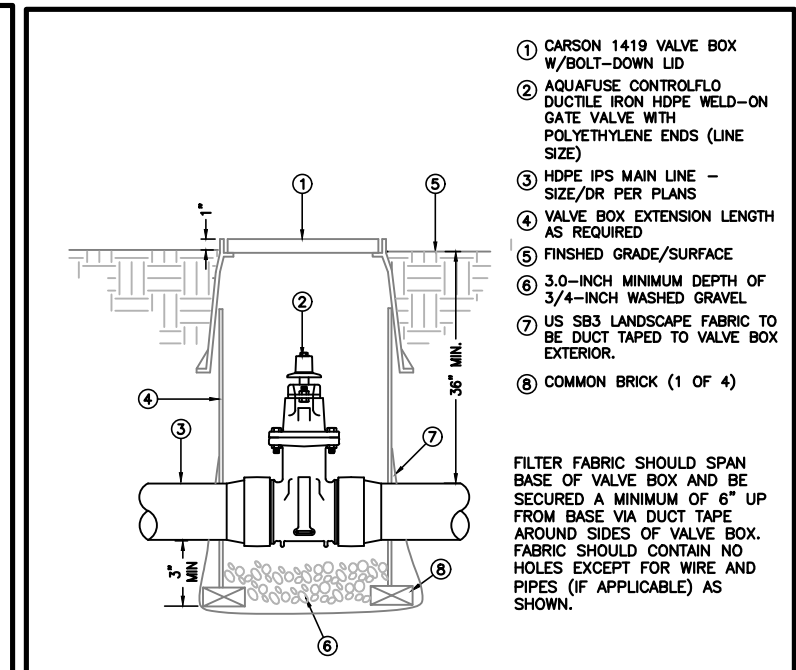
C CONTROLLER/PUMP GROUNDING DETAIL



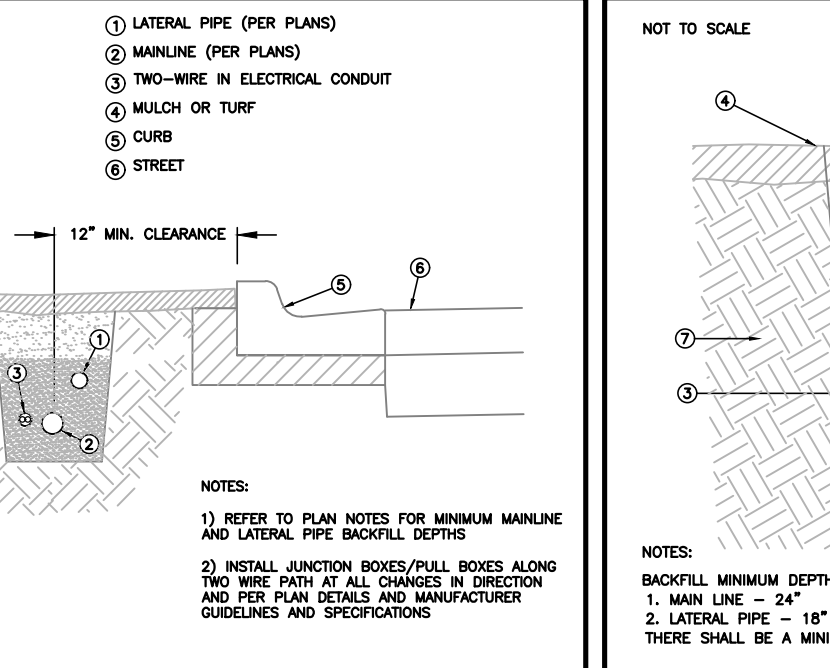
C WIRE SPLICE



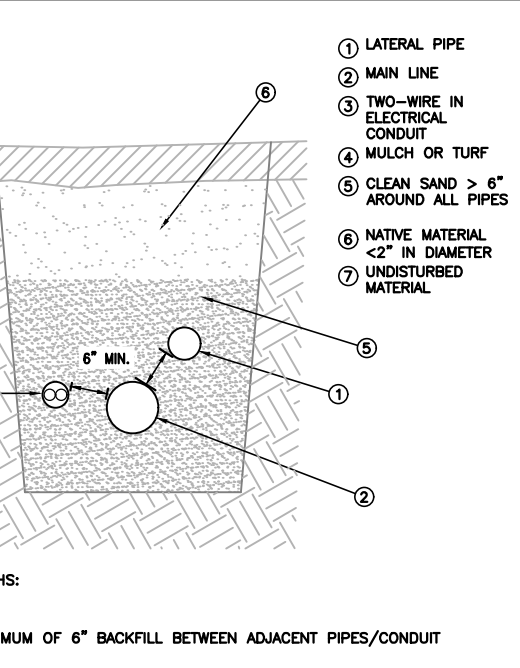
C WIRE SPLICE (WITH CONDUIT)



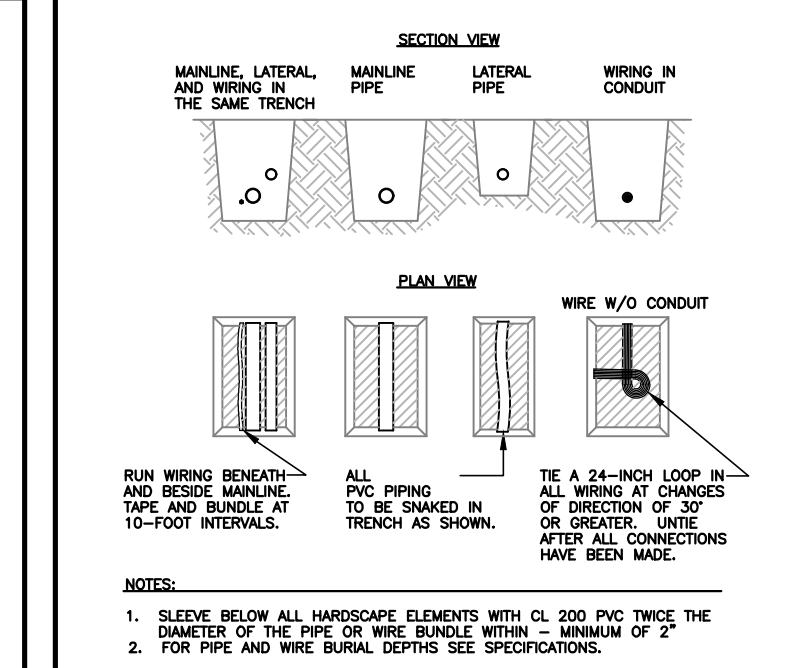
D AQUAFUSE CONTROLFLO DUCTILE IRON GATE VALVE



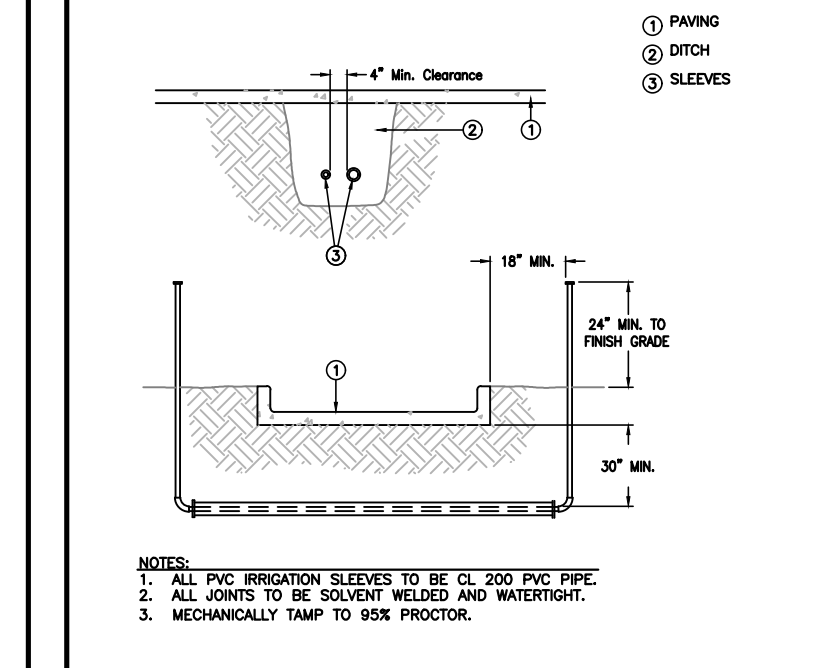
L MAINLINE WITH CONDUIT AND LATERAL PIPING DETAIL



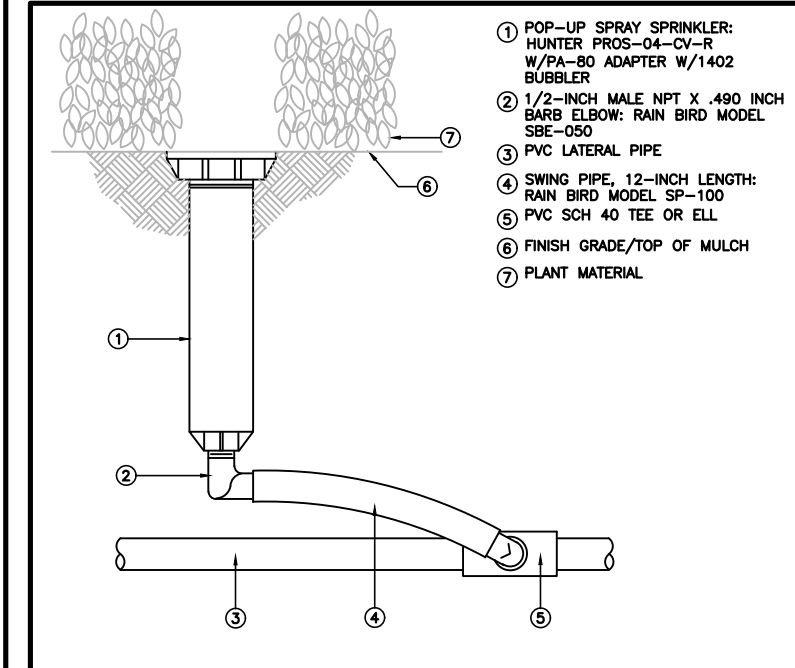
L MAINLINE AND LATERAL BACKFILL DETAIL



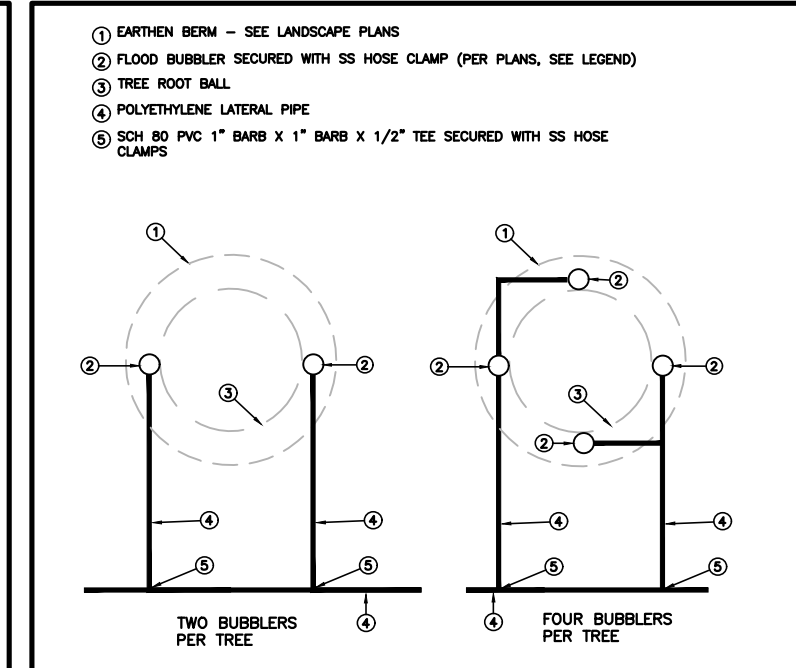
L PIPE AND WIRE TRENCHING



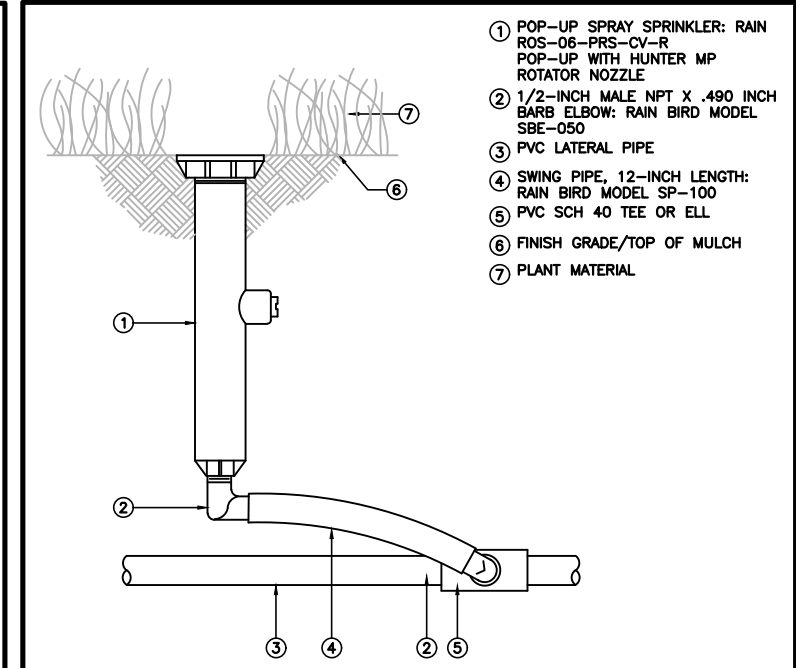
O SLEEVING



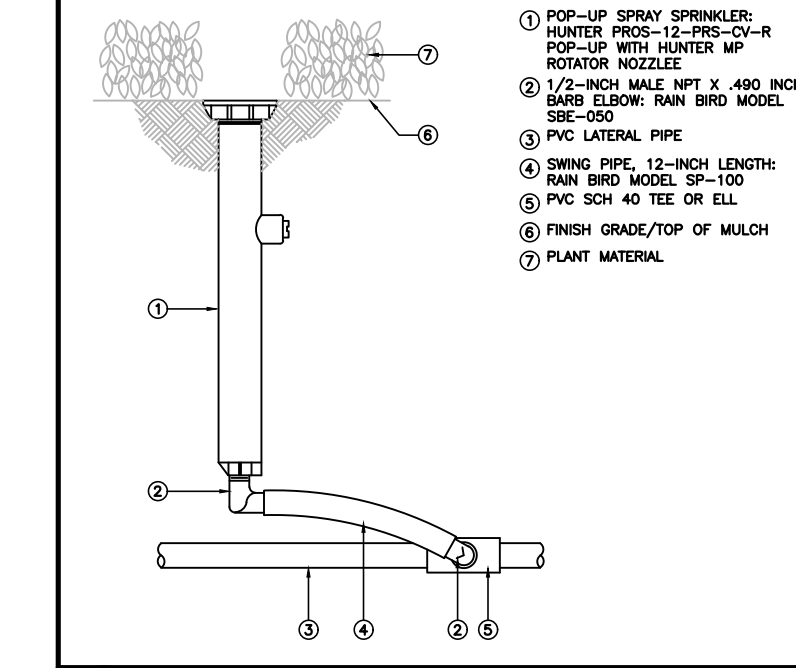
O HUNTER 4" CV-R POP-UP WITH 1402 BUBBLER



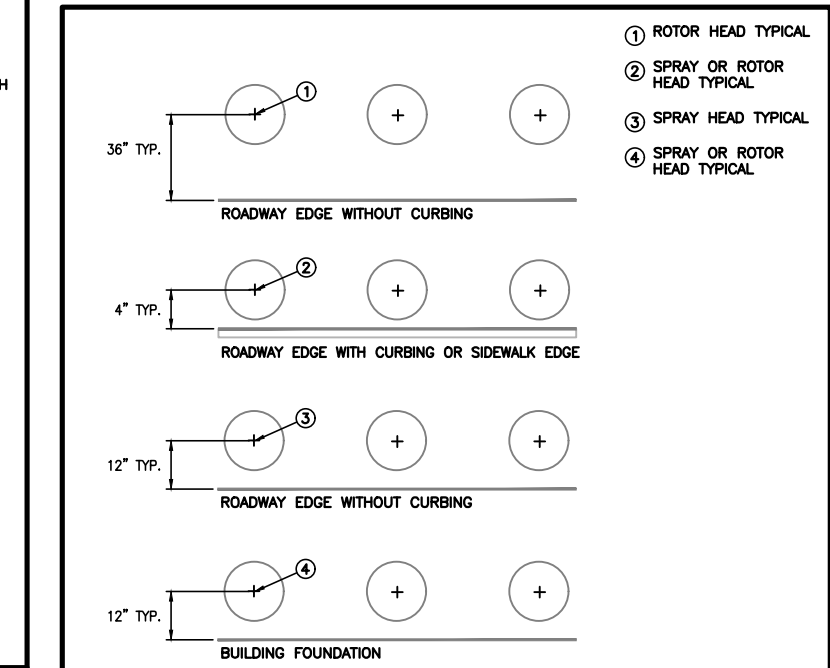
O BUBBLER PLACEMENT



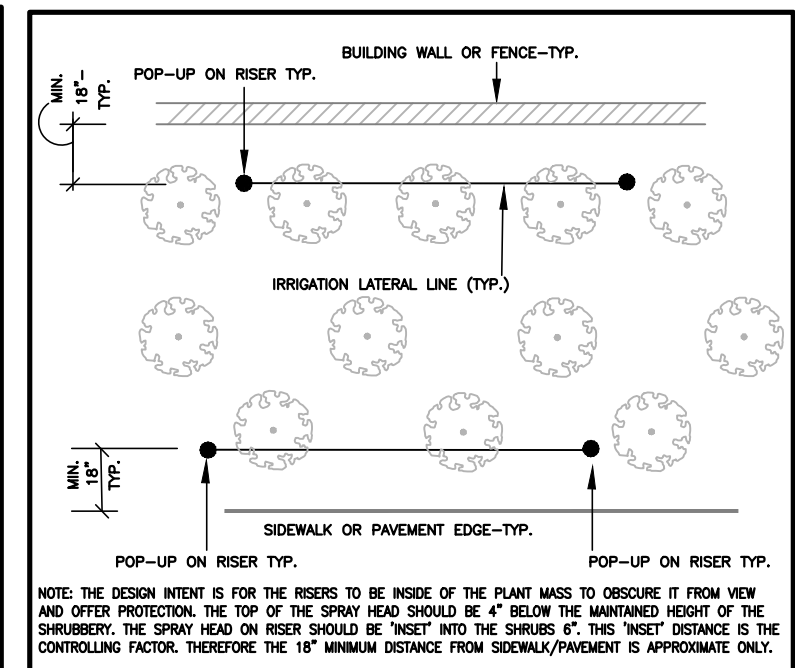
R HUNTER 6" PRS40-CV-R SPRAY



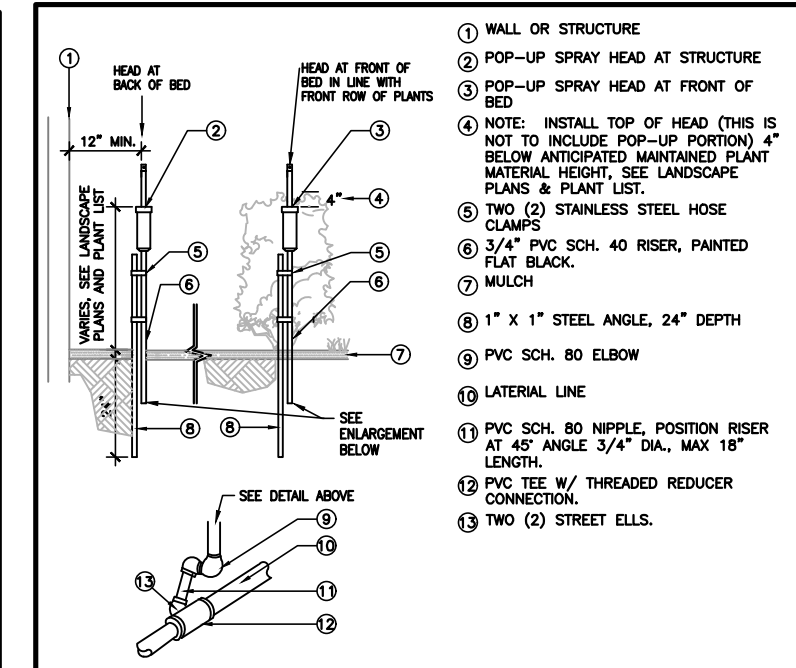
S HUNTER 12" PRS40-CV-R SPRAY



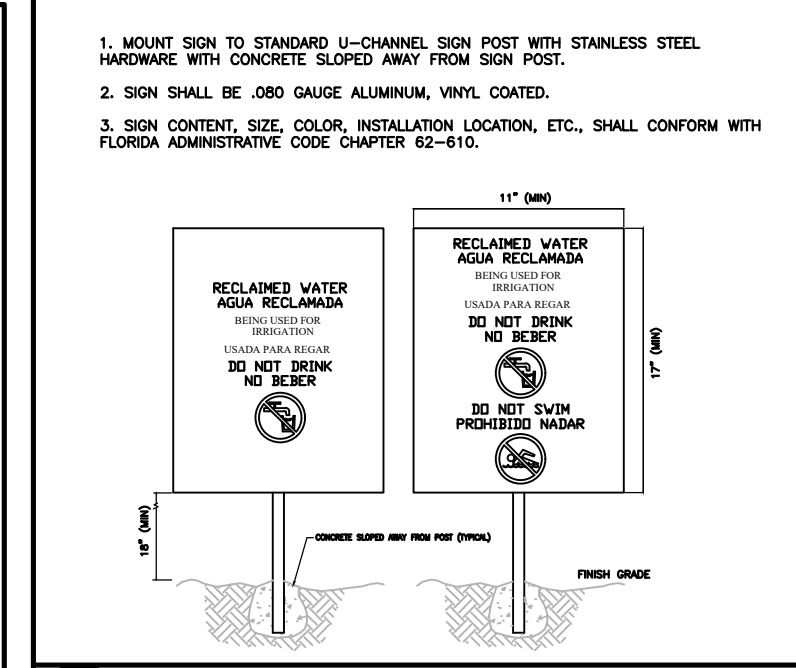
T POP-UP HEAD TO HARDSCAPE LOCATION DETAIL-A



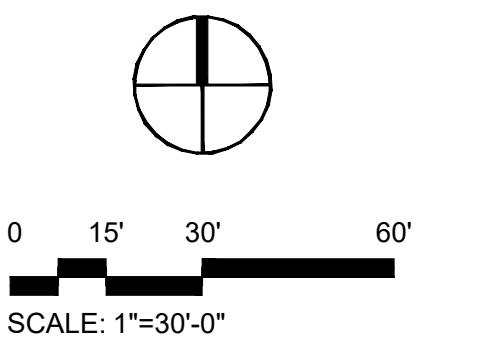
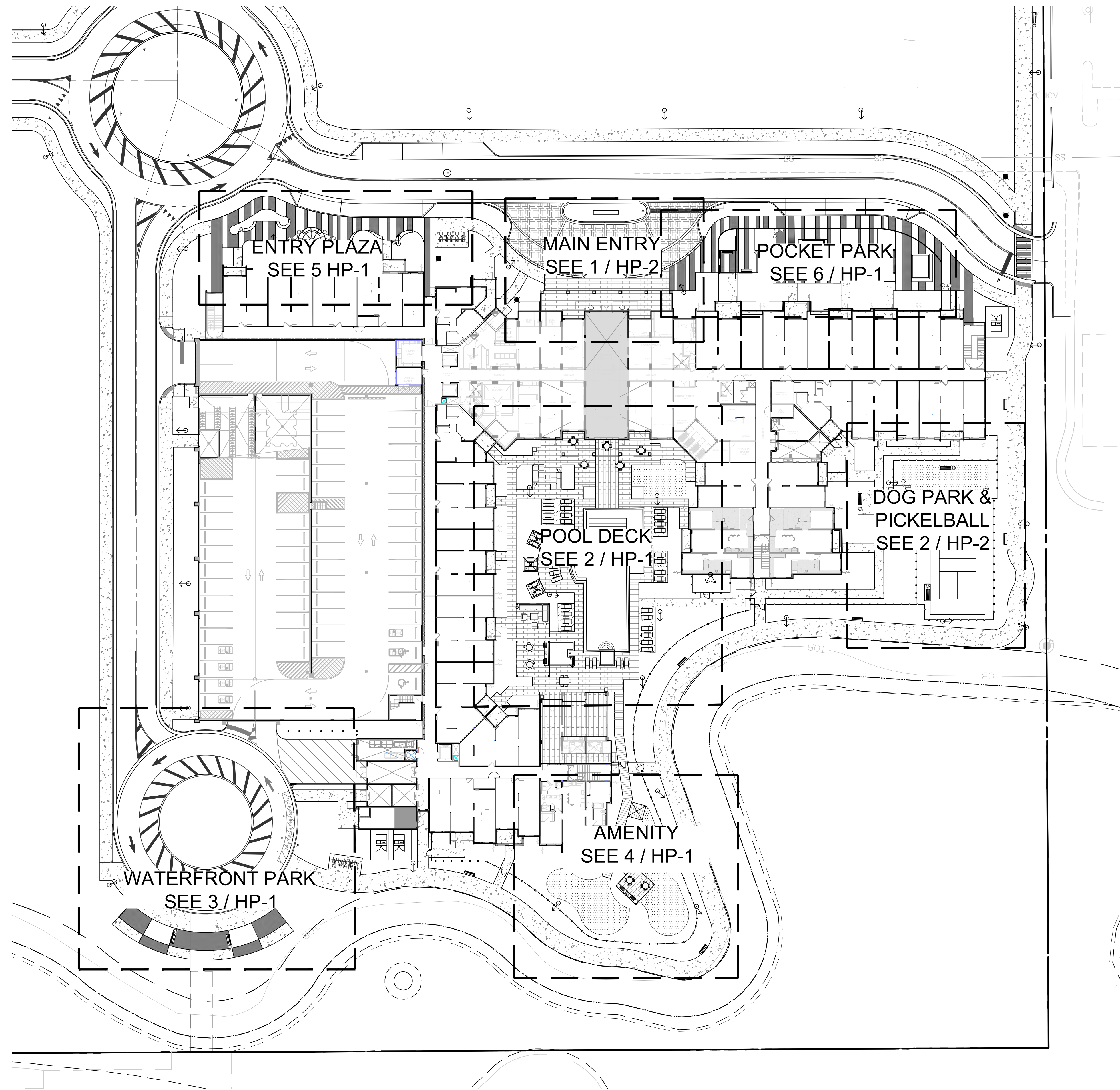
T POP-UP HEAD ON RISER LOCATION DETAIL-B



T POP-UP HEAD ON RISER



W REUSE WARNING SIGNS



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No.	REVISIONS	DATE	BY

SCALE: 1" = 30'-0"
DESIGNED BY: EWS
DRAWN BY: EWS / AR
CHECKED BY: SWP



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3083 N.W. 63RD STREET, FORT LAUDERDALE, FLORIDA 33309
PHONE: (954) 739-0400 FAX: (954) 739-0400
FLORIDA LICENSED LANDSCAPE ARCHITECTS: EWS, AR, SWP
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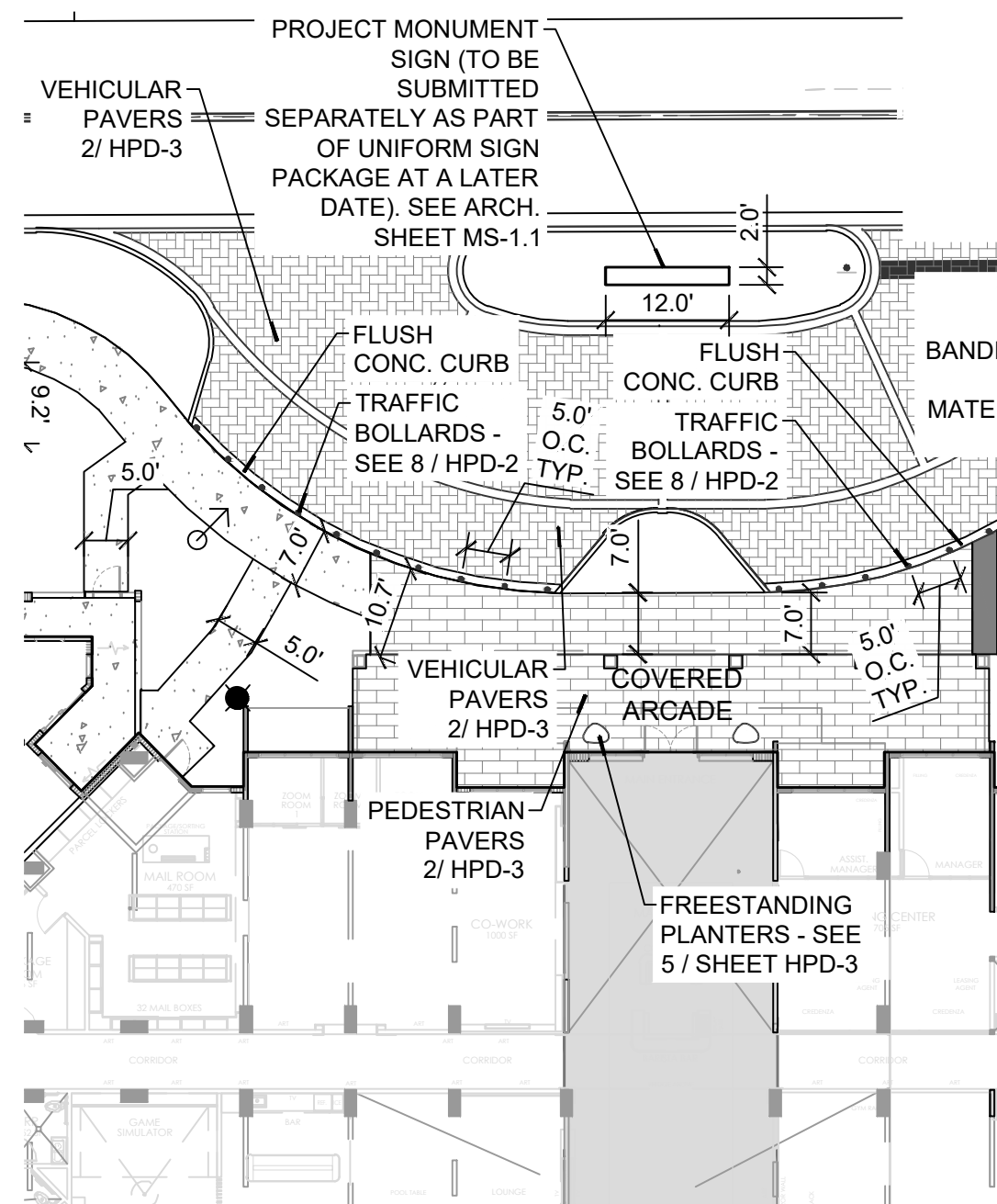
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1600 SAWGRASS CORPORATE PKWY #150
SUNRISE, FLORIDA 33323

WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

OVERALL
HARDSCAPE PLAN

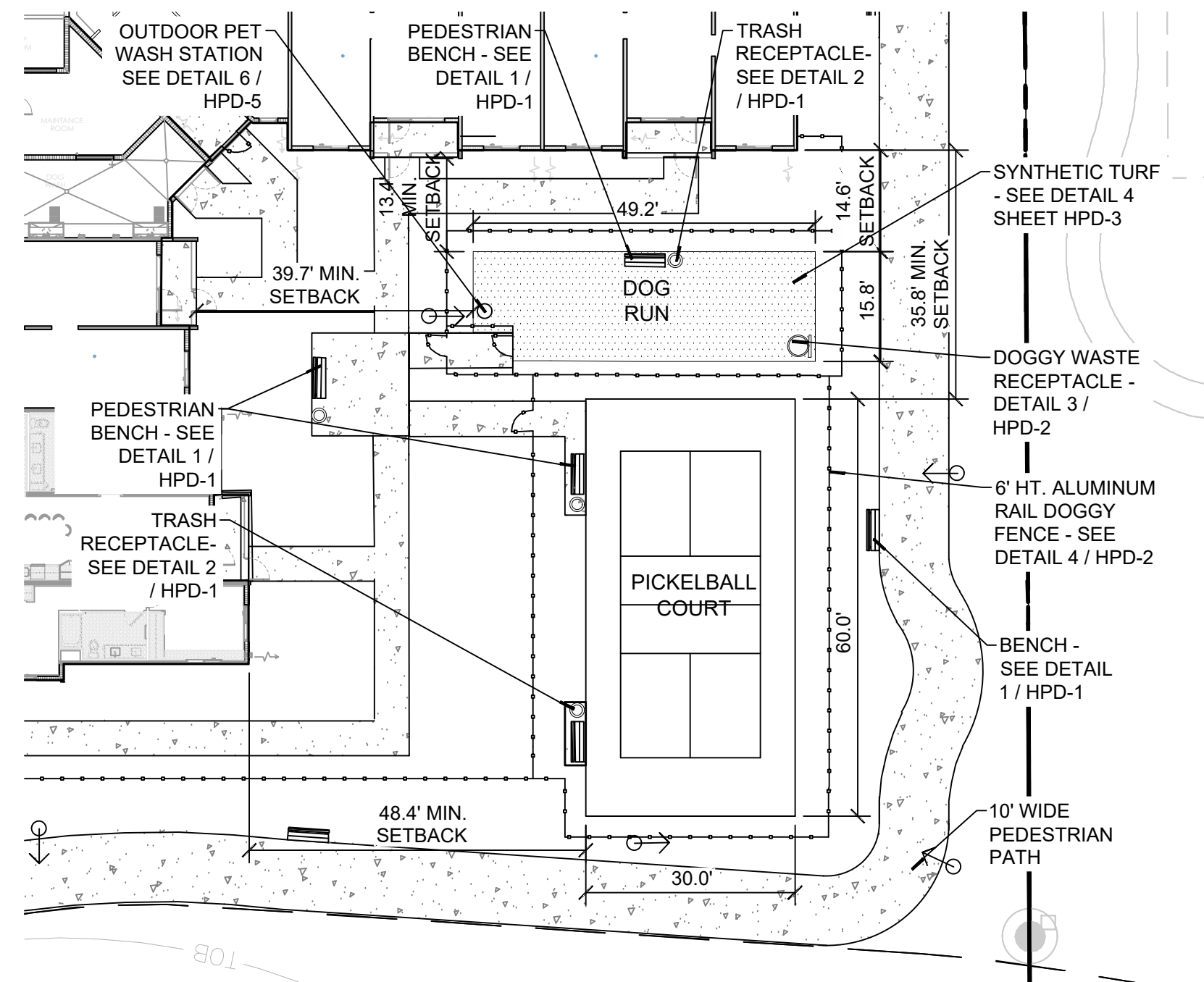
SEAL: 
PROJECT NO. 21-0061-001-02

DATE: 06/09/2026
DRAWING NO. OHP



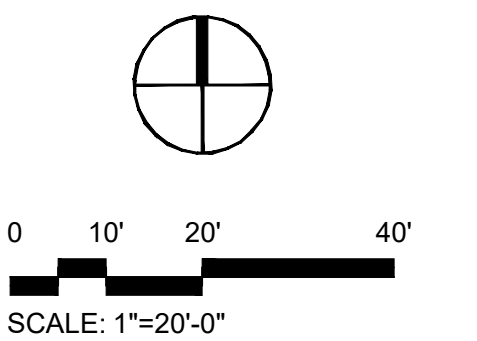
1 ENTRY DRIVE

NTS



2 DOG RUN & PICKELBALL COURT ENLARGEMENT

NTS



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No.	REVISIONS	DATE	BY

SCALE: 1" = 20'-0"
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CHECKED BY: SWP



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 3063 N.W. 63RD STREET, FORT LAUDERDALE, FLORIDA 33309
 FAX: (954) 738-0400 TEL: (954) 738-0400
 FLORIDA LICENSED PROFESSIONAL ENGINEERS & SURVEYORS LICENSE NO. 571
 FLORIDA LICENSED LANDSCAPE ARCHITECTURE LICENSE NO. 0600194

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WESTERRA PHASE I - POD 4
 SUNRISE, FLORIDA

HARDSCAPE PLAN

SEAL:  ERIK W. SCHOFIELD Florida R.L.A. No. 6667682	DATE: 06/09/2026
PROJECT NO. 21-0061-001-02	DRAWING NO. HP-2



- NOTES:
- MANUFACTURER: LANDSCAPE FORMS
 - MODEL: AUSTIN- BACKED, SURFACE MOUNT
 - COLOR: BLACK POWDERCOATED
 - SIZE: 72" W X 24" D X 18" SH

1 SITE BENCH NTS



- NOTES:
- MANUFACTURER: SOURCE FURNITURE
 - MODEL: FUSION CHASE
 - FABRIC COLOR: TBD
 - SIZE: 82" L. x 32" W. x 15" HT.
 - FRAME: WHITE

5 CHAISE LOUNGE @ POOL NTS



9 BIKE MAINTENANCE STATION NTS



- NOTES:
- MANUFACTURER: RENSON OUTDOOR
 - MODEL: CUSTOM
 - COLOR: BLACK POWDERCOATED
 - SIZE: 9' HT. BY VARYING LENGTH & WIDTHS, REFER TO PLAN

13 SHADE STRUCTURE DETAIL NTS

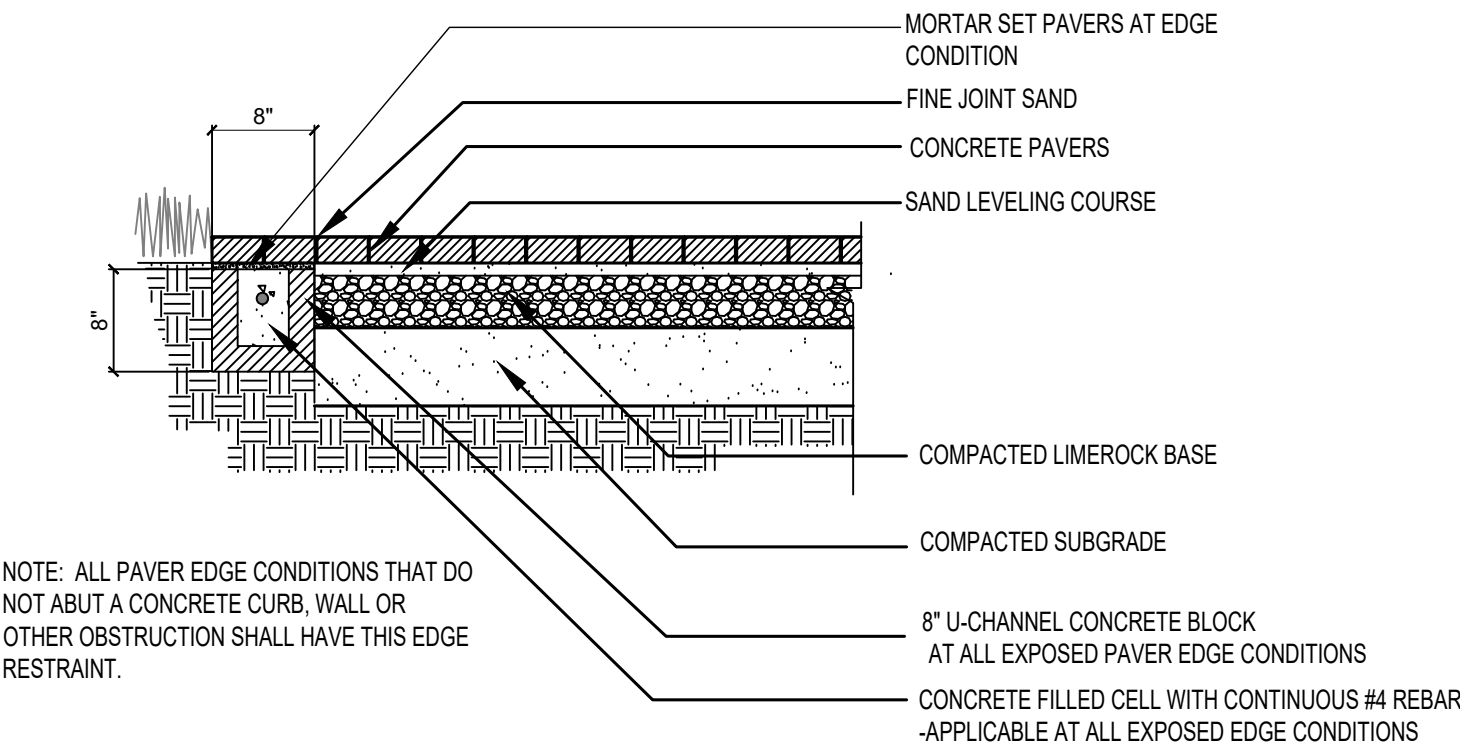


- NOTES:
- MANUFACTURER: LANDSCAPE FORMS
 - MODEL: AUSTIN- TOP OPEN, SURFACE MOUNT
 - COLOR: BLACK POWDERCOATED
 - SIZE: 24" W X 35" H, 34 GAL.

2 TRASH RECEPTACLE NTS



6 BBQ GRILL AREA CHARACTER IMAGE NTS

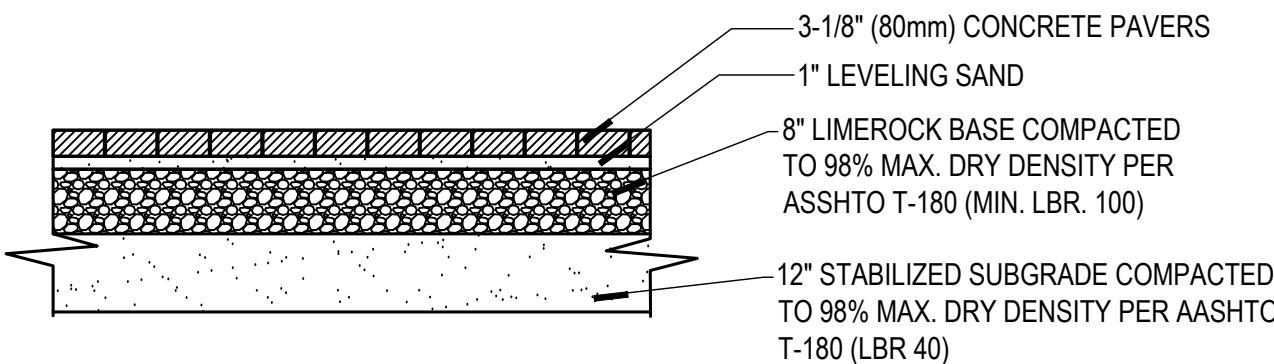


10 PAVER EDGE RESTRAINT NTS



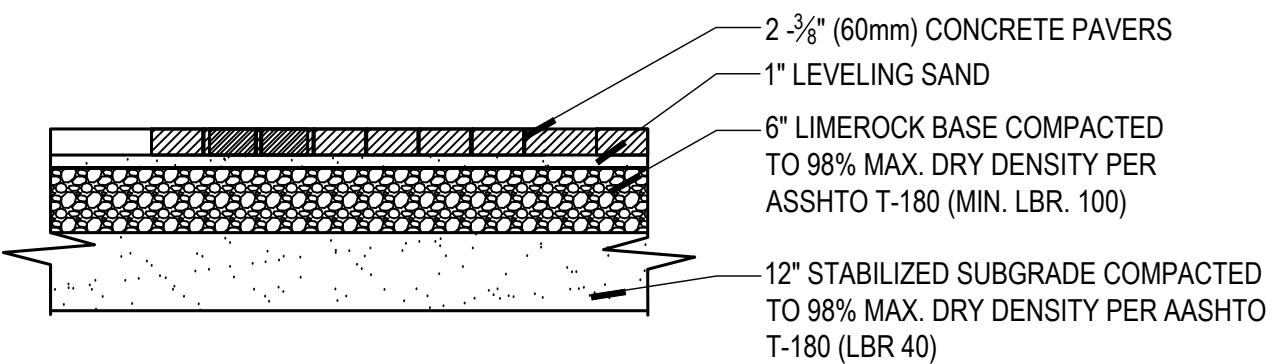
- NOTES:
- MANUFACTURER: LANDSCAPE FORMS
 - MODEL: EMERSON, SURFACE MOUNT
 - COLOR: BLACK POWDERCOATED
 - SIZE: 4' W X 30" H X 20" D
 - EACH RACK ACCOMMODATES 2 BIKES

3 BIKE RACK NTS



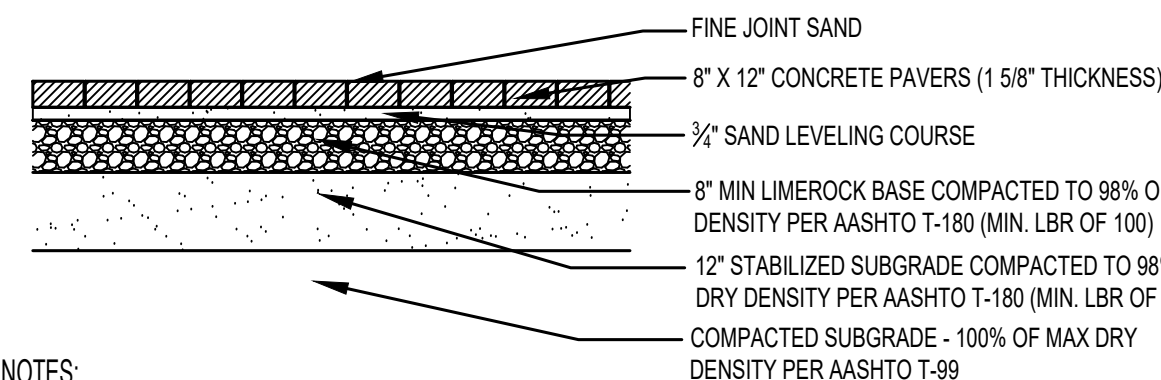
- NOTES:
- REFER TO SPECIFICATION REGARDING CONCRETE PAVER INSTALLATION
 - NO CUT PAVER LESS THAN $\frac{1}{2}$ ORIGINAL SIZE SHALL BE UTILIZED.
 - SUBSEQUENT TO INSTALLATION APPROVAL, PAVERS TO BE SEALED WITH A MATTE SEALER.
 - CONTRACTOR TO SUBMIT CUTSHEET OF SEALER FOR APPROVAL.
 - POLYMERIC SAND TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
 - CONTRACTOR TO PROVIDE A MINIMUM 4'X4' MOCKUP OF ALL PAVER TYPES FOR APPROVAL.
 - CONTRACTOR TO HAVE PAVER INSTALLATION INSPECTED BY OWNER/ARCHITECT PRIOR TO SEALING.
- NOTES:
- REFER TO PLANS FOR LOCATION
 - SUBSEQUENT TO INSTALLATION, PAVERS TO BE SEALED WITH A MATTE SEALER.
 - NO CUT PAVER LESS THAN $\frac{1}{2}$ ORIGINAL SIZE SHALL BE UTILIZED.

7 VEHICULAR PAVERS NTS



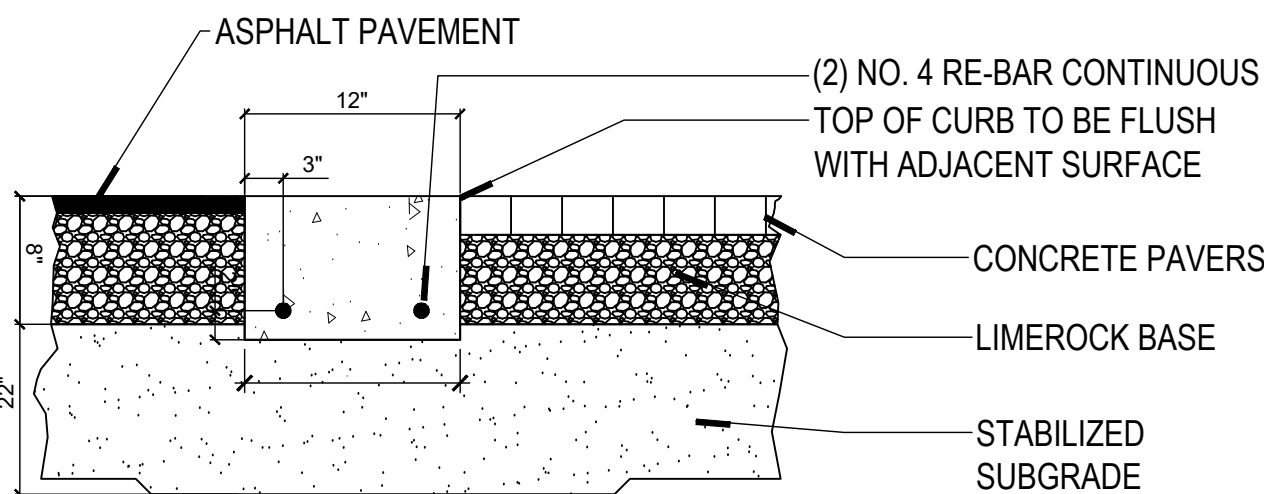
- NOTES:
- REFER TO SPECIFICATION REGARDING CONCRETE PAVER INSTALLATION
 - NO CUT PAVER LESS THAN $\frac{1}{2}$ ORIGINAL SIZE SHALL BE UTILIZED.
 - SUBSEQUENT TO INSTALLATION APPROVAL, PAVERS TO BE SEALED WITH A MATTE SEALER.
 - CONTRACTOR TO SUBMIT CUTSHEET OF SEALER FOR APPROVAL.
 - POLYMERIC SAND TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
 - CONTRACTOR TO PROVIDE A MINIMUM 4'X4' MOCKUP OF ALL PAVER TYPES FOR APPROVAL.
 - CONTRACTOR TO HAVE PAVER INSTALLATION INSPECTED BY OWNER/ARCHITECT PRIOR TO SEALING.
- NOTES:
- REFER TO PLANS FOR LOCATION
 - SUBSEQUENT TO INSTALLATION, PAVERS TO BE SEALED WITH A MATTE SEALER.
 - NO CUT PAVER LESS THAN $\frac{1}{2}$ ORIGINAL SIZE SHALL BE UTILIZED.

8 PEDESTRIAN PAVERS NTS



- NOTES:
- SEE CIVIL DETAILS FOR CONSTRUCTABILITY.
 - SUBSEQUENT TO INSTALLATION, PAVERS TO BE SEALED WITH A MATTE SEALER.
 - NO CUT PAVER LESS THAN $\frac{1}{2}$ ORIGINAL SIZE SHALL BE UTILIZED.
 - A 4'X4' SAMPLE FOR EACH PAVING TYPE SHALL BE CONSTRUCTED ON SITE FOR APPROVAL BY LANDSCAPE ARCHITECT AND KEPT ON SITE FOR THE DURATION OF CONSTRUCTION.
 - THE ALLOWABLE FOR TOLERANCE FOR THE FINAL GRADE OF THE FINISHED PAVERS SHALL NOT EXCEED $\frac{3}{8}$ INCH OVER 10 FEET.
 - ALL PAVERS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERLOCKING CONCRETE PAVEMENT INSTITUTE STANDARDS.

11 POOL DECK PAVER SECTION NTS



- NOTES:
- LIMEROCK BASE, MIN. LBR 100 COMPACTED TO 98% OF MAX. DENSITY AS DETERMINED BY AASHTO T-180.
 - 12" STABILIZED SUBGRADE, MIN. LBR 40 COMPACTED TO 98% OF MAX. DENSITY AS DETERMINED BY AASHTO T-180.

12 12" CONC. HEADER CURB BETWEEN ASPHALT AND PAVERS NTS



- NOTES:
- PLANTER MATERIAL: CAST IN PLACE CONCRETE
 - FINISH: SMOOTH STUCCO
 - COLOR: TO MATCH ARCH.
 - BENCH: STAINED WOOD
 - PLANTER WALL: 30" HT.
 - BENCH SIZE: 24" HT. x 24" WIDTH

14 RAISED PLANTER WITH BUILT-IN SEAT NTS



- NOTES:
- MATERIAL: ALUMINUM
 - MODEL: CUSTOM
 - COLOR: BLACK POWDERCOATED
 - SIZE: 12-14' APPROX. WIDTH x 10'-14' APPROX. HT.

15 BOUGAINVILLE SCULPTURE TRELLIS NTS

No.	REVISIONS	DATE	BY

SCALE: N.T.S.
DESIGNED BY: EWS
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PAK: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS NO. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C000114

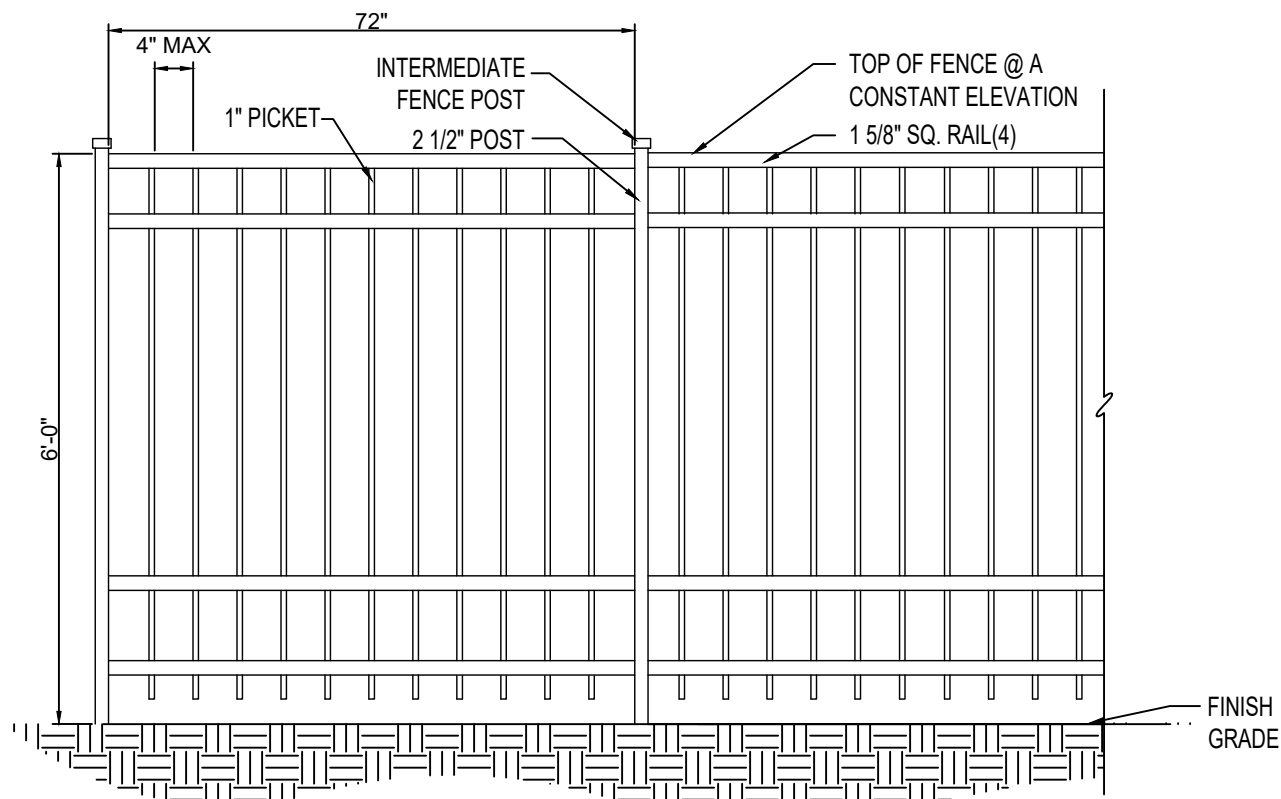
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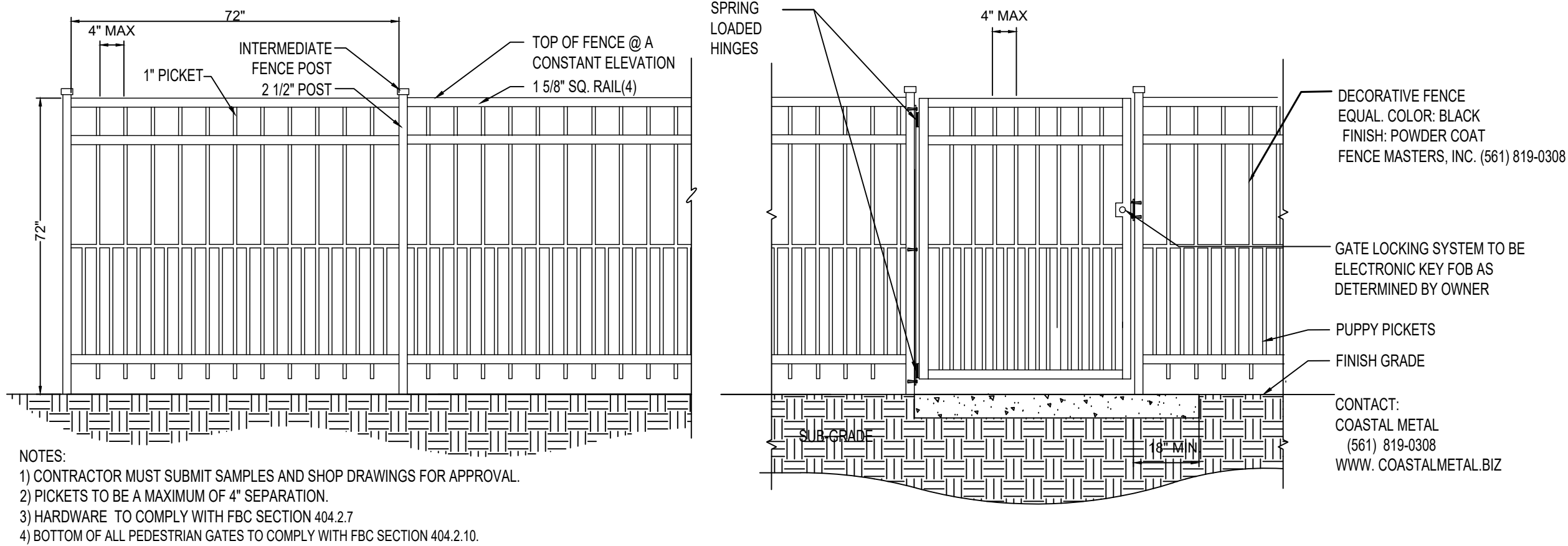
WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

SITE AMENITIES/ HARDSCAPE
DETAILS

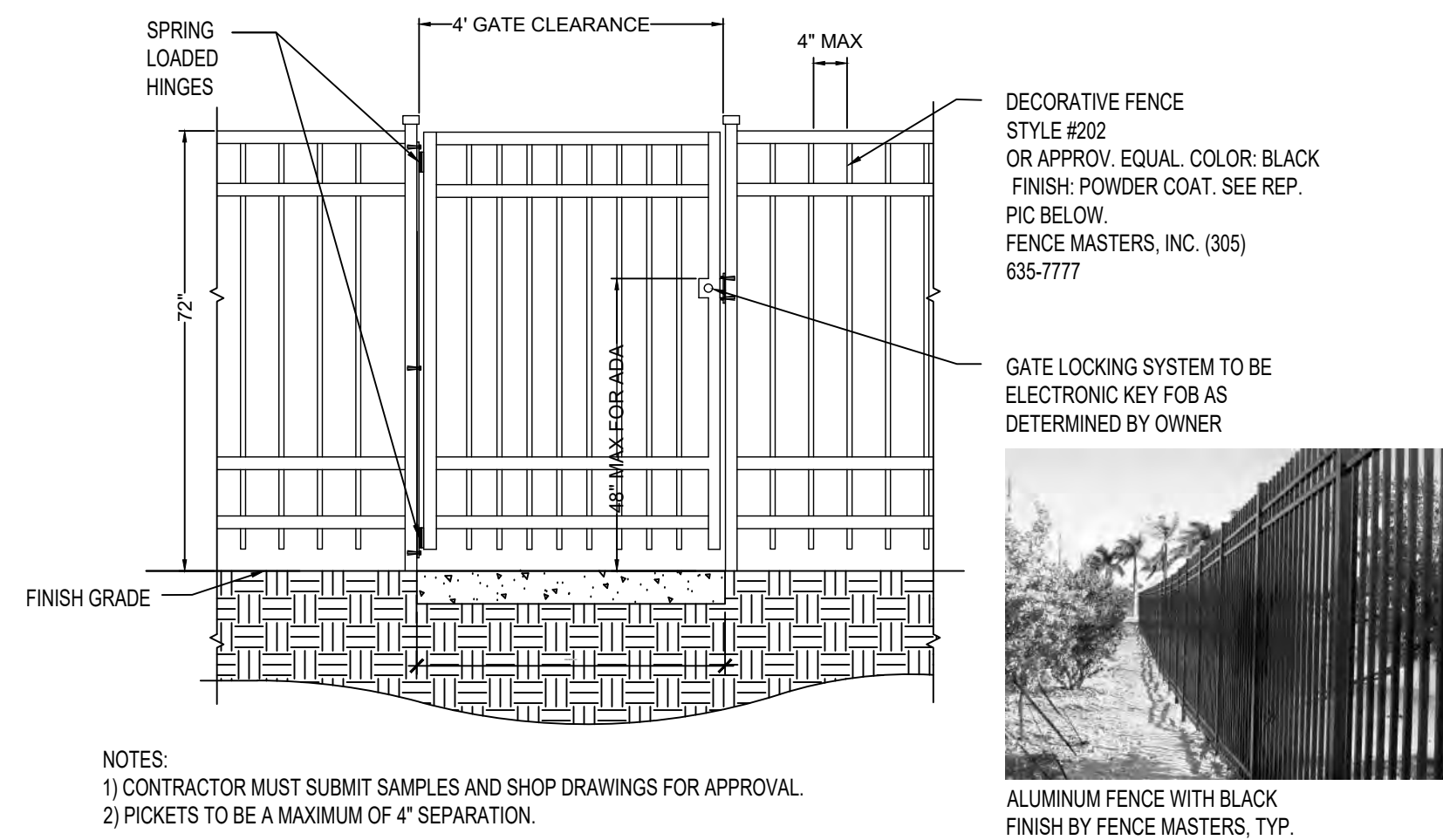
SEAL: 	DATE: 06/09/2026
PROJECT NO. 21-0061-001-02	DRAWING NO. HPD-1



1 ALUMINUM PICKET POOL & SECURITY FENCE
DETAIL
NOTE: NOT A CITY STANDARD DETAIL



4 DOG PARK FENCE
DETAIL
NOTE: NOT A CITY STANDARD DETAIL



2 6' HT POOL GATE
DETAIL
NOTE: NOT A CITY STANDARD DETAIL



5 CURVILINEAR CONCRETE BENCH
REFERENCE IMAGE
NOTE: NOT A CITY STANDARD DETAIL



3 DOGGY WASTE STATION
NOTE: NOT A CITY STANDARD DETAIL



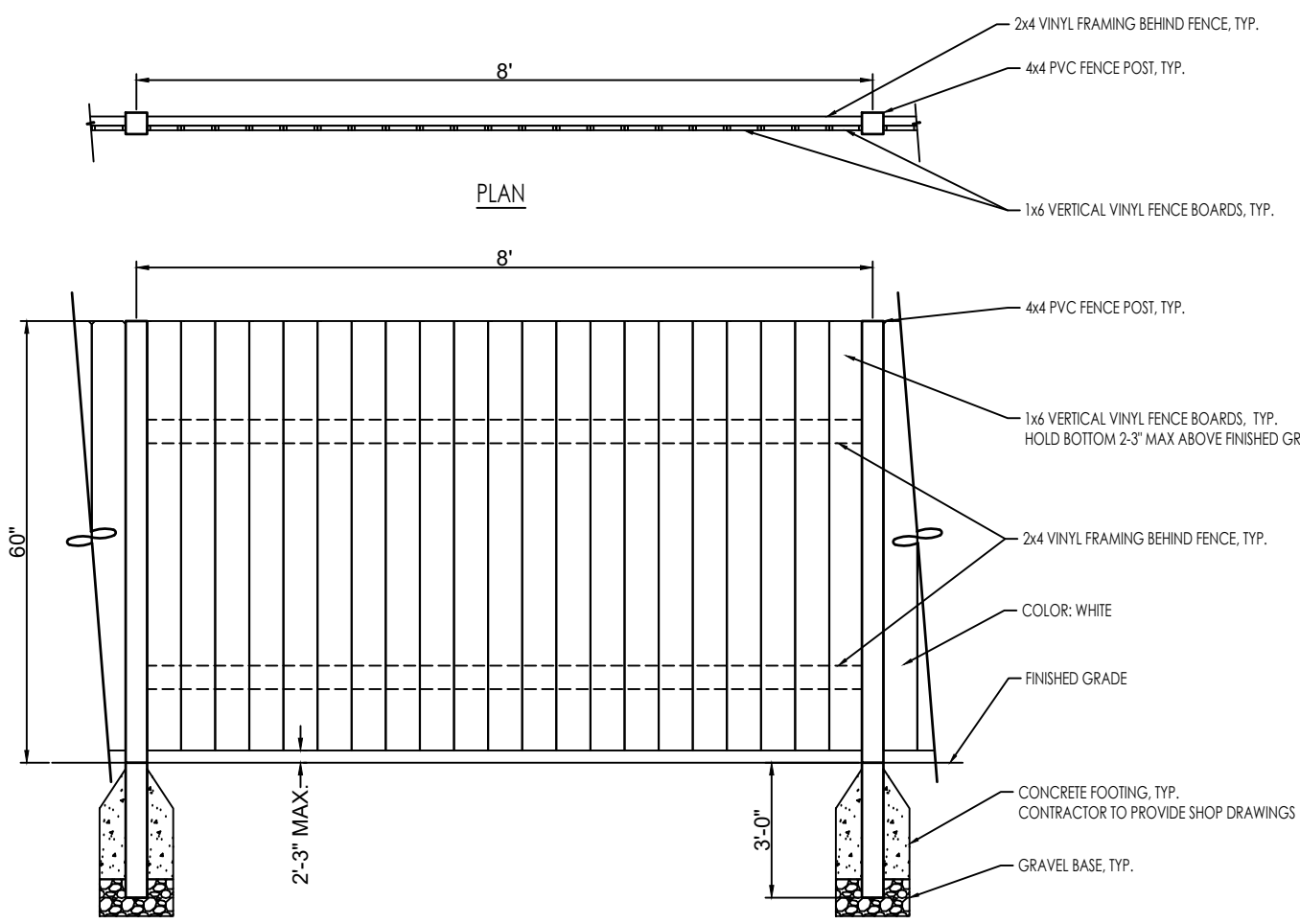
6 POOL WATER WALL DETAIL
REFERENCE IMAGE
NOTE: NOT A CITY STANDARD DETAIL



7 FIRE TABLE
REFERENCE IMAGE
NOTE: NOT A CITY STANDARD DETAIL



8 SITE BOLLARD
NOTE: NOT A CITY STANDARD DETAIL



9 VINYL FENCE DETAIL
NOTE: NOT A CITY STANDARD DETAIL

- NOTES:
- MODEL: MOJITO 40
 - COLOR: GRAPHITE
 - SIZE: 39.4" L x 39.4" W x 13.3" HT.
 - FUEL: BIOETHANOL BURNER

- NOTES:
- MANUFACTURER: CALPIPE SECURITY BOLLARDS
 - MODEL: SSF04080-SCH 80
 - COLOR: POLISHED STAINLESS STEEL
 - SIZE: 36" HEIGHT x 4" DIA.

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No.	REVISIONS	DATE	BY

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P.A.K. (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS NO. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C000114

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WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

SITE AMENITIES/ HARDSCAPE
DETAILS

SEAL: 	DATE: 06/09/2026
ERIK W. SCHOFIELD Florida R.L.A. No. 6667682	DRAWING NO. HPD-2
PROJECT NO. 21-0061-001-02	



ENTRY VEHICULAR PAVERS

MANUFACTURER: BELGARD
COLOR: KNIGHTSBRIDGE
SIZE: 4"X8", 80 MM (3 1/8")
PATTERN:HERRINGBONE, 45 DEGREE
SOLDIER COURSE BORDER



MANUFACTURER: QCP FURNISHINGS
MODEL: KNITTS QR-KNITS2615PLC,
QRKNITS-3622PLC, QR-KNITS 2713PLC
MATERIAL: PRECAST CONCRETE
COLOR: NATURAL
SIZE: 26" W. x 15" HT., 36" WIDTH x 22" HT.,
& 27" WIDTH x 13" HT.

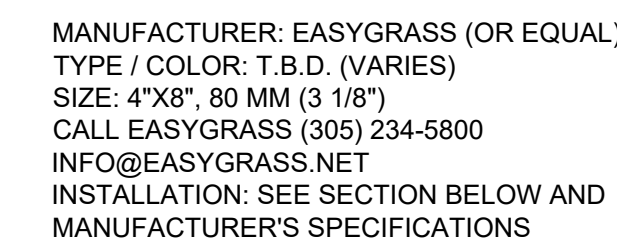


ENTRANCE PEDESTRIAN PAVERS

MANUFACTURER: BELGARD
FIELD COLOR: TITANIUM
BORDER COLOR: TITANIUM
SIZE: 4"x8", 60 MM (2 3/8")
PATTERN: STAGGERED RUNNING BOND
SOLDIER COURSE BORDER



DROP-OFF VEHICULAR PAVERS
MANUFACTURER: BELGARD
FIELD COLOR: TITANIUM
BORDER COLOR: CHARCOAL
SIZE: 4"X8", 80 MM (3 1/8")
PATTERN:HERRINGBONE, 45 DEGREE
SOLDIER COURSE BORDER



MANUFACTURER: BELGARD
FIELD COLOR: TITANIUM ALTERNATING
WITH KNIGHTSBRIDGE IN 2" WIDE BANDS
BORDER COLOR: CHARCOAL
SIZE: 4"x8", 80 MM (3 1/8")
PATTERN:DOUBLE RUNNING BOND
PERPENDICULAR TO BORDER

'WHERE NON-CITY STANDARD DETAILS PROVIDED
CONFLICT WITH THE CITY'S STANDARD DETAILS,
THE REQUIREMENTS OF THE CITY'S STANDARD
DETAILS SHALL SUPERSEDE'

No.	REVISIONS	DATE	BY

SCALE:	N.T.S.
DESIGNED BY:	EWS
DRAWN BY:	EWS / AR
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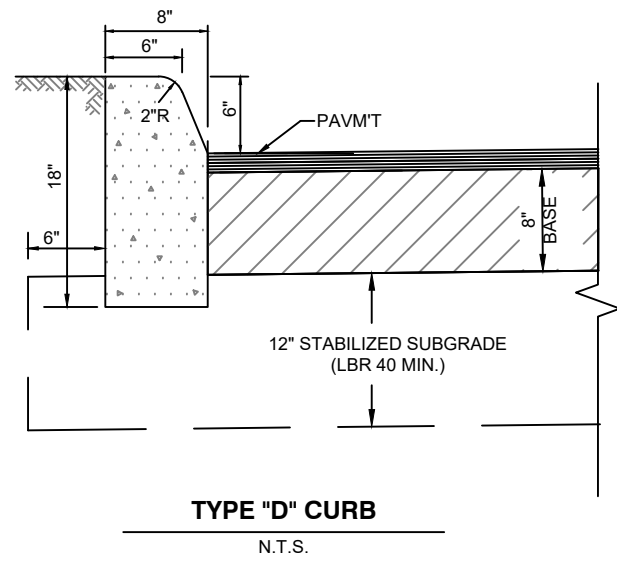
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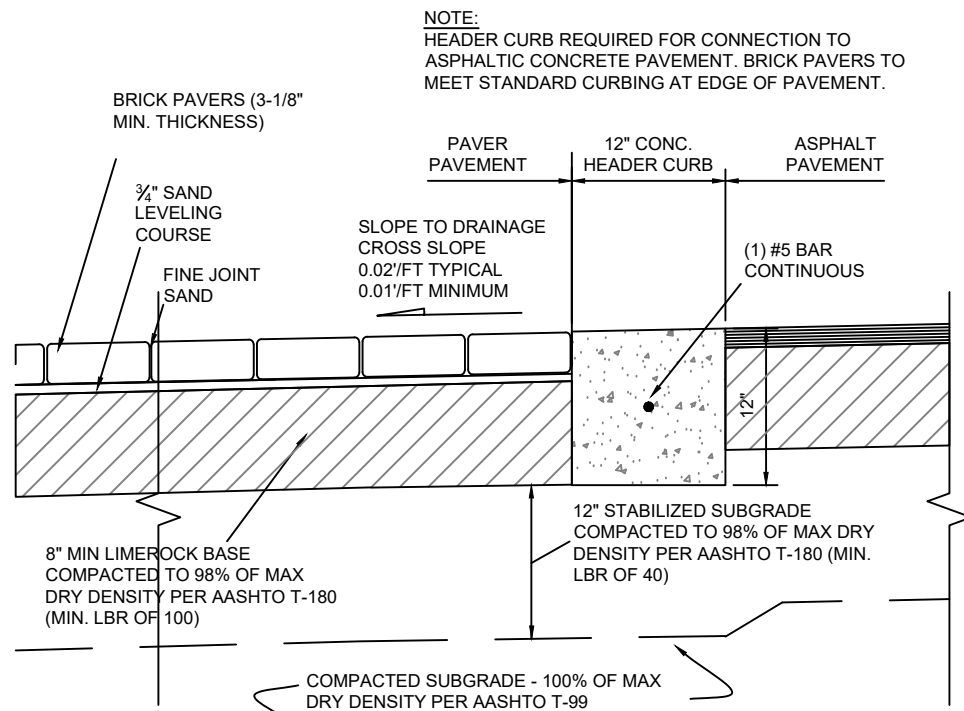
HARDSCAPE DETAILS

SEAL: 	DATE: 06/09/2026
ERIK W. SCHOFIELD Florida R.L.A. No. 6667682	DRAWING NO. HPD-3
PROJECT NO. 21-0061-001-02 21-0061-001-02	



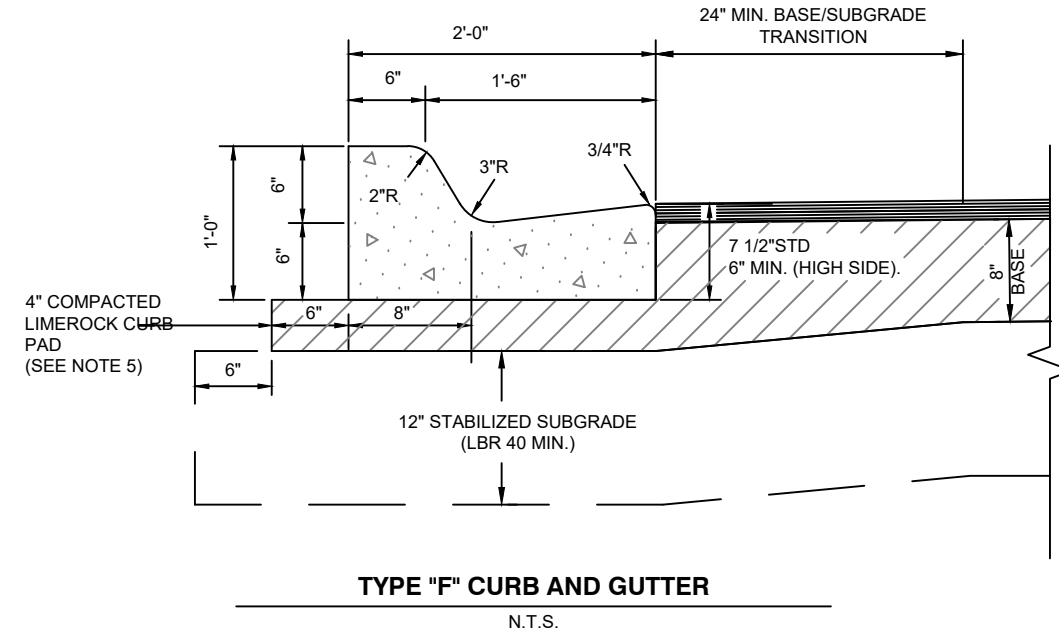
- CURB NOTES:**
1. PROVIDE 1/4" WIDE CONTRACTION JOINT A MINIMUM OF 1-1/2" DEEP AND AT 10' SPACING MAXIMUM FOR ALL CURBS.
 2. CONCRETE SHALL BE 3000 P.S.I. MIN. @ 28 DAYS.
 3. TYPE "D" CURB FOR PARKING LOTS MAY BE INSTALLED AS "TRENCHED" D CURB WITH EXTRUDED TOP AT THE CONTRACTOR'S OPTION. TRENCHED CURB REQUIRES CITY TRENCH INSPECTION AND APPROVAL. EXTRUDED CURB MUST BE PLACED WITHIN 15 MINUTES OF PLACEMENT OF TRENCH CONCRETE. EXTRUDED CURB AND TRENCH CONCRETE SHALL BE MONOLITHIC.

1 TYPE 'D' CURB DETAIL NTS



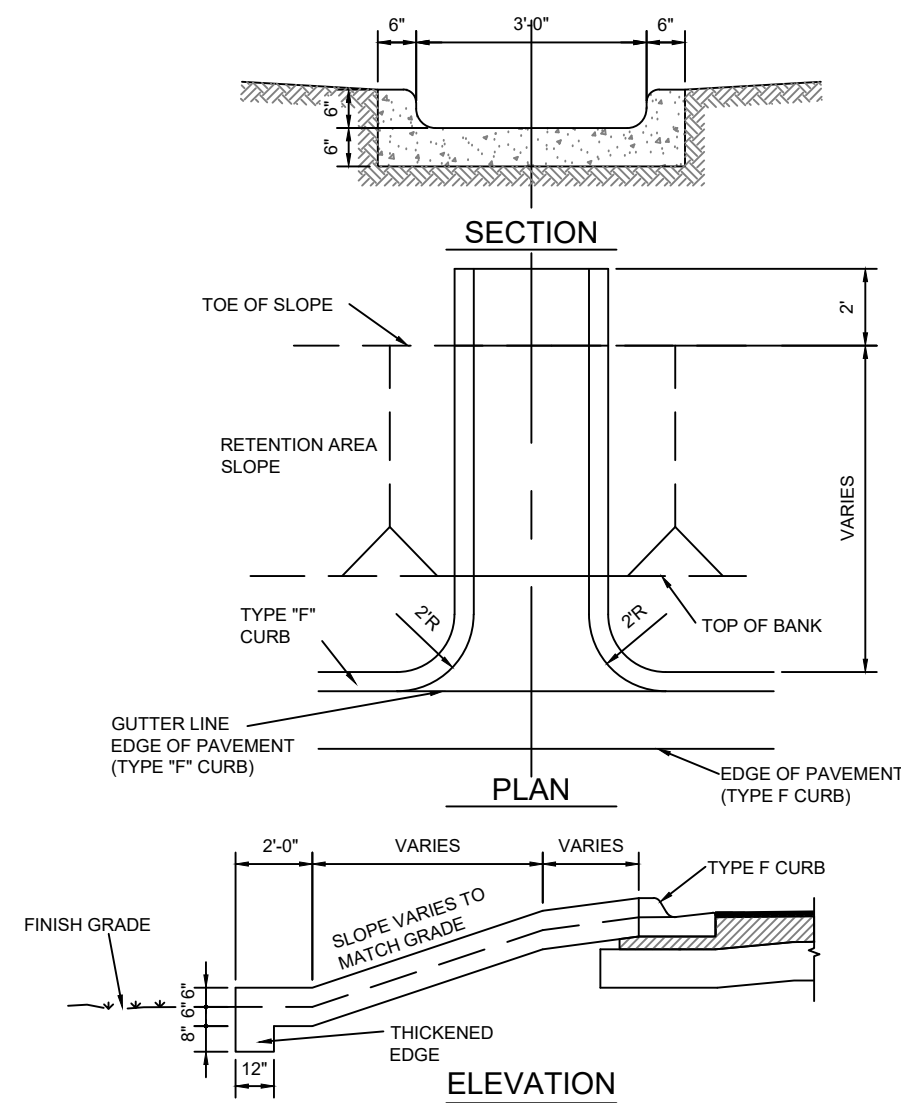
- NOTES:**
1. STABILIZED SUBGRADE SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 40 AND IS REQUIRED FOR ALL NEW PAVEMENT CONSTRUCTION. ALL STABILIZED SUBGRADE SHALL BE STRING LINED FOR GRADE AND PASS ALL REQUIRED DENSITY TESTING PRIOR TO PLACEMENT OF CONCRETE PAVEMENT. ALL AREAS FOUND TO BE ABOVE OR BELOW THE DESIGN GRADE MUST BE CORRECTED AND REINSPECTED PRIOR TO PAVEMENT CONSTRUCTION.
 2. LIMEROCK BASE FOR ROADWAYS AND PARKING LOTS SHALL BE A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM. BASE THICKNESS GREATER THAN 6" SHALL BE INSTALLED IN EQUAL LIFTS NOT EXCEEDING 6".
 3. BASE PRIME COAT WILL NOT BE REQUIRED FOR BRICK PAVEMENT.
 4. SHOP DRAWING AND SUBMITTALS REQUIRED FOR THE PROPOSED PAVEMENT MODULES, PAVEMENT PATTERN, LEVELING SAND AND JOINT SAND MATERIALS. PAVERS SHALL BE LAID LEVEL TO ALL ADJACENT PAVERS AND TO THE FINISH GRADE WITH A TOLERANCE OF 1/4".
 5. PAVEMENT SHALL BE PROTECTED FROM ALL TRAFFIC UNTIL COMPLETED AND APPROVED FOR USE BY THE CITY ENGINEERING DIVISION INSPECTOR.
 6. USE OF BRICK PAVEMENT WILL REQUIRE APPROVAL BY THE CITY. APPROVAL SHALL INCLUDE LOCATION, COLOR AND PAVEMENT PATTERN.

5 BRICK PAVEMENT DETAIL NTS



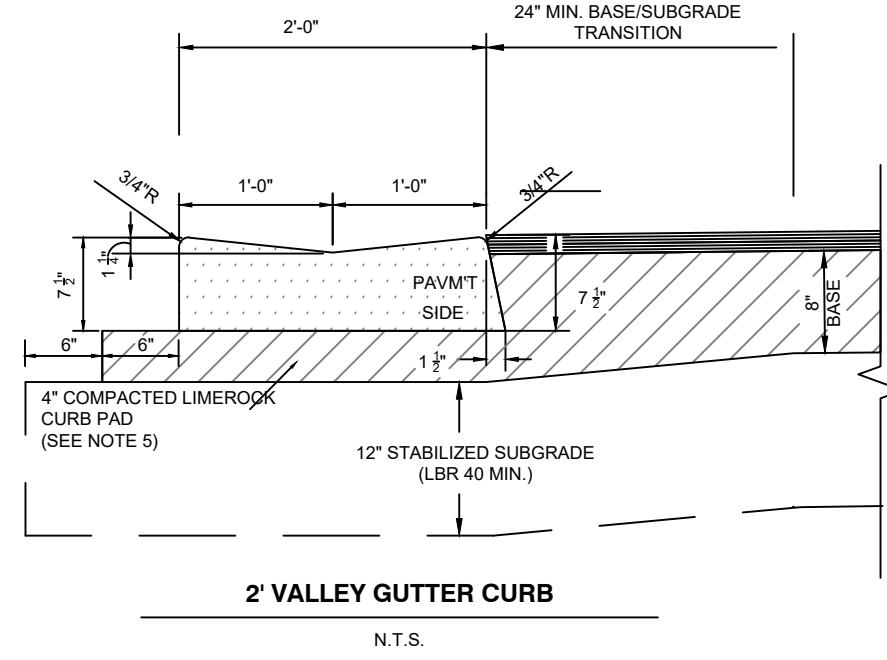
- CURB NOTES:**
1. WHEN USED ON THE HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF TYPE "F" GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT.
 2. PROVIDE 1/4" WIDE CONTRACTION JOINT A MINIMUM OF 1-1/2" DEEP AND AT 10' SPACING MAXIMUM FOR ALL CURBS.
 3. CONCRETE SHALL BE 3000 P.S.I. MIN. @ 28 DAYS.
 4. FOR COMMUNITY DEVELOPMENT DEPARTMENT CAPITAL PROJECT DIVISION PROJECTS COST OF CURB PAD TO BE INCLUDED IN COST OF CURB.
 5. COMPACT CURB PAD TO A DENSITY OF 98% OF AASHTO T-180 SPECIFICATION.

2 TYPE 'F' CURB AND GUTTER DETAIL NTS



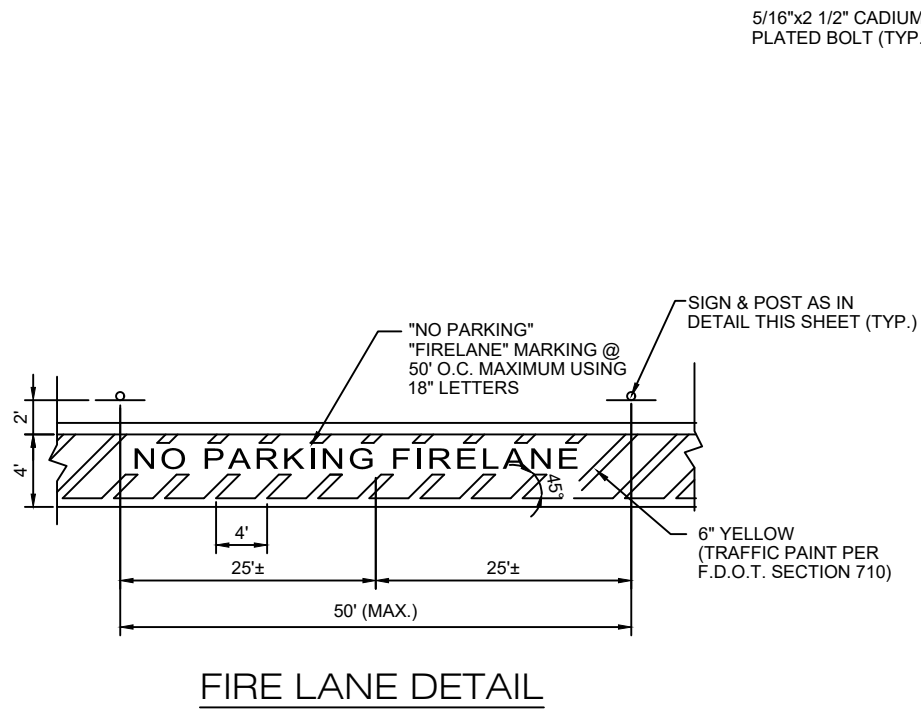
- NOTES:**
1. CONCRETE SHALL BE 3000 P.S.I. MIN. @ 28 DAYS. BROOM FINISH AND TOOL EDGES.
 2. SLOPE OF FLUME SHALL MATCH EXISTING GROUND SLOPE OR 2% MINIMUM.
 3. FLUME SHALL BE CONSTRUCTED ON A COMPACTED SUBGRADE.

6 CONCRETE FLUME DETAIL NTS

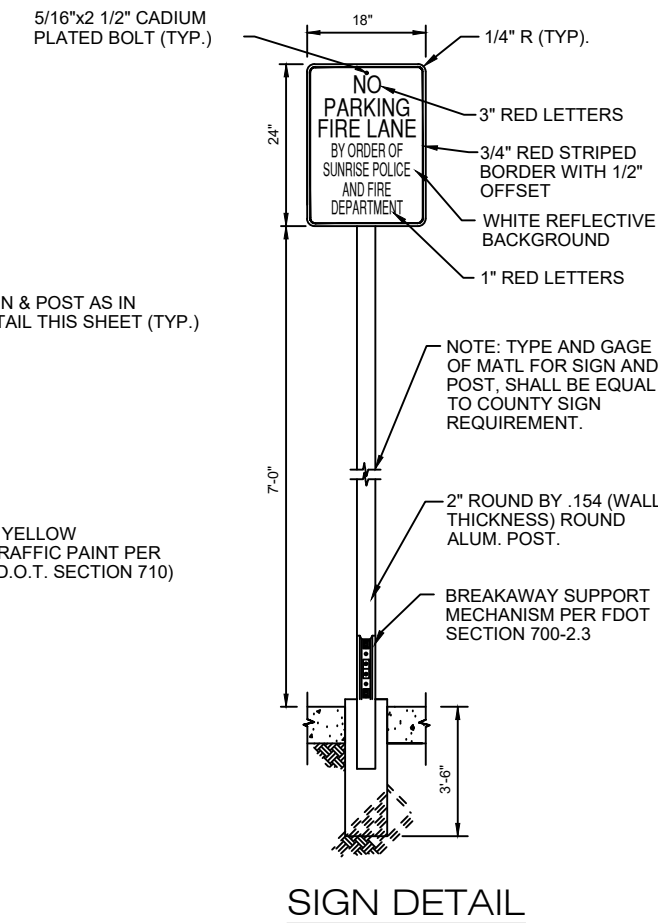


- CURB NOTES:**
1. PROVIDE 1/4" WIDE CONTRACTION JOINT A MINIMUM OF 1-1/2" DEEP AND AT 10' SPACING MAXIMUM FOR ALL CURBS.
 2. CONCRETE SHALL BE 3000 P.S.I. MIN. @ 28 DAYS.
 3. FOR COMMUNITY DEVELOPMENT DEPARTMENT CAPITAL PROJECT DIVISION PROJECTS COST OF CURB PAD TO BE INCLUDED IN COST OF CURB.
 4. SEE PAVEMENT MINIMUM PAVEMENT DESIGN SECTION FOR COMPACTION REQUIREMENTS.
 5. COMPACT CURB PAD TO A DENSITY OF 98% OF AASHTO T-180 SPECIFICATION.

3 VALLEY GUTTER CURB DETAIL NTS

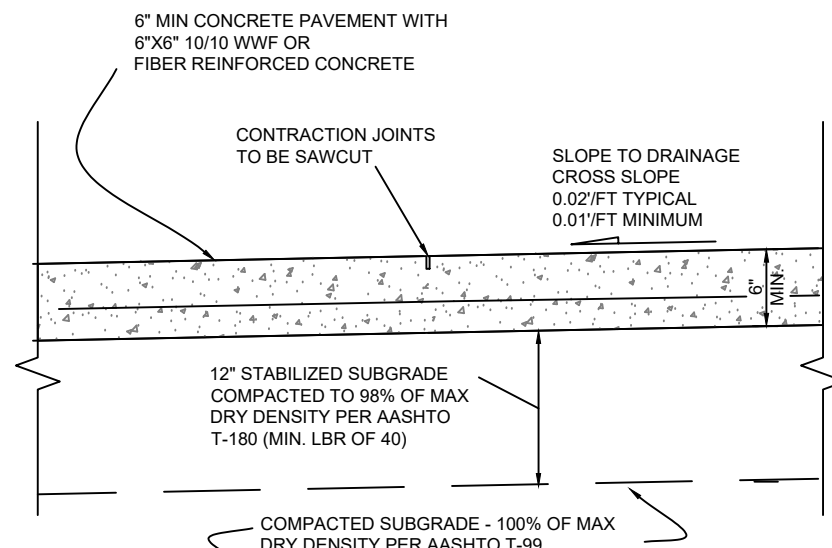


FIRE LANE DETAIL



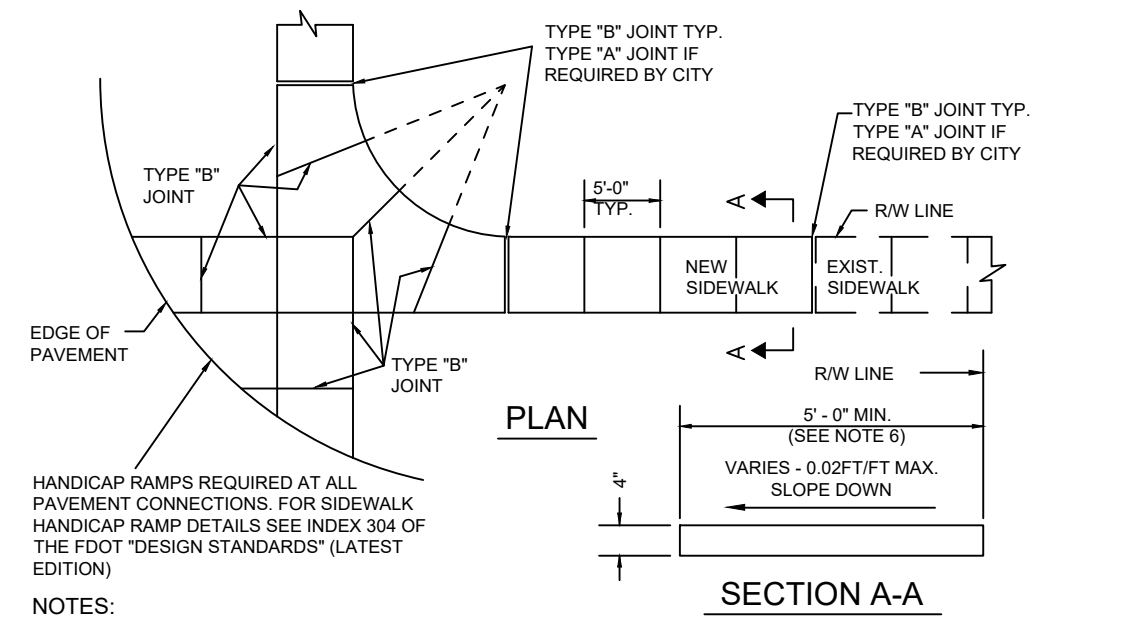
SIGN DETAIL

7 FIRE LANE STRIPING DETAIL NTS



- NOTES:**
1. STABILIZED SUBGRADE SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 40 AND IS REQUIRED FOR ALL NEW PAVEMENT CONSTRUCTION. ALL STABILIZED SUBGRADE SHALL BE STRING LINED FOR GRADE AND PASS ALL REQUIRED DENSITY TESTING PRIOR TO PLACEMENT OF CONCRETE PAVEMENT. ALL AREAS FOUND TO BE ABOVE OR BELOW THE DESIGN GRADE MUST BE CORRECTED AND REINSPECTED PRIOR TO CONCRETE PAVEMENT CONSTRUCTION.
 2. CONCRETE PAVEMENT SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
 3. DESIGN OF CONSTRUCTION, EXPANSION AND CONTRACTION JOINTS AND LOCATIONS SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER. DESIGN SHALL PROVIDE UNIFORM SPACING AND ACHIEVE CONTROLLED CRACKING. EXPANSION JOINTS ARE REQUIRED WHERE THE CONCRETE PAVEMENT MEETS CURBING.
 4. ALL CONCRETE PAVEMENT SHALL BE CURED IN ACCORDANCE WITH FOOT SPECIFICATIONS AND SHALL HAVE A BROOM FINISH.
 5. COLORED AND/OR STAMPED CONCRETE PAVEMENT WILL REQUIRE CITY APPROVAL OF BOTH THE COLOR AND STAMP PATTERN.
 6. CONCRETE PAVEMENT SHALL BE SAWCUT ALONG ALL CITY OF SUNRISE EASEMENT LINES.
 7. USE OF CONCRETE PAVEMENT TO BE APPROVED BY THE CITY OF SUNRISE.

4 CONCRETE PAVEMENT DETAIL NTS



- NOTES:**
1. FOR NEW SIDEWALK LOCATIONS SUBGRADE BELOW SIDEWALK SHALL BE A MIN. L.B.R.-40 COMPACTED TO 98% OF MAX. DENSITY PER A.A.S.H.T.O. T-180.
 2. CONCRETE TO BE 3,000 P.S.I. @ 28 DAYS.
 3. ALL JOINTS AND EDGES OF NEW SIDEWALK SHALL BE TOOLED. NO SAWCUT JOINTS ARE PERMITTED IN NEW SIDEWALK.
 4. THE USE OF WIRE MESH REINFORCEMENT IN SIDEWALK WILL NOT BE PERMITTED.
 5. SIDEWALK SLOPES SHALL MEET THE REQUIREMENTS OF THE "AMERICAN WITH DISABILITIES ACT". CROSS SLOPES SHALL NOT EXCEED 0.02'/FT (2.0%).
 6. ALL SIDEWALKS SHALL BE 4" THICK EXCEPT AT DRIVEWAY CROSSINGS AND OTHER VEHICULAR CROSSING AREAS WHERE THE SIDEWALK SHALL BE A MINIMUM OF 6" THICK.
 7. MINIMUM WIDTH OF SIDEWALK PLACED AT BACK OF CURB IS 6'-0".
 8. FOR TYPE "A" EXPANSION JOINTS PRE-MOULDED EXPANSION MATERIAL IS NOT PERMITTED. EXPANSION JOINTS TO BE USED ONLY IF APPROVED BY THE ENGINEERING DIVISION AND SHALL BE SEALED WITH APPROVED FLEXIBLE RUBBERIZED CAULK.
 9. SIDEWALKS SHALL HAVE A LIGHT BROOM FINISH.

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
"A"	ONLY WHERE DIRECTED BY THE CITY
"B"	5'-0" MINIMUM CENTER TO CENTER ON SIDEWALK

8 CONCRETE SIDEWALK DETAIL NTS

NOTES:

"WHERE NON-CITY STANDARD DETAILS PROVIDED CONFLICTS WITH THE CITY'S STANDARD DETAILS, THE REQUIREMENTS OF THE CITY'S STANDARD DETAILS SHALL SUPERSEDE"

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No.	REVISIONS	DATE	BY

SCALE: N.T.S.
DESIGNED BY: EWS
DRAWN BY: EWS / AR
CHECKED BY: SWP

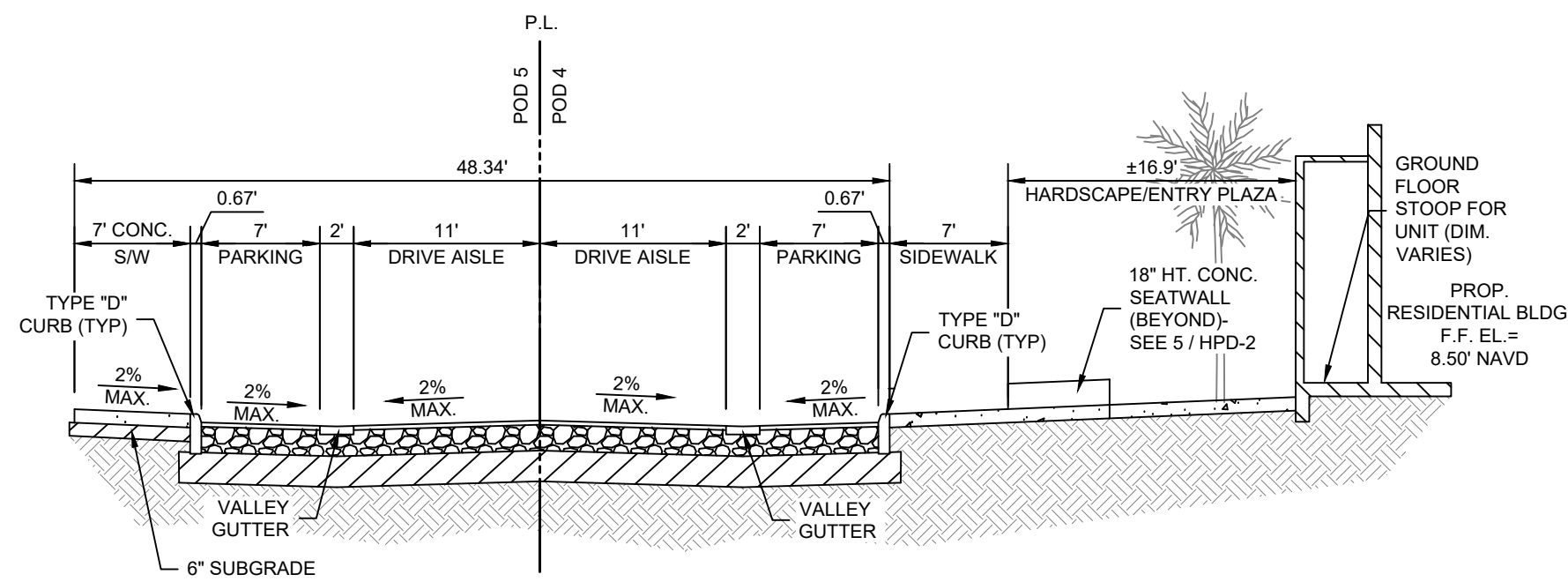
CRAVEN THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS NO. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C000114
MATERIALS, SOME WHEN IN THE POSSESSION OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2011

GL COMMERCIAL
1600 SAWGRASS CORPORATE PKWY #150
SUNRISE, FLORIDA 33323

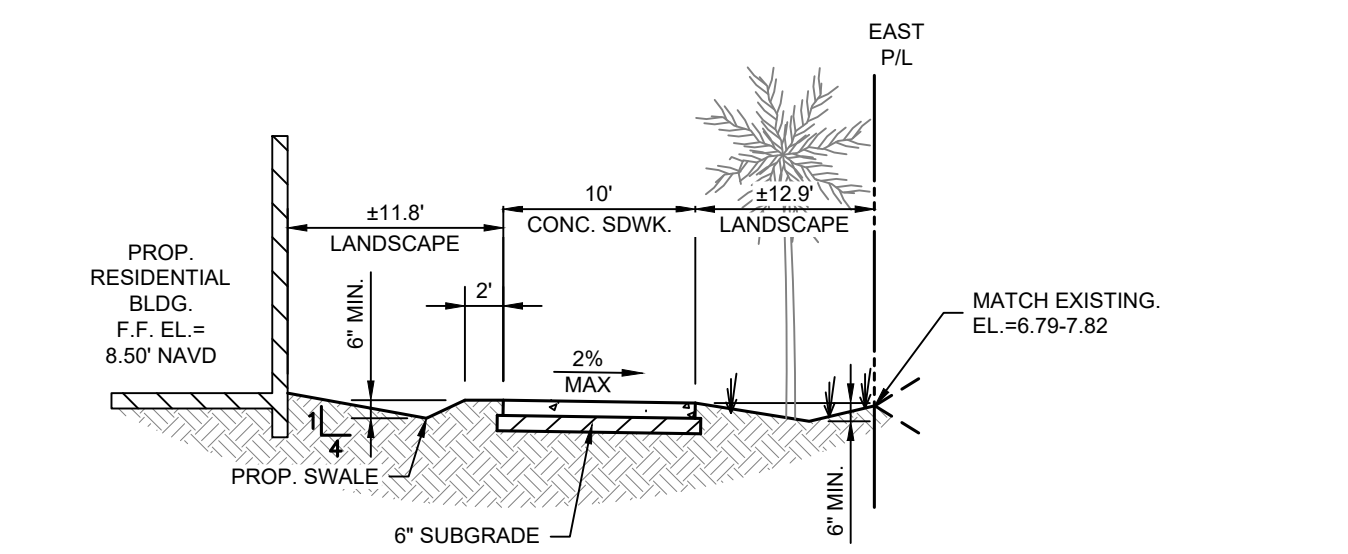
WESTERRA PHASE I - POD 4
SUNRISE, FLORIDA

HARDSCAPE DETAILS

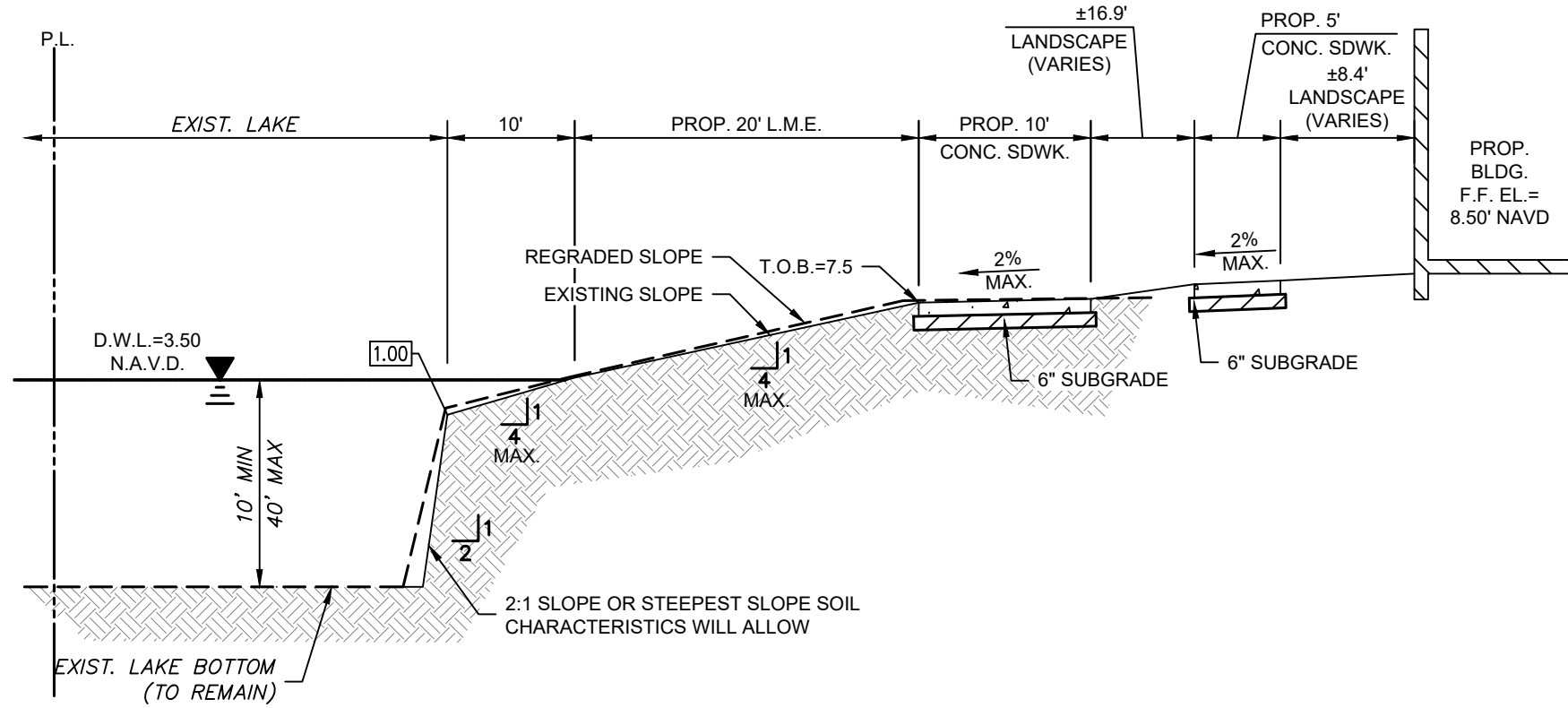
SEAL:	DATE: 06/09/2026
ERIK W. SCHOFIELD Florida R.L.A. No. 6667682	DRAWING NO. HPD-4
PROJECT NO. 21-0061-001-02	



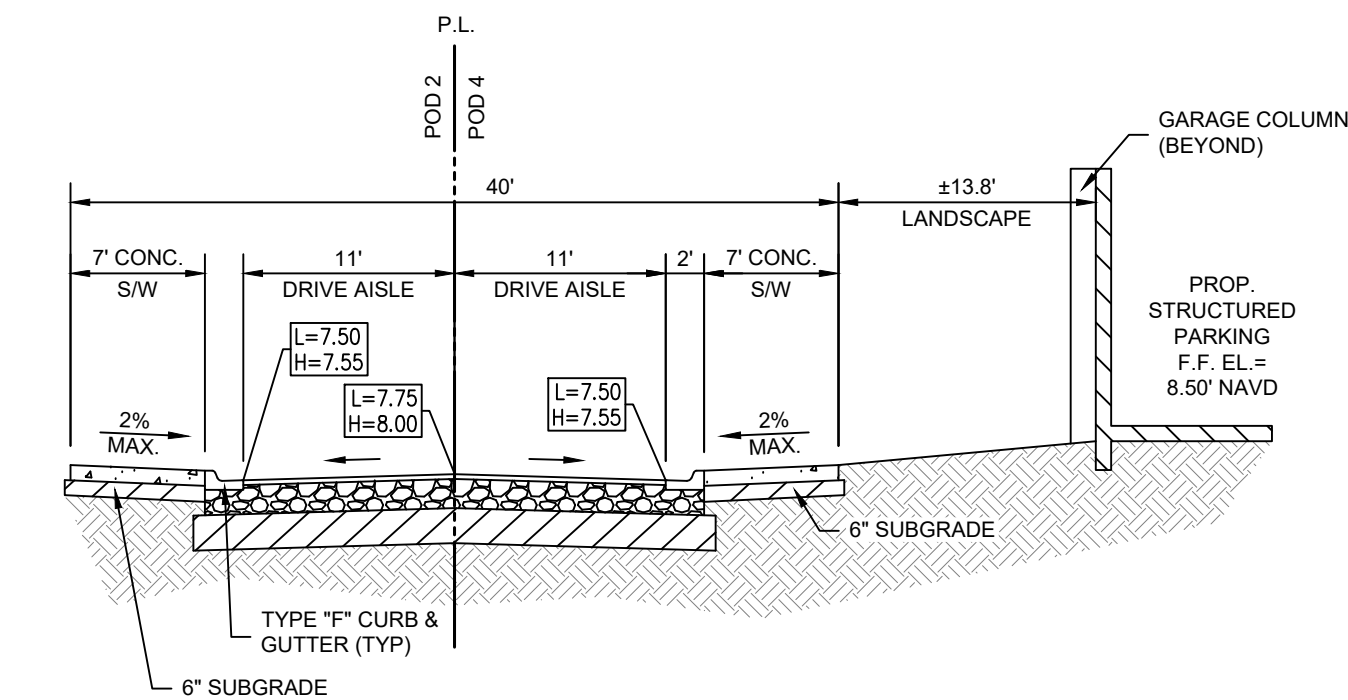
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NOT TO SCALE
NOTE: NOT A CITY STANDARD DETAIL



2 EAST SECTION
NOT TO SCALE
NOTE: NOT A CITY STANDARD DETAIL



3 SOUTH SECTION
NOT TO SCALE
NOTE: NOT A CITY STANDARD DETAIL



4 WEST SECTION
NOT TO SCALE
NOTE: NOT A CITY STANDARD DETAIL

CT4000 Level 2 Commercial Charging Station
Specifications and Ordering Information

Ordering Information
Specify model number followed by the applicable code(s).
The order code sequence is: **Model-Options. Software. Services**
and **Misc** are ordered as separate line items.

Description	Order Code
Model	
1830 mm (6 ft) Single Port Bollard Mount	CT4001-GW1
1830 mm (6 ft) Dual Port Bollard Mount	CT4002-GW1
1830 mm (6 ft) Single Port Wall Mount	CT4003-GW1
1830 mm (6 ft) Dual Port Wall Mount	CT4004-GW1
2440 mm (8 ft) Single Port Bollard Mount	CT4005-GW1
2440 mm (8 ft) Dual Port Bollard Mount	CT4006-GW1
2440 mm (8 ft) Single Port Wall Mount	CT4007-GW1
2440 mm (8 ft) Dual Port Wall Mount	CT4008-GW1
Included	Integral Modern - North America
Misc	Power Management Kit Bollard Concrete Mounting Kit
	CT4000-PMKIT CT4009-CCM

Note: All CT4000 stations include Integral Modern - GW1.

Software & Services

Description	Order Code
ChargePoint Commercial Service Plan	CPCLD-COMMERCIAL-n*
ChargePoint Enterprise Plan	CPCLD-ENTERPRISE-n*
ChargePoint Assure	CT4000-ASSURE-n*
Station Activation and Configuration	CPUSUPPORT-ACTIVE
ChargePoint Station Installation and Validation	CT4000-INSTALLVALID

Note: All CT4000 stations require a network service plan per port.
*Substitute n for desired years (1, 2, 3, 4, or 5 years).

Order Code Examples

If ordering the	The order code is
1830 mm (6 ft) Dual Port Bollard Networked Station with Concrete Mounting Kit	CT4002-GW1 CT4009-CCM
ChargePoint Commercial Service Plan, 3 Year Subscription	CPCLD-COMMERCIAL-3
ChargePoint Station Installation and Validation	CT4000-INSTALLVALID
3 Years of Assure Coverage	CT4000-ASSURES
1830 mm (6 ft) Single Port Wall Mount Networked Station	CT4003-GW1
ChargePoint Commercial Service Plan, 5 Year Subscription	CPCLD-COMMERCIAL-5
5 Years of Assure Coverage	CT4000-ASSURES
Station Activation and Configuration	CPUSUPPORT-ACTIVE

CT4001

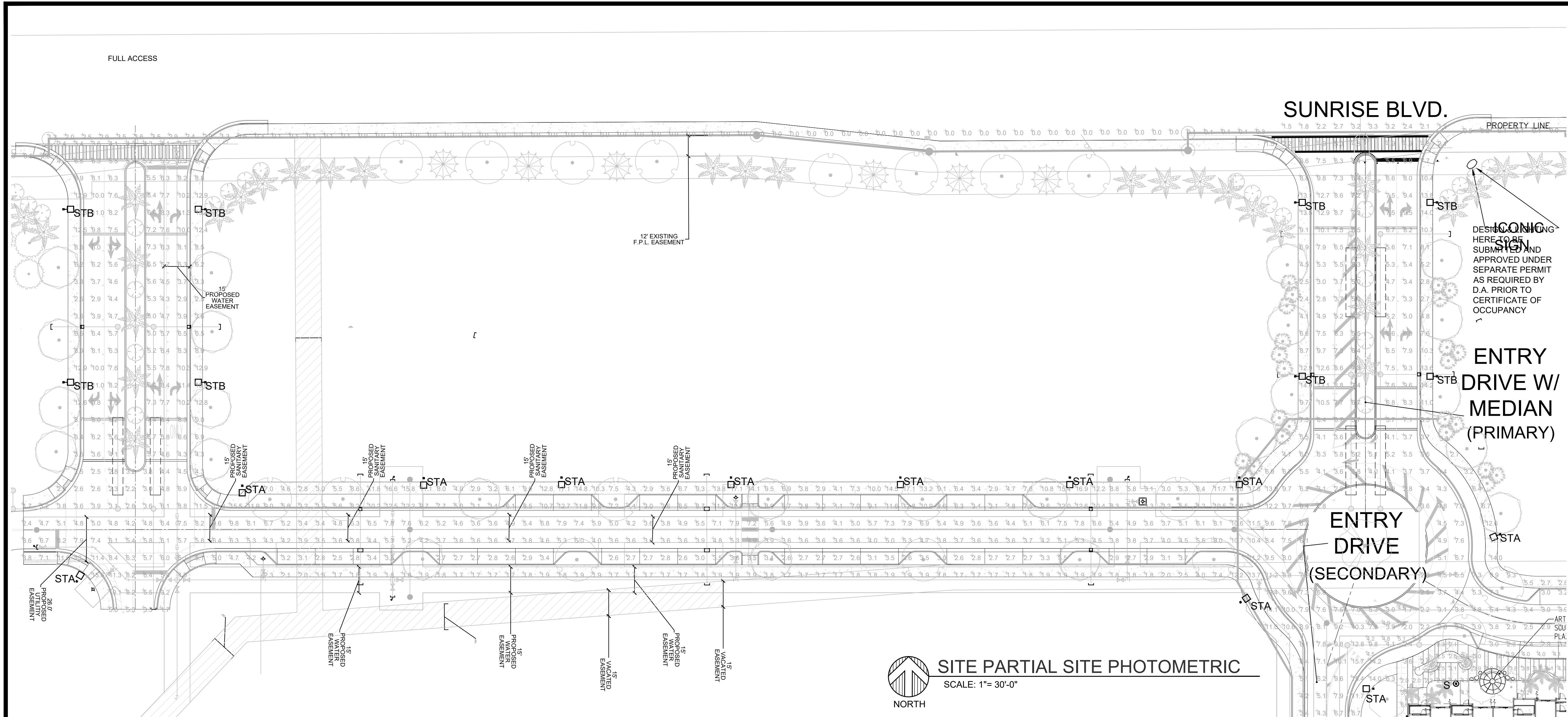
The First ENERGY STAR® Certified EV Charger

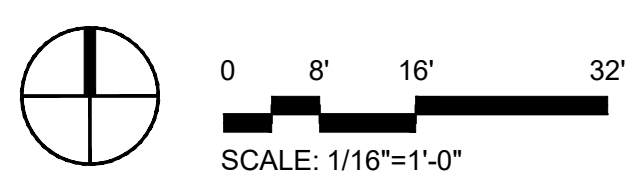
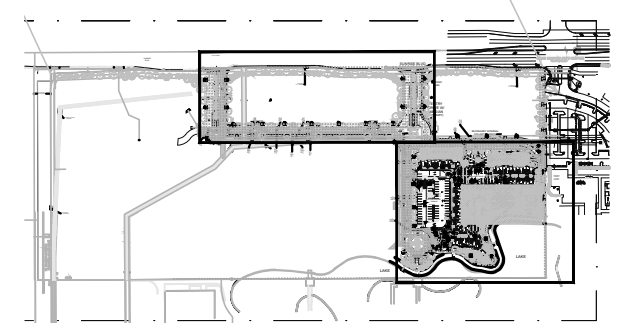
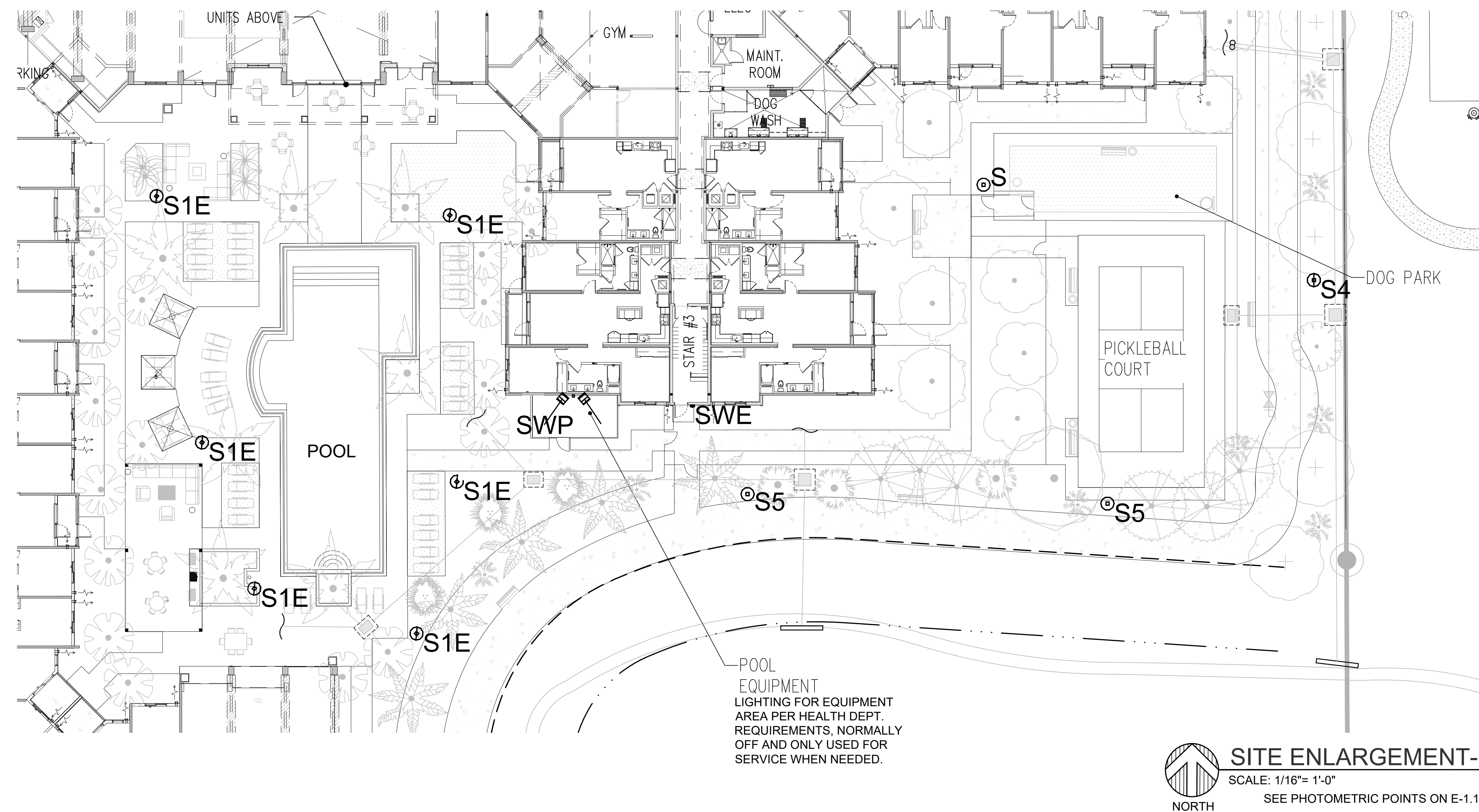
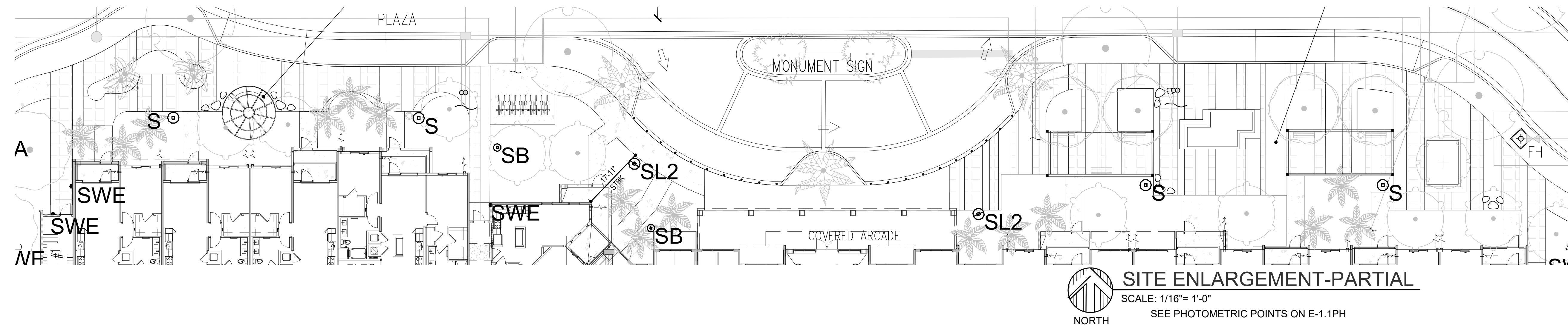
5 EV CHARGER SPEC. SHEET
NOT TO SCALE
NOTE: NOT A CITY STANDARD DETAIL. THIS OR EQUIVALENT TO BE INSTALLED.



OUTDOOR PET WASH STATION
MANUFACTURER: PLAYGROUNDSETC.
CONTACT: (866) 461-2814
ADMIN@PLAYGROUNDSETC.COM
PRODUCT: BSW-0011XX

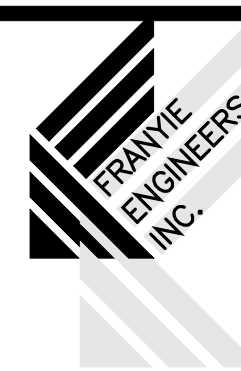
6 OUTDOOR PET WASH
NOT TO SCALE
NOTE: NOT A CITY STANDARD DETAIL. THIS OR EQUIVALENT TO BE INSTALLED.





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No.	REVISIONS	DATE



VIVIANA FRANYIE
PE # 49985 MECH

Certificate of
Authorization ;
00002906

10610 NW 27 Street, Miami FL 33172
T:(305)592-1360 F:(305)594-9275
www.franyieengineers.com

CLIENT:

GL COMMERCIAL
1600 SAWGRASS CORPORATE PKWY #150
SUNRISE, FLORIDA 33323

PROJECT:

Westerra Phase I - Pod 4
SUNRISE, FLORIDA 33323

SITE PHOTOMETRIC ENLARGEMENTS



DATE:
10/31/2025

SITE PLAN SHEET NO.

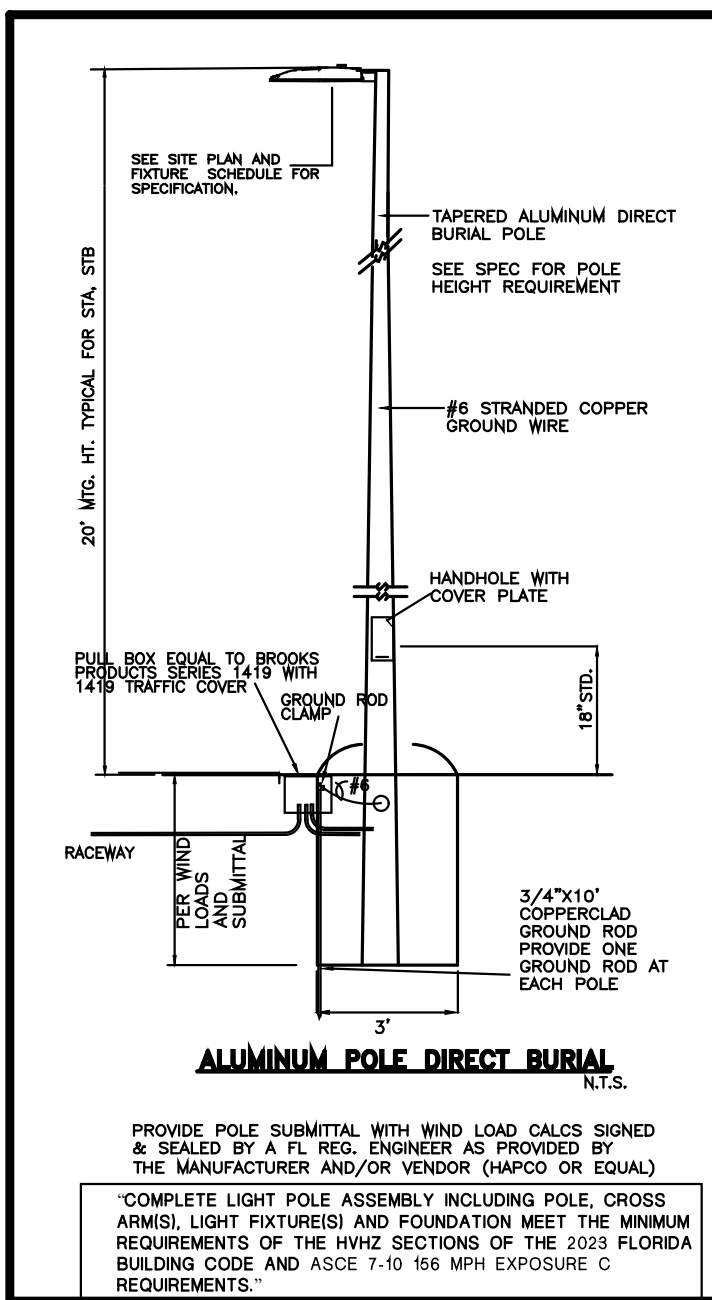
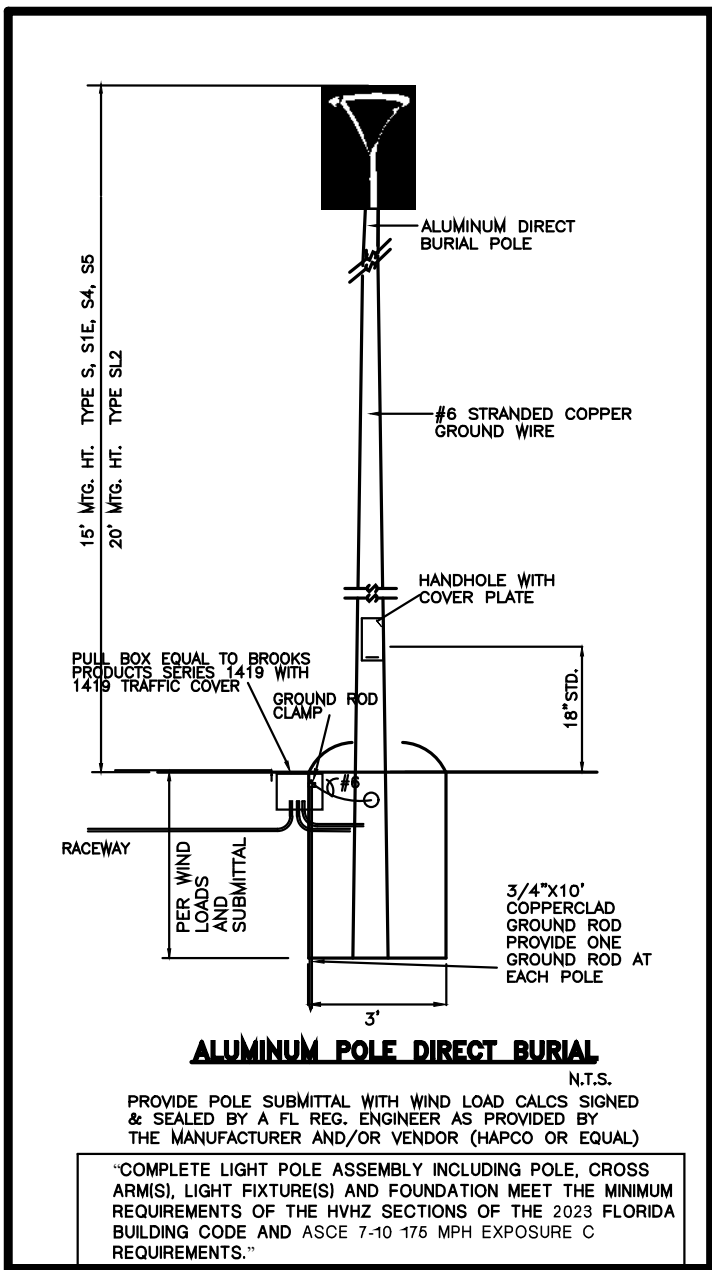
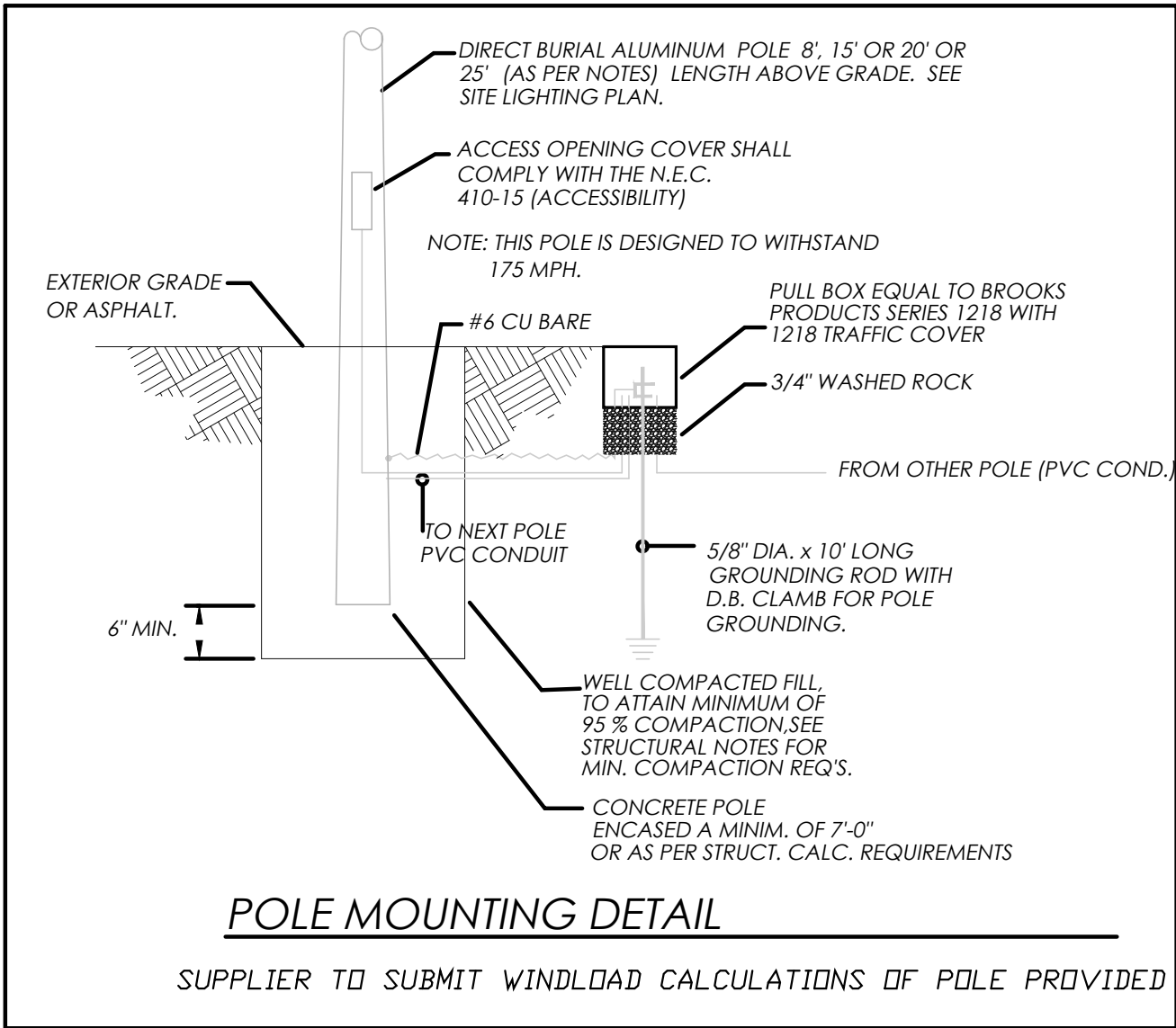
E-2PH

SITE PLAN NOTES

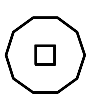
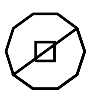
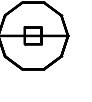
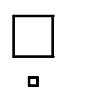
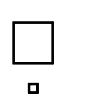
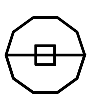
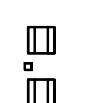
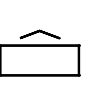
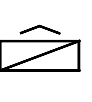
- 1- LIGHTING SHALL BE DESIGNED & INSTALLED TO MEET SECTION 16-150 OF THE CITY OF SUNRISE LAND DEVELOPMENT CODE.
- 2- THERE WILL BE INTERIORS FPL, CABLE, TELEPHONE EASEMENT AT POINT OF PROJECT DEVELOPMENT FOR DISTRIBUTION, THIS PLAN IS TO BE RESPECTED FOR ANY FUTURE EASEMENT INSTALLATION.
- 3- ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHER-PROOF
- 4- ALL TRENCHING AND BACKFILLING FOR POST LIGHTS SHALL BE DONE BY ELECTRICAL CONTRACTOR.
- 5- SETTING OF POSTS LIGHTS AND POST SHALL BE DONE BY ELECTRICAL CONTRACTOR.
- 6 - ALL OUTSIDE LIGHTING SHALL BE VERIFY WITH POLE MANUFACTURER BEFORE ROUGHING-IN.
- 7- ALL OUTSIDE LIGHTING SHALL BE INSTALLED IN CONDUIT.
- 8- PROVIDE PULL BOXES AS ALL POSTS LIGHTS SHALL BE GROUNDED TO BUILDING GROUNDING SYSTEM AS PER N.E.C. AND LOCAL CODES.
- 9- MAX ALLOWED MOUNTING HEIGHT OF 25'-0" MAX. MOUNTING HEIGHT TO TOP OF LIGHT FIXTURE ON POLE. CAPABLE TO WITHSTAND WINDS UP TO 175 MILES PER HOUR AND DESIGNED TO SUPPORT THE METER BOX & MCB IN N3R ENCLOSURE.
- 10- CONDUIT RUNNING UNDER PAVING SHALL BE 24 INCHES MINIMUM BELOW FINISHED. COORDINATE POWER SERVICES WORK WITH POWER UTILITY Co. ENGINEER AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

FIELD COORDINATION NOTE

EVERY CONTRACTOR SHALL COORDINATE IN FIELD W/ OTHER TRADES PRIOR START OF CONSTRUCTION FOR THE STRUCTURAL BEAM, SLAB, TRUSSES, ARCHITECTURAL DETAILING AS PRE-FAB FORMS, REVELING, CEILINGS, ARCH WITH THE LOCATION OF CEILING OR WALL GRILLES, DUCT WORKS, RETURN GRILLES, RETURN FIXTURES, SWITCHES, RECEPTACLES OR ANY OTHER DEVICES, AND TO NOTIFY ARCHITECT/ ENGINEERS IF ANY CONFLICT OCCUR PRIOR ITS INSTALLATION. NO ADDITIONAL COST TO OWNER CAN BE APPLIED.



LUMINAIRE SCHEDULE

Symbol	Label	Catalog Number	Description	Lamp		Lumens	LLF	Watts
	S	US ARCHITECTURAL PAC18-PT2-PLED-VSQ-W-48LED-875mA-40K-UNV-RAL-XXXX-T POLE MOUNTED 15' AFG	LED POST TOP LUMINIARE	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.		Absolute	0.85	134.7
	S1E	US ARCHITECTURAL PAC18-PT2-PLED-VSQ-W-48LED-875mA-40K-MVOLT-RAL-XXXX-T POLE MOUNTED 15' AFG	LED TOP MOUNTED LUMINIARE THRU INVERTER	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.		Absolute	0.85	134.7
	S4	US ARCHITECTURAL PAC18-PT1-PLED-III-W-48LED-875mA-40K OF: -HS-RAL-XXXX-T POLE MOUNTED 15'AFG	FABRICATED METAL HOUSING, 1 LED MODULE CONSISTING	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	PAC18-PT1-PLED-III-W-48LED-875mA-40K-HS.ies	Absolute	0.90	135
	S5	US ARCHITECTURAL PAC18-PT1-PLED-VSQ-W-48LED-875mA OF: -40K-RAL-XXXX-T POLE MOUNTED 15' AFG	FABRICATED METAL HOUSING, 1 LED MODULE CONSISTING	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	PAC18-PT1-PLED-VSQ-W-48LED-875mA-40K.ies	Absolute	0.90	135
	STA	NLS LIGHTING NV-2-T4-128L-1-40K8 -UNV-DPS11-XXX POLE MOUNTED 20' AFG	T4 SILICONE OPTICS	WHT LED, 40K, 80 CRI	NV-2-T4-128L-1-40K.IES	Absolute	0.90	409
	STB	NLS LIGHTING NV-2-T4-112L-1-40K8 -UNV-DPS11-XXX POLE MOUNTED 20' AFG	T4 SILICONE OPTICS	WHT LED, 40K, 80 CRI	NV-2-T4-112L-1-40K.IES	Absolute	0.90	366
	SL2	US ARCHITECTURAL PAC24-PT1-PLED-IV-W-80LED-525mA-40K-HS-UNC-RAL-DB-T POLE MOUNTED 20' AFG	LED POST TOP LUMINAIRE WITH A HOUSE-SIDE SHIELD	80 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.		Absolute	0.85	129.7
	SB BOLLARD	US ARCHITECTURAL PACB-PLED-III-W-20LED-350mA-40K-UNV-RAL-XXXX-T GROUND MOUNTED AS INDICATED IN DWGS	LED BOLLARD WITH TYPE III DISTRIBUTION	20 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.		Absolute	0.85	23.6
	SWP	LITHONIA DSXF2 LED P1 40K 80CRI FL MVOLT IS FAO XXXXD WALL MTD 8FT	2-RSXF Flood Fixture Size 2 P5 Lumen Package 4000K CCT Type WFL Distribution WALL MTD TWIN BRACKET FOR FLOODS	WHT LED, 40K, 80 CRI		Absolute	0.85	426.96
	SW	LITHONIA WDGE1 LED P1 40K 80CRI VW MVOLT XXXXD WALL MOUNTED 8' AFG	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT WIDE OPTIC	WHT LED, 40K, 80 CRI		Absolute	0.85	10.0002
	SWE	LITHONIA WDGE1 LED P1 40K 80CRI VW 120 EEWH XXXXD WALL MOUNTED 8' AFG	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT WIDE OPTIC WITH EMERG. BATT. PACK	WHT LED, 40K, 80 CRI		Absolute	0.85	10.0002

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min
AMENITIES AREA (Z=0')	+	3.6 fc	8.2 fc	2.5 fc	3.3:1
DOG PARK (Z=0')	+	6.5 fc	8.7 fc	5.3 fc	1.6:1
STREETS AND SIDEWALKS (Z=0')	+	5.8 fc	17.6 fc	1.7 fc	10.4:1
PICKLEBALL COURT (Z=3)	+	4.9 fc	10.8 fc	1.8 fc	6.0:1
NO NIGHT PLAY PER OWNER - NO LIGHTING FOR THS AREA					
PARK (Z=0')	+	3.2 fc	5.2 fc	2.3 fc	2.3:1
PROPERTY LINES	+	0.0 fc	0.5 fc	0.0 fc	N / A
STREET SIDE PROPERTY LINE	+	0.2 fc	STREET SIDE 3.6 fc	0.0 fc	N / A
POOL DECK NP (Z=0')	+	4.4 fc	9.0 fc	1.8 fc	5.0:1
POOL EQUIP. AREA (Z=0') HEALTH DEPT. REQMTS.	+	NORMALLY OFF AT NIGHT AND SWITCHED ON ONLY IF EMERG. REPAIR REQD. 21.5 fc	24.0 fc	19.6 fc	1.2:1
RESI ART PLAZA (Z=0')	+	3.6 fc	8.6 fc	1.9 fc	4.5:1
WALKWAYS (Z=0')	+	3.9 fc	11.8 fc	1.5 fc	3.0:1
ADDED WALKWAY (Z=0')	+	4.0 fc	6.5 fc	1.8 fc	3.6:1

NOTES

- CALCULATIONS HAVE BEEN PERFORMED ACCORDING TO IES STANDARDS AND PRACTICE. SOME DIFFERENCES BETWEEN MEASURED VALUES AND CALCULATED RESULTS MAY OCCUR DUE TO TOLERANCES IN CALCULATION METHODS, TESTING PROCEDURES, COMPONENT PERFORMANCES, MEASURED CONDITIONS SUCH AS TECHNICAL AND FIELD VOLTAGES AND TEMPERATURE VARIATIONS. INPUT DATA SUCH AS ROOM DIMENSIONS, REFLECTANCES, FURNITURE, LIGHT LOSS FACTOR, FURNITURE, ARCHITECTURAL ELEMENTS AND FOLIAGE SIGNIFICANTLY AFFECT THE LIGHTING CALCULATIONS. IF THE REAL ENVIRONMENT DO NOT MATCH INPUT DATA DIFFERENCES WILL OCCUR BETWEEN MEASURED AND CALCULATED VALUES.
- POLES ARE TO BE ROUND TAPERED ALUMINUM, DIRECT BURIAL WITHOUT TENON. POLES WITH SIDE MOUNTED LUMINAIRES ARE TO BOLTED TO SIDE OF POLES.

TYPE SL1, SL2 - 20' AFG, DIRECT BURIAL, (RTA)
HAPCO # 30157-0512-XXXXD.

TYPE S, S1, S1E - 15' AFG, DIRECT BURIAL, (RTA)
HAPCO # RTA # 15B5AD-XXXXD.

TYPE STA AND STB - 20' MH AND 28' OL DIRECT BURIAL
HAPCO # RTA20C7BE-"

TYPE S4 & S5 - 15'MH AND 24' OL DIRECT BURIAL
HAPCO CAT NUMBER RTA15C7BE-"

FINAL POLE LENGTH TO BE BASED ON BORING TEST RESULTS- SUPPLIED BY OTHERS.
- WIND LOAD CALCULATIONS, TO MEET FLORIDA WIND LOAD REQUIREMENTS, MUST BE PREPARED AND SUBMITTED AS PART OF THE SUBMITTAL PROCESS. SAID CALCULATIONS MUST BE SIGNED AND SEALED BY FLORIDA REGISTERED ENGINEER.
- POOL DECK INVERTER FOR TYPE S1E AND S2 TO BE AS FOLLOWS - I.O.T.A. # IISC 1000 120IN 120 OUT BYPASS WALL CABINET: 25"Wx28"Hx11"D. MOUNTING: WALL. WEIGHT: 281 LBS.

LIGHT FIXTURE NOTE:

ALL LIGHT FIXTURES SPECIFIED HEREIN ARE "FULL CUT OFF" STYLE FIXTURES.

LEAVE BLANK - FOR CITY USE ONLY

No.	REVISIONS	DATE

FRANYE ENGINEERS INC.

WIANA FRANYE
PE # 49985 MECH

Certificate of
Authorization #
00002906

10610 NW 27 Street, Miami FL 33172
T:(305)592-1360 F:(305)594-9279
www.franyeeengineers.com

CLIENT:

GL COMMERCIAL
1600 SAWGRASS CORPORATE PKWY #150
SUNRISE, FLORIDA 33323

PROJECT:

Westerra Phase I - Pod 4
SUNRISE, FLORIDA 33323

SITE LIGHTING SCHEDULES
AND NOTES

SEAL

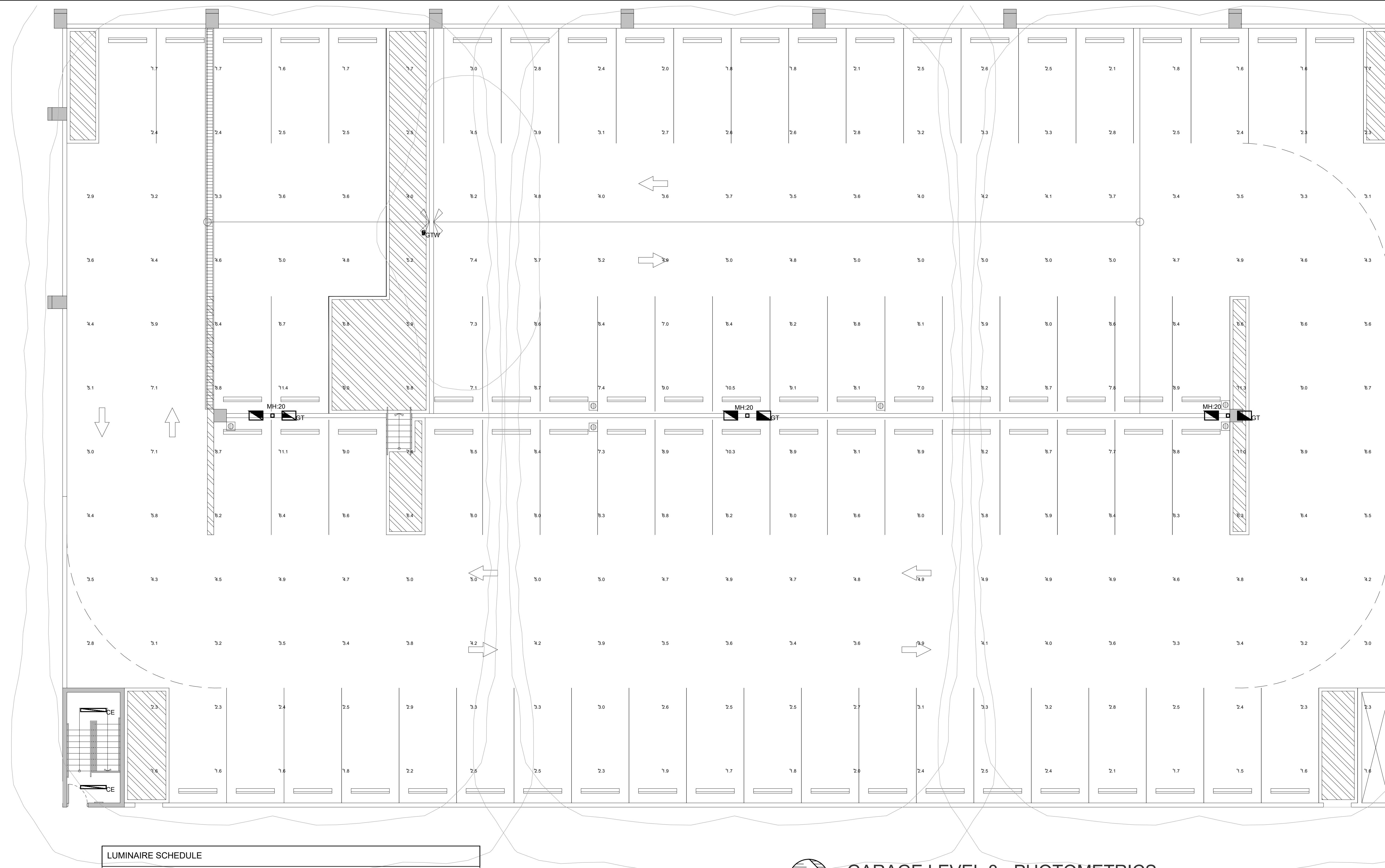
pr 30 2026

The seal for this document is signed and sealed by WIANA FRANYE, P.E. for the purpose of this seal.

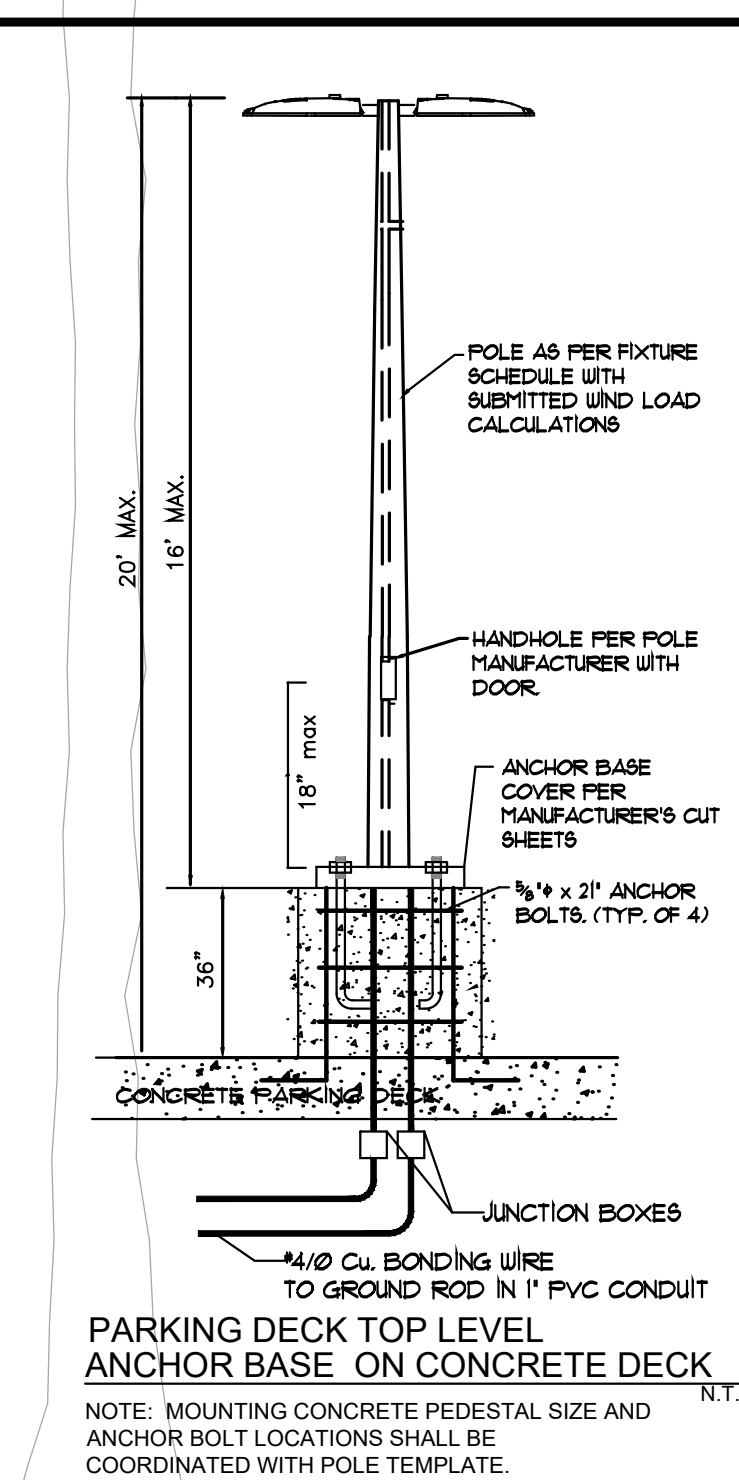
Signature must be verified on any electronic document.

DATE:
10/31/2025

SITE PLAN SHEET NO.
E-3PH

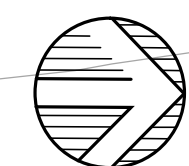


- # NOTES
1. CALCULATIONS HAVE BEEN PERFORMED ACCORDING TO IES STANDARDS AND PRACTICE. SOME DIFFERENCES BETWEEN MEASURED VALUES AND CALCULATED RESULTS MAY OCCUR DUE TO TOLERANCES IN CALCULATION METHODS, TESTING PROCEDURES, COMPONENT PERFORMANCES, MEASURED CONDITIONS SUCH AS TECHNICAL AND FIELD VOLTAGES AND TEMPERATURE VARIATIONS. INPUT DATA SUCH AS ROOM DIMENSIONS, REFLECTANCES, FURNITURE, LIGHT LOSS FACTOR, FURNITURE, ARCHITECTURAL ELEMENTS AND FOLIAGE SIGNIFICANTLY AFFECT THE LIGHTING CALCULATIONS. IF THE REAL ENVIRONMENT DO NOT MATCH INPUT DATA DIFFERENCES WILL OCCUR BETWEEN MEASURED AND CALCULATED VALUES.
 2. POLES TYPE GT ARE TO BE R7A ROUND TAPERED ALUMINUM WITHOUT TENON. TENON COORDINATION REQUIRED PRIOR ORDER. POLES SHALL BE 20' TALL. TENON MUST BE TAPERED UNDER CONSIDERATION AS ACTUAL LENGTH OF POLES MAY BE LESS THAN 20' AFTER ADDING MOUNTING ACCESSORIES.
 3. WIND LOAD CALCULATIONS, TO MEET FLORIDA WIND LOAD REQUIREMENTS, MUST BE PREPARED AND SUBMITTED AS PART OF THE SUBMITTAL PROCESS. SAIL CALCULATIONS MUST BE SIGNED AND SEALED BY FLORIDA REGISTERED ENGINEER.
 4. ALL TYPE GT AND GTW ARE TO BE FED THRU AN INVERTER, MANUFACTURED BY I.O.T.A. # IJSCN 2250 90W 120IM 120 OUT



GARAGE LEVEL 8 - PHOTOMETRICS

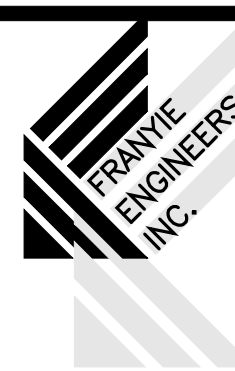
SCALE: 1/8"= 1'-0"



STATISTICS					
Description	Symbol	Avg	Max	Min	Max/Min
8TH FL OPEN PARKING (Z=0')	+	4.6 fc	11.4 fc	1.5 fc	7.6:1

LUMINAIRE SCHEDULE							
Symbol	Label	Catalog Number	Description	Lamp	Lumens	LLF	Watts
	CE	ALPHALITE ILL-4-4660-35-A30-EM1400 SURFACE MOUNTED INSIDE STAIRS	4' LED STRIP WITH LENS AND A 1400 LUMENS EMERGENCY BATTERY PACK	WHT LED, 30K, 80 CRI	4660	0.85	34.81
	GT	LITHONIA DSX1 LED P2 30K (80CRI) T3M MVOLT DWHXD POLE MOUNTED 20' AFG	TWIN (180D) LED LUMINAIRES THRU INVERTER ON POLE	WHT LED, 30K, 80 CRI	Absolute	0.85	554.14
	GTW	LITHONIA WDGE2 LED P2 30K (80CRI) T3M MVOLT DWHXD WALL MOUNTED ON PARAPET	WALL MOUNTED LED WALL PACK THRU INVERTER	WHT LED, 30K, 80 CRI	Absolute	0.85	18.9815

No.	REVISIONS	DATE



VIVIANA FRANYIE
PE # 49985 MECH

Certificate of
Authorization #
00002906

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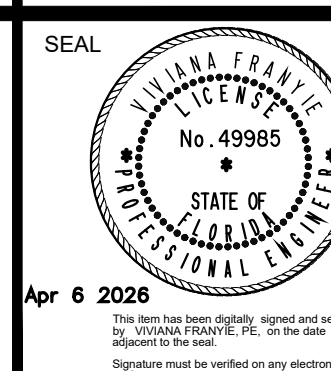
CLIENT:

GL COMMERCIAL
1600 SAWGRASS CORPORATE PKWY #150
SUNRISE, FLORIDA 33323

PROJECT:

Westerra Phase I - Pod 4
SUNRISE, FLORIDA 33323

GARAGE LEVEL 8 PHOTOMETRICS



DATE:
10/31/2025

SITE PLAN SHEET NO.

E-G4PH