12TH STREET PARK RENOVATIONS

DRAWINGS

COVER	TITLE, LOCATION MAP, SHEET INDEX
V-1	SITE SURVEY
D-1	DEMOLITION PLAN
V-1	SURVEY
SP-1	SITE PLAN
LA-1	LANDSCAPE PLAN
LA-2	LANDSCAPE NOTES
IR-1	IRRIGATION PLAN
IR-2	IRRIGATION DETAILS
IR-3	IRRIGATION NOTES
E-1	ELECTRICAL SITE PLAN
E-2-3	PHOTOMETRICS PLAN

12th Street Park Renovations

PREPARED FOR CITY OF SUNRISE, FLORIDA SECTION 35, TOWNSHIP 49 SOUTH, RANGE 41 EAST

PREPARED FOR:



CITY COMMISSION:

MICHAEL J. RYAN - MAYOR
JOSEPH A. SCUOTTO - DEPUTY MAYOR
NEIL C. KERCH - ASSISTANT DEPUTY MAYOR
LAWRENCE A. SOFIELD - COMMISSIONER
DONALD K. ROSEN - COMMISSIONER
RICHARD SALAMON - CITY MANAGER
ROSEMARIE MARCO - LEISURE SERVICES DIRECTOR



PROJECT LOCATION MAP

OCATION MAP NTS

(CURRENT NAD 83/90 ADJUSTMENT FOR FLORIDA EAST ZONE)

CITY OF SUNRISE, BROWARD COUNTY, FLORIDA

PROJECT TEAM

PRIME CONSULTANT
LANDSCAPE ARCHITECT/ SURVEYOR/
CIVIL ENGINEER



CRAVEN THOMPSON & ASSOCIATES, INC.

3563 N.W. 53RD STREET FORT LAUDERDALE, FL 33309 954.739.6400

DATE:					
SCALE:					
DESIGNED BY:	DJS				
DRAWN BY:	DJS				-
CHECKED BY:	DJS				
APPROVED BY:	JDH	DESCRIPTION	BY:	DATE:	:

CRAVEN THOMPSON AND ASSOCIATES, INC.
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

12TH STREET PARK RENOVATIONS

LOCATED AT NW 12TH STREET AND NW 58TH TERRACE SUNRISE, FL PREPARED FOR: CITY OF SUNRISE, FLORIDA

COVER SHEET

SEAL

DATE:

07/06/16

Douglas James Schultz
Florida RLA No. LA 6666937

PROJECT #:

15-0108

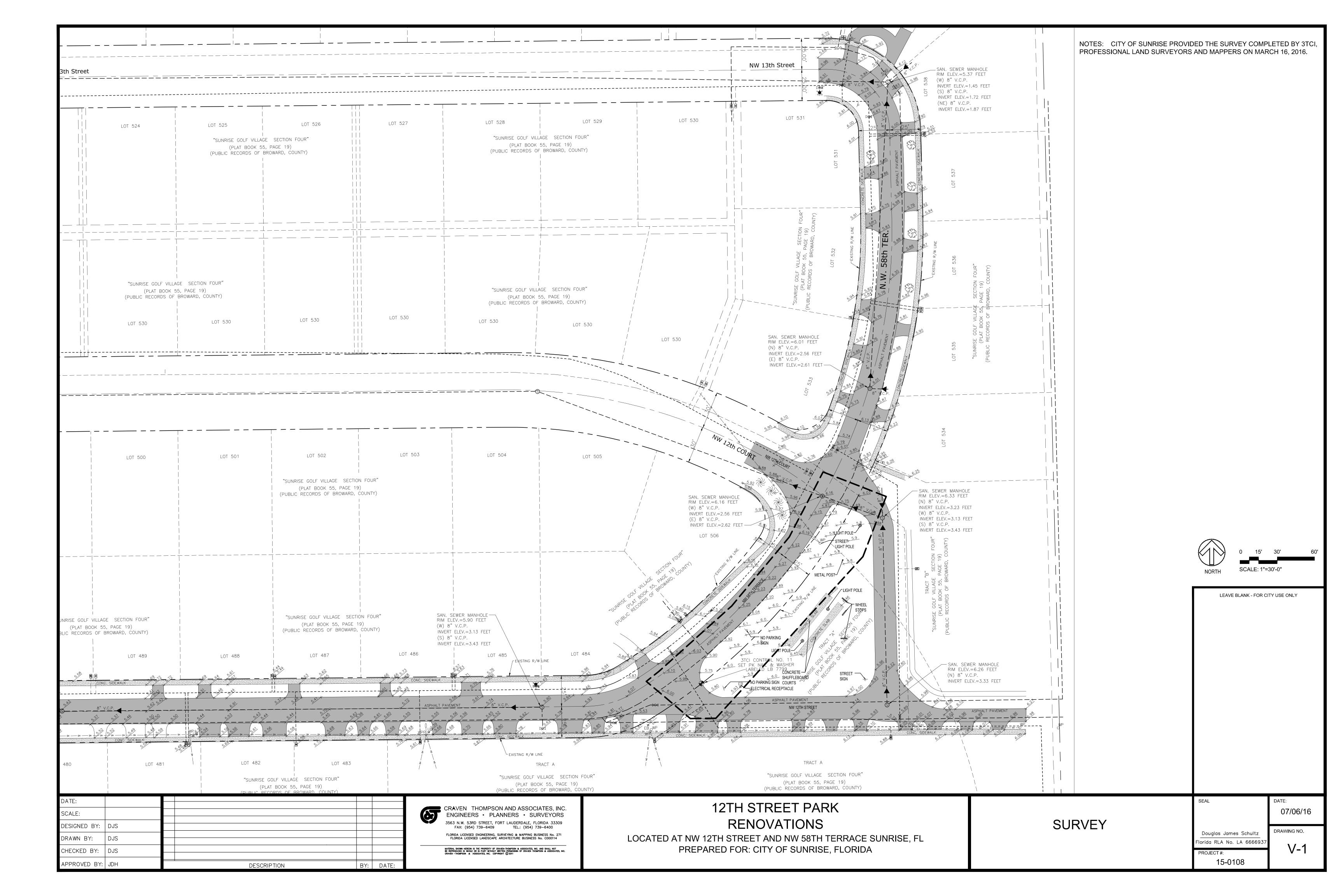
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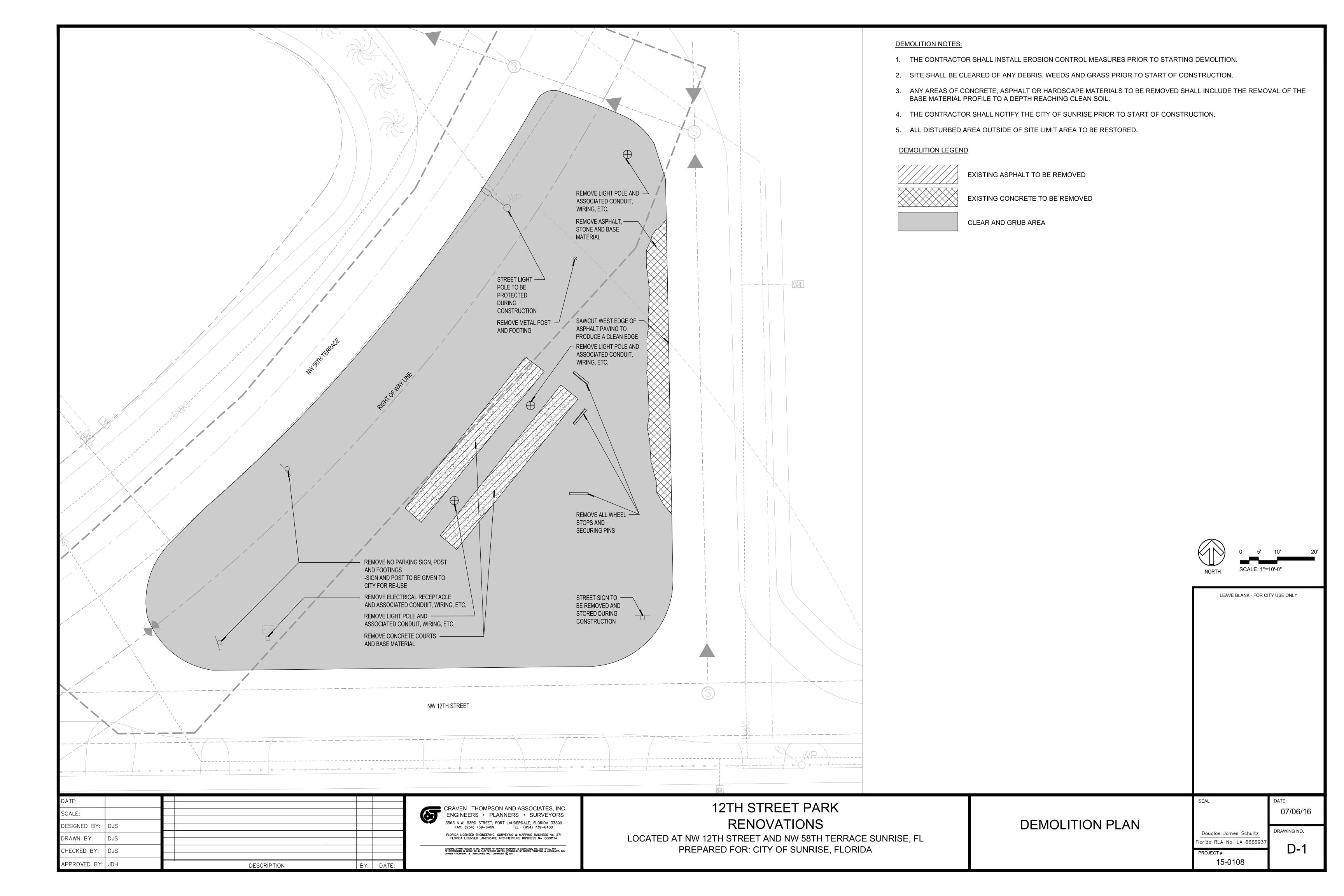
	V-1	SURVEY
	D-1	DEMOLITION PLAN
	SP-1	SITE PLAN
	LA-1 - LA-2	LANDSCAPE PLAN AND NOTES
	IR-1 - IR-3	IRRIGATION PLAN AND NOTES
	E-1 - E-3	ELECTRICAL PLANS
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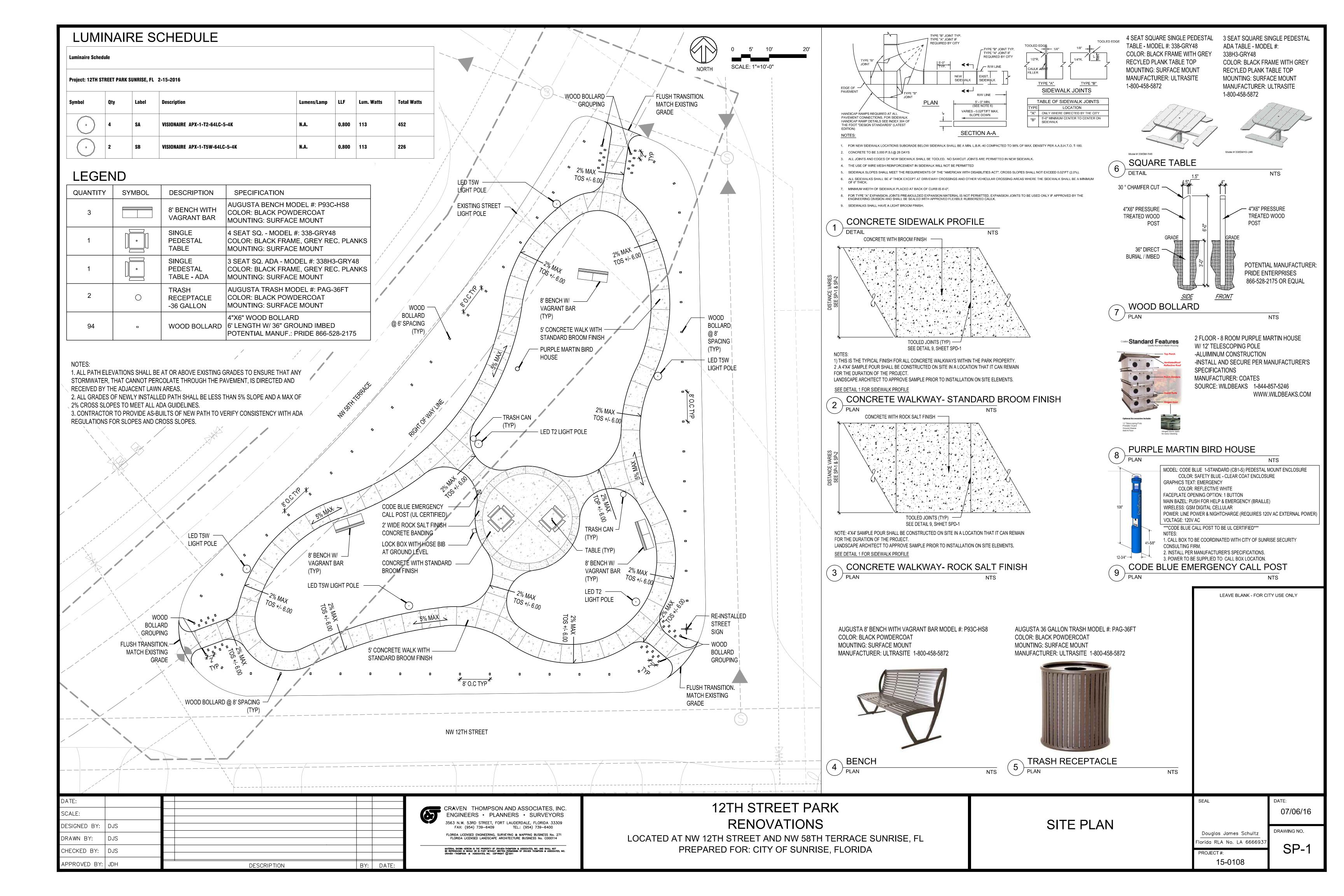
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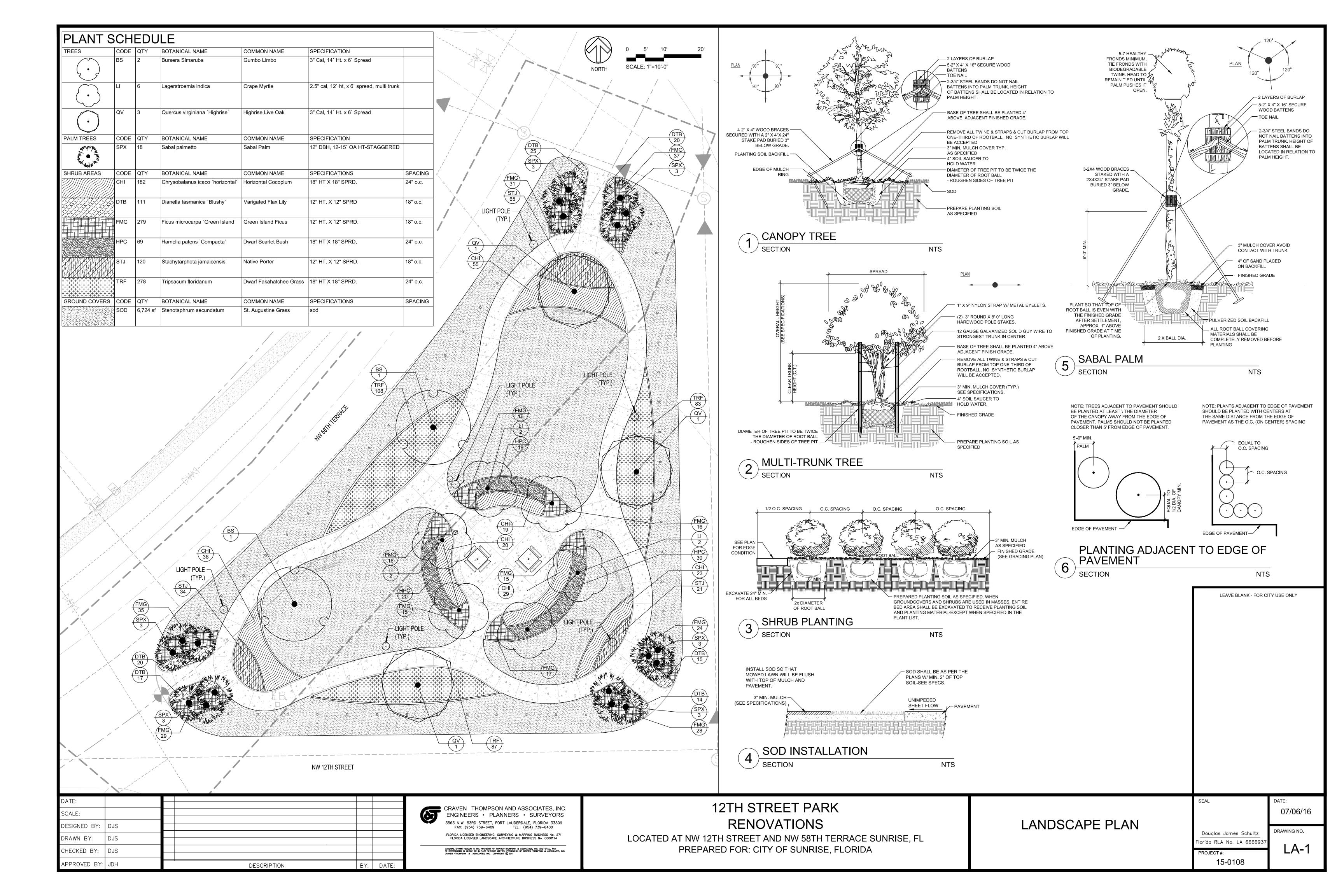
1) CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF SUNRISE MINIMUM DESIGN AND CONSTRUCTION STANDARDS.
2) ALL DRAWINGS IN PLAN SET UTILIZE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4) ALL WORK AREAS SHALL BE FENCED OFF FROM PUBLIC

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- 1. THE LOCATION OF PLANT MATERIAL AS SHOWN ON THESE PLANS IS FINAL. THE FINAL LOCATIONS CAN BE ADJUSTED ON SITE TO ACCOMMODATE UNFORESEEN FIELD CONDITIONS. THESE CHANGES MUST COMPLY WITH ALL SAFETY SETBACK CRITERIA AND BE DIRECTED OR APPROVED BY THE LANDSCAPE ARCHITECT AND THE CITY OF SUNRISE.
- 2. REPORT ANY AND ALL DISCREPANCIES BETWEEN THE CONSTRUCTION DRAWINGS AND FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
- 4. BEFORE CONSTRUCTION BEGINS THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING CONSTRUCTION. IF SUCH DAMAGE OCCURS THE CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY REPAIRS AND THEY SHOULD BE MADE IMMEDIATELY AT THE CONTRACTORS EXPENSE WITH SUPERVISION OF THE LANDSCAPE ARCHITECT.
- 5. ALL MUST COMPLY WITH THE FLORIDA STATE STATUTE 553.81- "PROTECTION OF UNDERGROUND PIPELINES."
- 6. THE CONTRACTOR MUST COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
- 7. THE LOCATION OF ALL THE UTILITIES SHOWN ON THE PLAN IS APPROXIMATE. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR ON SITE. ALL PLANTING MAY BE ADJUSTED TO AVOID CONFLICTS WITH UTILITIES AND/OR EXISTING ABOVE GROUND ELEMENTS. ANY ADJUSTMENTS GREATER THAN 10 FEET SHALL BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- 8. CAUTION SHOULD BE EXERCISED WHEN WORKING NEAR EXISTING PLANTING AND ANY FURNISHING THAT IS TO REMAIN ON SITE TO PREVENT ANY DAMAGE. ANY SIGNS. STRUCTURES, OR PLANTING SHALL BE REPLACED AT THE CONTRACTORS EXPENSE IF DAMAGED BEYOND USE. DAMAGED BEYOND USE WILL BE DETERMINED BY THE LANDSCAPE ARCHITECT.
- 9. ANY MAINTENANCE THAT INVOLVES TRAFFIC ACTIVITY SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND ONGOING CONSTRUCTION ACTIVITIES.
- 10. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL WORK AREAS AT THE END OF EACH WORKING DAY. ANY DEBRIS SHALL BE COLLECTED AND DEPOSITED APPROPRIATELY OFF SITE DAILY. ALL MATERIALS, PRODUCTS, AND EOUIPMENT SHALL BE STORED IN AN ORGANIZED FASHION AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- 11. TREE REMOVAL PERMITS ARE REQUIRED FOR TREE REMOVALS EXCEPT IN THE CASE OF THOSE TREES ON THE EXOTIC SPECIES LIST OR TREES DEEMED TO BE PUBLIC NUISANCES.
- 12. AN IRRIGATION PLAN AND SPECIFICATIONS FOR THE SYSTEM MUST BE INCLUDED WITH THE LANDSCAPE PLANS WHEN SUBMITTING FOR PERMIT. THE IRRIGATION SYSTEM SHALL BE DESIGNED TO HAVE A MINIMUM OF 150% COVERAGE. THE SYSTEM MUST INCLUDE A
- 13. THE CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS THAT ARE REQUIRED BY THE CITY FOR TREE REMOVAL, RELOCATION, OR TREE PROTECTION BEFORE BEGINNING
- 14. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED BY INSTALLING PROTECTIVE BARRIERS AROUND THE DRIP LINE OF TREES. THESE PROTECTIVE BARRIERS SHALL BE SEEN EASILY BY OPERATORS OF TRUCKS AND OTHER EQUIPMENT. THEY SHALL BE CONSTRUCTED OF STURDY MATERIALS (NOT FLAGGING OR RIBBON) AND SHALL BE INSTALLED PRIOR TO AND DURING CONSTRUCTION AND/OR LAND DEVELOPMENT.
- 15. DO NOT STORE OR USE ANY MATERIALS OR EQUIPMENT WITHIN THE DRIP LINE OF ANY TREE THAT IS TO BE RELOCATED OR PROTECTED IN PLACE UNLESS THE ACTIVITY IS BEING DONE TO PROTECT THE TREES.
- 16. DO NOT DISCHARGE OR CONTAMINATE THE SOIL WITHIN THE DRIP LINE OF ANY OF THE TREES TO BE RELOCATED OR PROTECTED IN PLACE. THIS INCLUDES SUBSTANCES SUCH AS PAINT, OIL, SOLVENTS, PETROLEUM PRODUCTS, ASPHALT, CONCRETE, MORTAR, OR ANY OTHER MATERIAL THAT MAY CAUSE DAMAGE TO THE TREE'S ROOT SYSTEM.
- 17. CLEARING OF VEGETATION WITHIN THE DRIP LINE OF THE TREES DESIGNATED TO BE PROTECTED IN PLACE OR RELOCATED SHALL BE PERFORMED CAUTIOUSLY WITH HAND TOOLS TO MINIMIZE ANY DAMAGE TO THE TREE'S ROOT SYSTEM.
- 18, DO NOT ATTACH ANYTHING TO TREES THAT ARE TO REMAIN ON THE SITE UNLESS IT IS SOMETHING THAT WILL PROTECT AND NOT DAMAGE THE TREE
- 19. KEEP A NATURAL GRADE ABOVE THE DRIP LINE ON ANY TREE THAT IS TO BE PROTECTED IN PLACE OR ANY PRESERVED TREES DISTURBED DURING CONSTRUCTION MUST BE RETURNED TO ITS ORIGINAL GRADE AFTER CONSTRUCTION.
- 20. ALL TREES ADJACENT TO FP&L POWER LINES ARE REQUIRED TO COMPLY WITH THE FP&L RIGHT TREE RIGHT PLACE GUIDELINES.

SOIL PREPARATION, SOIL, FERTILIZER, AND MUCH NOTES:

- 1. ENSURE THAT ALL PLANTING SOIL IS FERTILE, FRIABLE, NATURAL LOAM SURFACE SOIL REASONABLY FREE OF SUBSOIL, CLAY LUMPS, WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS AND STONES LARGER THAN ONE INCH IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH, SHOULD ANY SOIL AMENDMENT BE NECESSARY, THE CONTRACTOR SHALL BRING THIS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
- 2. APPLY APPROVED HERBICIDE ACCORDING TO MANUFACTURERS RATE AND SPECS WITHIN LIMITS OF ALL AREAS TO BE PLANTED. PROTECT EXISTING PLANTS TO REMAIN FROM OVER SPRAY OR SPRAY WITHIN ROOT ZONE. CONTRACTOR TO ENSURE TOTAL WEED ERADICATION. ANY PESTICIDES MUST BE APPLIED BY A LICENSED PET CONTROL OPERATOR.
- 3. SCARIFY SUBSOIL TO A DEPTH OF 3 INCHES.
- 4. PLANTING MIX FOR TREES, SHRUBS, AND GROUND COVERS SHALL CONSIST OF A THOROUGHLY BLENDED MIXTURE OF:
- A.20% TOPSOIL B.10% PEAT OR COMPOST

C. 70% SAND

- 5. PLANTING MIX FOR BACKFILL AROUND ROOT BALLS OF PALMS: A.90% NATIVE SAND FROM ON SITE OR APPROVED SUBSTITUTE B.10% TOPSOIL
- 6. FERTILIZE ALL TREES, SHRUBS AND GROUNDCOVER WITH PLANTING TABLETS 20-10-5 FORMULA, 21 GRAM OR APPROVED ORGANIC EQUAL.
- 7. ALL SHRUB BEDS SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 24" AND BACK FILLED WITH THE SPECIFIED MIXTURE.
- 8. SMOOTH ALL PREPARED TOPSOIL TO 3" EXCEPT WITHIN DRIP LINES OF EXISTING TREES AND 4" BELOW TOP OF SURROUNDING PAVING EDGES. REMOVE ALL ROCKS AND OTHER OBJECTS OVER 1" IN DIAMETER.

9. FINISH GRADE ALL PREPARED TOPSOIL AREAS TO A SMOOTH, EVEN SURFACE ASSURING

- POSITIVE DRAINAGE AWAY FROM THE STRUCTURES AND ELIMINATE ANY LOW AREAS WHICH MAY COLLECT WATER. 10. TOPSOIL SHALL NOT BE EXTREMELY ACIDIC OR ALKALINE, NOR CONTAIN ANY TOXIC
- SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH. THE PH SHALL BE IN THE RANGE OF 5.5-6.5.
- 11. CONTRACTOR SHALL MULCH ALL PLANTING MATERIAL THROUGHOUT AND COMPLETELY TO A 3 INCH DEPTH WITH CLEAN, NATURAL, NON-RED, WEED FREE FLORA MULCH.

LANDSCAPE NOTES

PLANTS SHOWN, THE PLANS HOLD TRUE.

- 1. ALL PLANT MATERIAL FURNISHED BY THE LANDSCAPE CONTRACTOR UNLESS OTHERWISE SPECIFIED SHALL BE FLORIDA NO. 1 GRADE OR BETTER, AND SHALL BE INSTALLED AS SPECIFIED IN "GRADES AND STANDARDS FOR NURSERY PLANTS," PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANT MATERIAL MUST BE HEALTHY, VIGOROUS MATERIALS, FREE OF PESTS AND DISEASES.
- 2. ALL LANDSCAPE PLANT MATERIALS, INSTALLATION, MAINTENANCE AND PRESERVATION SHALL BE IN ACCORDANCE WITH THE CITY OF SUNRISE CODE OF ORDINANCES.
- 3. LANDSCAPE ORDINANCE SPECIFICATIONS ON IRRIGATION AND INSTALLATIONS SUPERSEDE ANY NOTES ON THE PLAN.
- 4. ALL SIZES SHOWN FOR PLANT MATERIAL ON THE PLAN ARE TO BE CONSIDERED AS MINIMUMS. ALL PLANT MATERIAL MUST MEET OR EXCEED THESE MINIMUM REQUIREMENTS FOR BOTH HEIGHT AND SPREAD. ANY OTHER REQUIREMENTS FOR SPECIFIC SHAPE OR EFFECT AS NOTED ON THE PLAN OR SPECS WILL ALSO BE REQUIRED FOR ACCEPTANCE. ANY SUBSTITUTIONS MUST BE APPROVED BY LANDSCAPE ARCHITECT BEFORE PLANTING.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANTING MEETING SPECIFICATIONS AS NOTED BEFORE INSTALLATION. CONTRACTOR SHALL IMMEDIATELY REMOVE ALL PLANTING THAT DOES NOT MEET SPECIFICATIONS AND BE HELD RESPONSIBLE TO REPLACE IT WITH APPROPRIATE PLANTING.
- 6. IN THE EVENT OF A VARIATION BETWEEN THE PLANT LISTS AND THE ACTUAL QUANTITY OF
- 7. ALL ROOTBALLS SHALL CONFORM TO THE SIZE STANDARDS SET FORTH.
- ORDER ROOT(S) ARE FULLY VISIBLE 9. CONTRACTOR TO SUBMIT TO THE LANDSCAPE ARCHITECT THE GROWERS AND/OR SITE

8. TREES ARE TO BE PLANTED AT A DEPTH SO THAT THE ROOT-FLARE AND TOP OF THE FIRST

- INSPECTION CERTIFICATE FOR PLANT MATERIALS TWO (2) WEEKS PRIOR TO COMMENCEMENT OF WORK.
- 10. ALL PLANT MATERIALS MUST BE PROTECTED DURING TRANSPORT AND DELIVERY TO THE JOB SITE WITH SHADE CLOTH OR OTHER ACCEPTABLE MEANS OF WINDBURN PREVENTION.
- INSTALLATION. ALL EXISTING PLANTING SHALL REMAIN INTACT AND UNDISTURBED UNLESS OTHERWISE NOTED ON THE PLANS. 12. LANDSCAPE CONTRACTOR SHALL FIELD STAKE THE LOCATION OF ALL PLANT MATERIAL

11. CONTRACTORS SHALL FIELD VERIFY ALL INFORMATION PRIOR TO INITIATING PLANTING

- PRIOR TO INSTALLATION FOR THE REVIEW AND APPROVAL OF THE LANDSCAPE
- 13. ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED, AND MEET ALL REQUIREMENTS

14. CONTRACTOR TO GUARANTEE PLANT MATERIAL FOR (1) FULL YEAR FOLLOWING DATE OF

- SUBSTANTIAL COMPLETION.
- 15. CONTRACTOR TO REPLACE REJECTED PLANT MATERIAL WITHIN ONE WEEK OF NOTICE.
- 16. CONTRACTOR TO REQUEST INSPECTION OF PROJECT IN WRITING. IF ALL WORK IS SATISFACTORY AND COMPLETE IN ACCORDANCE WITH CONDITIONS OF CONTRACT DOCUMENTS, THEN THE OWNER AND LANDSCAPE ARCHITECT SHALL DECLARE SUBSTANTIALLY COMPLETE. SUBSTANTIAL COMPLETION CONSTITUTES THE BEGINNING OF THE GUARANTEE PERIOD.
- 17. INSTALLATION- ALL PLANT MATERIAL SHALL BE INSTALLED IN A SOUND WORKMANLIKE MANNER AND ACCORDING TO GOOD PLANTING PROCEDURES WITH THE OUALITY OF PLANT MATERIALS AS HEREINAFTER DESCRIBED. ALL ELEMENTS OF LANDSCAPING SHALL BE INSTALLED SO AS TO MEET ALL APPLICABLE ORDINANCES AND CODE REQUIREMENTS.
- 18. CONTRACTOR IS RESPONSIBLE FOR WATERING AND MAINTAINING ALL TREES AND LANDSCAPE UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE AND PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION OF PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF PLANTS DUE TO INADEQUATE WATERING OR POOR DRAINAGE CONDITIONS.
- 19. TYPICALLY, SHRUB AND GROUNDCOVER PLANTINGS ARE SHOWN AS MASS PLANTING BEDS. PLANTS SHOULD BE PLACED ON A TRIANGULAR SPACING SHOWN IN THE PLANTING DETAILS. PLANT CENTER TO CENTER DIMENSIONS (O.C.) ARE LISTED ON THE PLANT LIST.
- 20. TREES GROWN IN GROW BAGS OR GROW BAG TYPE MATERIAL MUST HAVE THE GROW BAG REMOVED ENTIRELY BEFORE PLANTING.
- 21.BALLED AND BURLAPPED MATERIAL SHALL HAVE THE TOP ONE HALF (1/2) OF THE BURLAP AROUND THE BASE OF THE TRUNK CUT AND PULLED BACK. DO NOT REMOVE THE BURLAP BUT WIRE CAGES, STRAPS, ETC. MUST BE CUT AND REMOVED COMPLETELY BEFORE INSTALLATION.
- 22. CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, PLANT LIST, GENERAL NOTES, AND ANY OTHER MATERIALS FROM THE LANDSCAPE ARCHITECT FOR COMPLETE LANDSCAPE PLANTING INSTRUCTIONS.
- 23."BRANCH TOUCHING BRANCH" PROVIDED AT TIME OF INSTALLATION. ALL HEDGES TO BE MIN. 24" AT PLANTING AND 36" HIGH WITHIN ONE YEAR.
- 24. ALL STAKING AND GUYING MATERIAL MUST BE REMOVED WITHIN ONE YEAR FOR FINAL AND NO CHANGES WITHOUT THE CLIENTS APPROVAL. IT IS THE RESPOSIBILITY OF THE
- 25. THE FOLLOWING GUIDELINES SHALL BE FOLLOWED TO ENSURE SUCCESSFUL
- TRANSPLANTING OF TREES: a. ANY TREE BEING RELOCATED SHALL NOT BE UNNECESSARILY DAMAGED DURING
- REMOVAL, TRANSPORT, OR REPLANTING OF THAT TREE. b. DURING AND FOLLOWING TRANSPLANTING THE ROOT BALL MUST BE KEPT MOIST AT
- c. TRANSPLANTED TREES SHALL BE BRACED AT LEAST ONE FULL YEAR.
- d. TRANSPLANTED TREES SHALL NOT BE FERTILIZED AT PLANTING TIME BUT SHALL BE WATERED SUFFICIENTLY UNTIL THE TREE GROWTH IS REESTABLISHED.
- e. RELOCATED TREES/PALMS WILL BE MOVED IN ACCORDANCE WITH MINIMUM
- STANDARDS SET FORTH IN ANSI A-300 f. ALL CROWN PRUNING SHALL BE DONE IN ACCORDANCE WITH NATIONAL ARBORIST ASSOCIATION STANDARDS OR PALM PRUNING IN ACCORDANCE WITH CITY
- g. TREES MAY ONLY BE RELOCATED ONE TIME FROM EXISTING AREA TO FINAL SITE. NO
- NURSERY OR HOLDING AREAS.
- REMOVAL, RELOCATION, AND/OR INSTALLATION WORK. LANDSCAPE CONTRACTOR SHALL REPLACE (BY EQUAL SIZE AND QUALITY) ANY AND ALL EXISTING PLANT MATERIAL DISTURBED OR DAMAGED BY PLANT REMOVAL, RELOCATION OR INSTALLATION.

26. LANDSCAPE CONTRACTOR SHALL REGRADE ALL AREAS DISTURBED BY PLANT

- 27. CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ALL PORTIONS OF EXISTING LAWN AREAS DAMAGED WHILE COMPLETING PLANTING INSTALLATION WITH SAME GRASS SPECIES TO THE SATISFACTION OF THE PROJECT MANAGER.
- 28. GENERAL GRADING TO APROX. 1 INCH SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. ALL FINISHED SITE GRADING AND FINAL DECORATIVE BERM SHAPING SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR.
- 29. ALL LANDSCAPE MATERIALS SHALL BE MAINTAINED TO PROVIDE CONTINUOUS CLEAR ZONES FOR SIGHT VISIBILITY FOR PEDESTRIANS AND VEHICULAR TRAFFIC AND LANDSCAPE MAINTENANCE SHALL CONFORM TO STANDARD INDEX 546 CRITERIA SET FORTH IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS.

IRRIGATION NOTES

- 1. XERISCAPE PRINCIPLES HAVE BEEN APPLIED TO THIS LANDSCAPE PLAN AS SPECIFIED IN SFWMD's XERISCAPE PLANT GUIDE II AND SHALL BE APPLIED ALL THROUGHOUT LANDSCAPE INSTALLATION AND MAINTENANCE.
- 2. EXCLUDING PLANTS ON DRIP IRRIGATION, A FULLY AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO SUPPLY 100% COVERAGE, AS PER CODE. 50% MINIMUM OVERLAP USING RUST-FREE WATER. AN APPROVED RAIN/ MOISTURE SENSOR DEVICE SHALL BE SUPPLIED.
- 3. REMOVE EXISTING IRRIGATION EQUIPMENT WHICH INTERFERES WITH ANY CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONTROLLERS, SPRINKLER HEADS, PIPE, QUICK COUPLERS, BACKFLOW PREVENTERS, CONTROL WIRE AND CONDUITS. ADDITIONALLY THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EXISTING SYSTEM THROUGHOUT THE CONSTRUCTION PROCESS.

LEAVE BLANK - FOR CITY USE ONLY 12TH STREET PARK 07/06/16 RENOVATIONS LANDSCAPE NOTES DRAWING NO. Douglas James Schultz Florida RLA No. LA 66669 PREPARED FOR: CITY OF SUNRISE, FLORIDA PROJECT #: 15-0108

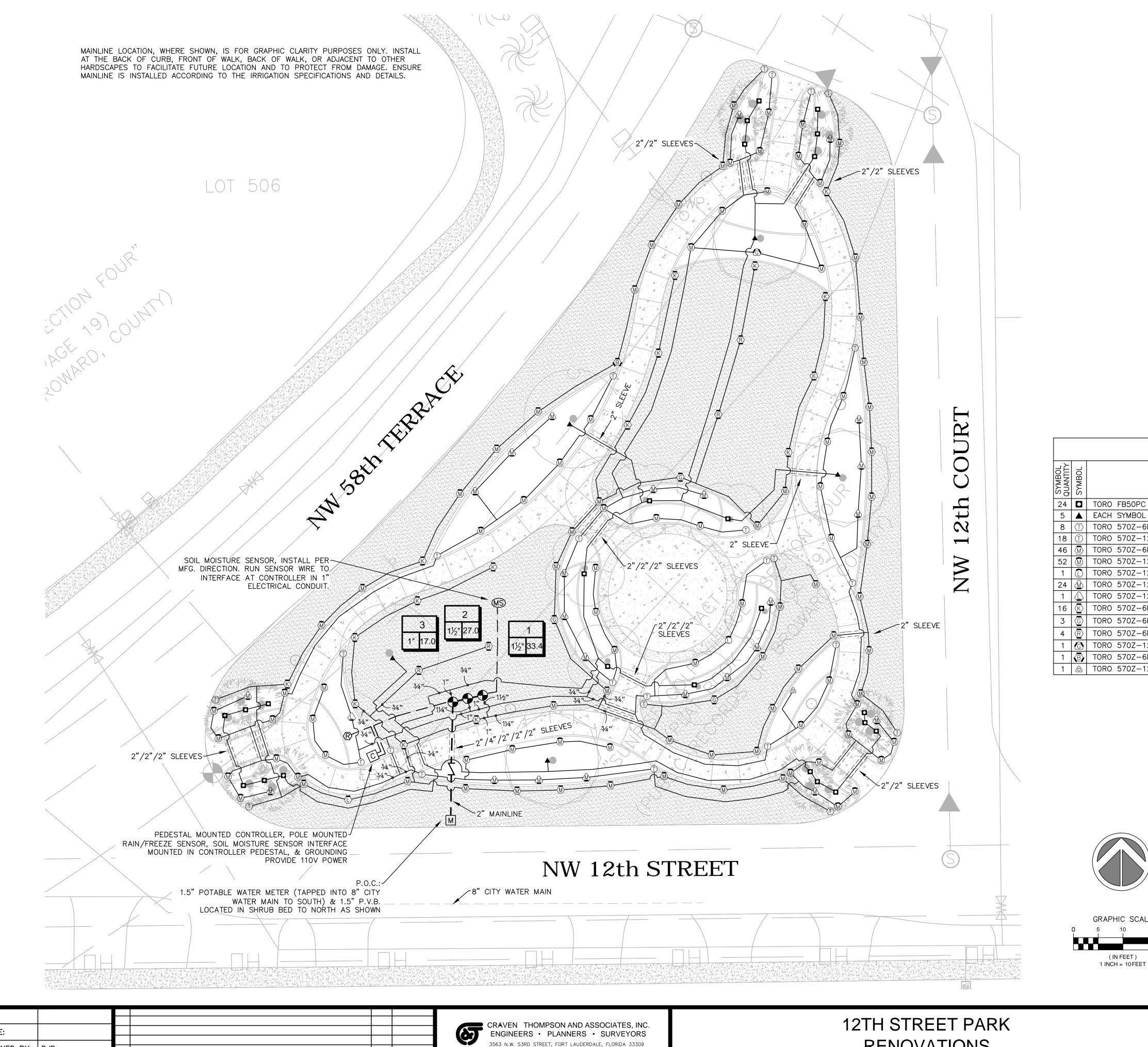
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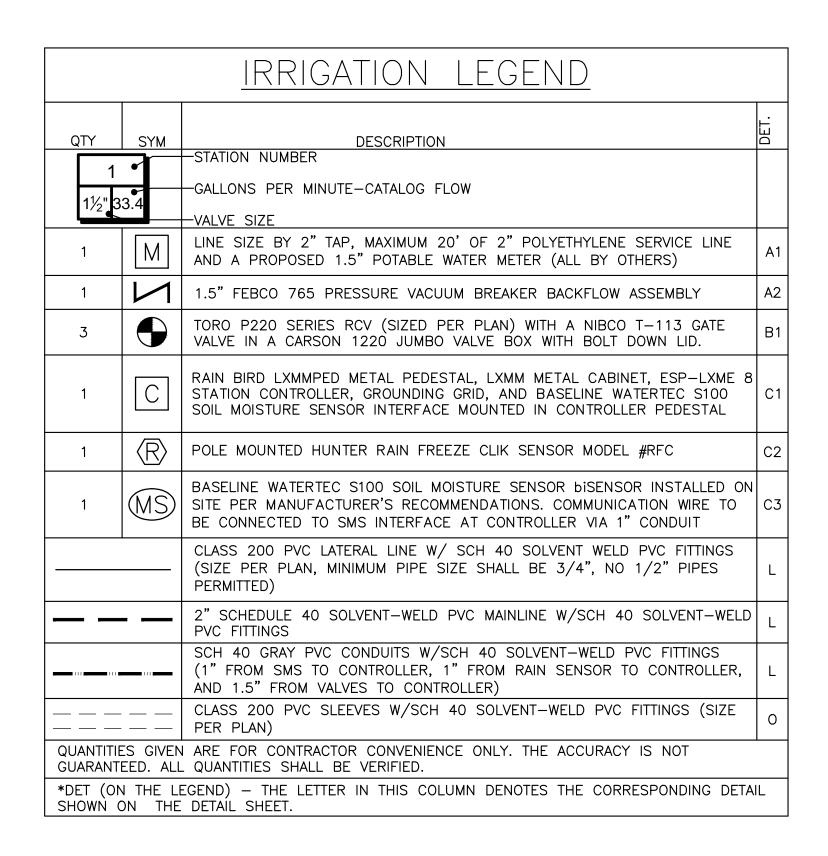
CRAVEN THOMPSON AND ASSOCIATES, INC. ENGINEERS • PLANNERS • SURVEYORS 3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309 FAX: (954) 739-6409 TEL.: (954) 739-6400

FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271 FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

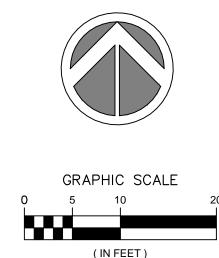
MATERIAL SHOWN HEREON IS THE PROPERTY OF CRAVEN-THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPROJUCION WHOLE OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. CRAVEN THOMPSON & ASSOCIATES, INC.

LOCATED AT NW 12TH STREET AND NW 58TH TERRACE SUNRISE, FL





	<u>IRRIGATION HEAD LEGEND</u>						
DESCRIPTION							
24		TORO FB50PC FLOOD BUBBLER ON SHRUB ADAPTER ON POLY PIPE	Q	30	0.50		
5		EACH SYMBOL DENOTES TWO (2) TORO FB50PC FLOOD BUBBLERS ON SHRUB ADAPTERS ON POLY PIPE	Q	30	1.00		
8	$\langle \mathbb{T} \rangle$	TORO 570Z-6P PRX COM W/ HUNTER MPCORNER HT NOZZLE ADJ ARC 0-90	R	30	VAR		
18	1	TORO 570Z-12P PRX COM W/ HUNTER MPCORNER HT NOZZLE ADJ ARC 0-90	S	30	VAR		
46	$\overline{\mathbb{A}}$	TORO 570Z-6P PRX COM W/ HUNTER MP1000 HT NOZZLE MAROON ADJ ARC 90-210	R	30	VAR		
52		TORO 570Z-12P PRX COM W/ HUNTER MP1000 HT NOZZLE MAROON ADJ ARC 90-210	S	30	VAR		
1		TORO 570Z-12P PRX COM W/ HUNTER MP1000 HT NOZZLE LIGHT BLUE ADJ ARC 210-270	S	30	VAR		
24		TORO 570Z-12P PRX COM W/ HUNTER MP1000 HT NOZZLE MAROON ADJ ARC 90-210 ON SCH 40 RISER	T	30	VAR		
1		TORO 570Z-12P PRX COM W/ HUNTER MP1000 HT NOZZLE LIGHT BLUE ADJ ARC 210-270 ON SCH 40 RISER	Т	30	VAR		
16	$\langle \mathbb{K} \rangle$	TORO 570Z-6P PRX COM W/ HUNTER MP2000 HT NOZZLE BLACK ADJ ARC 90-210	R	30	VAR		
3	<u>G</u>	TORO 570Z-6P PRX COM W/ HUNTER MP2000 HT NOZZLE GREEN ADJ ARC 210-270	R	30	VAR		
4	$\overline{\mathbb{R}}$	TORO 570Z-6P PRX COM W/ HUNTER MP2000 HT NOZZLE RED ARC 360	R	30	1.27		
1	(G)	TORO 570Z-12P PRX COM W/ HUNTER MP2000 HT NOZZLE GREEN ADJ ARC 210-270 ON SCH 40 RISER	Т	30	VAR		
1	$\langle \mathbb{B} \rangle$	TORO 570Z-6P PRX COM W/ HUNTER MP3000 HT NOZZLE BLUE ADJ ARC 90-210	R	30	VAR		
1	<u>(a)</u>	TORO 570Z-12P PRX COM W/ HUNTER MPSTRIP HT NOZZLE SST ON SCH 40 RISER	Т	30	VAR		





32801 Hwy 441 North, #293 Okeechobee, FL 34951 Telephone (866) 928-1533 Fax (800) 928-1534

Masuen Consulting LLC Water Resource Consultants

PROUDLY DESIGNED AND PRODUCED IN

DATE:				
SCALE:				
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DESIGNED BY:	DJS			
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APPROVED BY:	JDH	DESCRIPTION	BY:	DATE:

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

RENOVATIONS

LOCATED AT NW 12TH STREET AND NW 58TH TERRACE SUNRISE, FL PREPARED FOR: CITY OF SUNRISE, FLORIDA

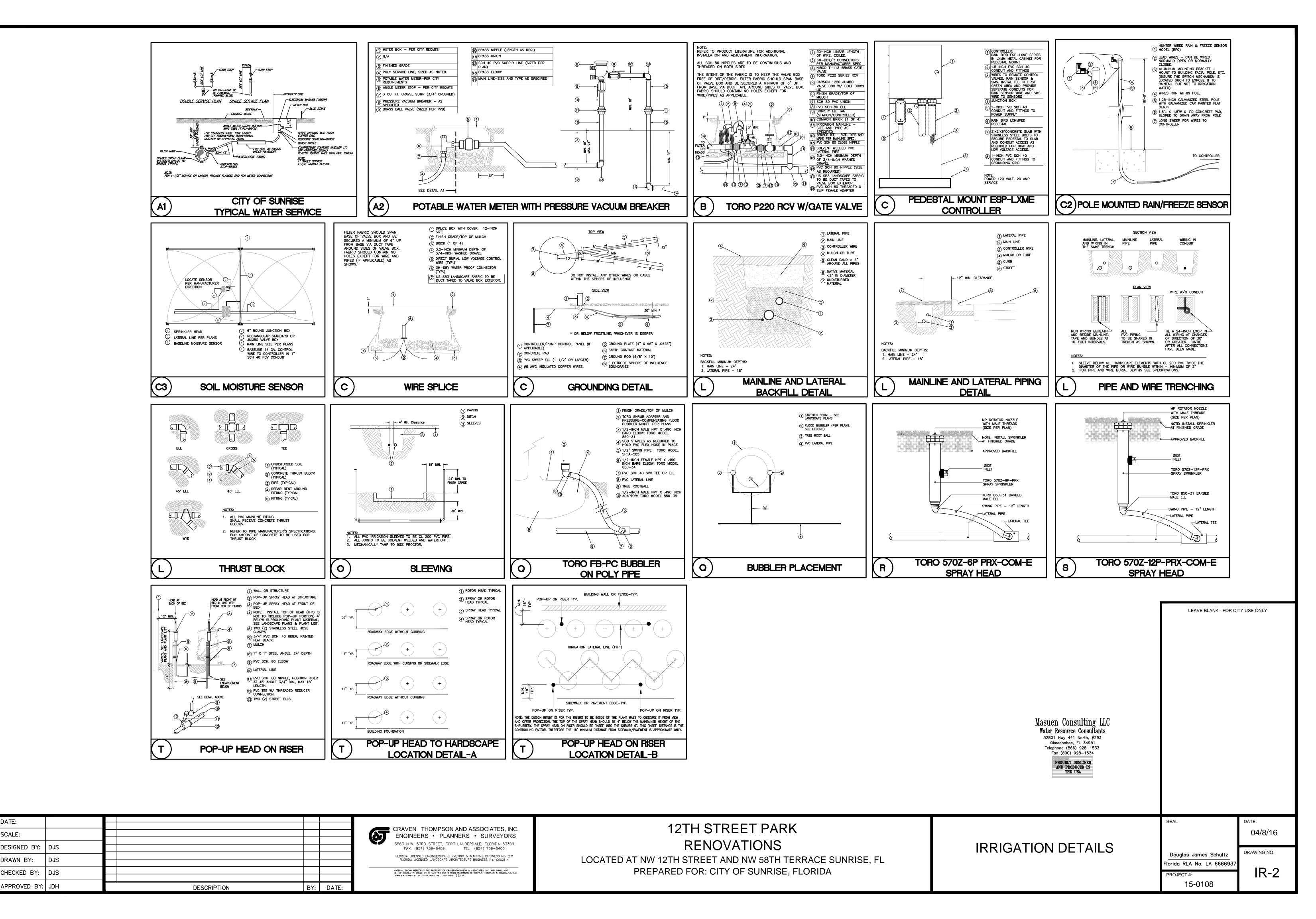
IRRIGATION PLAN

AL	DATE:
	04/8

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DRAWING NO. Douglas James Schultz Florida RLA No. LA 666693 PROJECT #:

IR-1 15-0108



IRRIGATION NOTES & SPECIFICATIONS

Irrigation design based on the Craven Thompson & Associates Landscape Plan dated 2/16/16. Contractor shall refer to these plans to coordinate sprinkler and pipe

The system has been designed to conform with the requirements of all applicable codes, laws, ordinances, rules, regulations and conventions. Should any conflict exist, the requirements of the codes shall prevail. It is the responsibility of the owner/installation contractor to ensure the entire system is installed as designed. Irrigation contractor responsible for obtaining all required permits according to federal, state and local laws.

The scope of work is shown on the plans, notes and details. The Irrigation Contractor shall be certified as a CERTIFIED IRRIGATION CONTRACTOR by the Irrigation Association. The certification shall be current and in good standing.

THE WORK

The work specified in this section consists of furnishing all components necessary for the installation, testing, and delivery of a complete, fully functional automatic landscape irrigation system that complies with the irrigation plans, specifications, notes, and details. This work shall include, but not be limited to, the providing of all required material if applicable (pump(s), backflows, pipes, valves, fittings, controllers, wire, primer, glue, etc.), layout, protection to the public, excavation, assembly, installation, back filling, compacting, repair of road surfaces, controller and low voltage feeds to valves, cleanup, maintenance, guarantee and as—built plans.

All irrigated areas shall provide 100% head—to—head coverage from a fully automatic irrigation system with a rain/freeze shut off device. If the shut off device is a rain sensor, it shall be installed to prevent activation by adjacent heads and in a visually un-obtrusive location approved by owner. Zones are prioritized first by public safety and then by hydraulic concerns. This sequencing will be a mandatory punch list item.

These plans have been designed to satisfy/exceed the Florida Building Code (FBC) Appendix F and the Florida Irrigation Society Standards and Specifications for Turf and Landscape Irrigation Systems, fourth edition. All products should be installed per manufacturer's recommendation. Contractor shall verify all underground utilities 72 hours prior to commencement of work.

It is the responsibility of the irrigation contractor to familiarize themselves with all grade differences, location of walls, retaining walls, structures and utilities. Do not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that unknown obstruction, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions, or differences, should be brought to the attention of the owner's authorized representative. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.

Irrigation contractor shall repair or replace all items damaged by their work. Irrigation contractor shall coordinate their work with other contractors for the location and installation of pipe sleeves and laterals through walls, under roadways and paving,

The contractor shall take immediate steps to repair, replace, or restore all services to any utilities which are disrupted due to their operations. All costs involved in disruption of service and repairs due to negligence on the part of the contractor shall be their responsibility.

POINT OF CONNECTION (P.O.C.)

The P.O.C. is a new line size X 2" tap, maximum of 20' of 2" polyethylene service line, a new 1.5" potable meter and a 1.5" pressure vacuum breaker (P.V.B). The P.O.C. must be capable of delivering a minimum of 40 GPM at 50 PSI downstream of the water meter.

Contractor to verify these minimum conditions can be met prior to ordering of materials and the beginning of installation. If the conditions can not be met, the contractor must notify the designer prior to proceeding with the work. If the contractor does not do so, the contractor proceeds at their own risk and becomes responsible for any future work required to make the system perform as required.

Pipe locations shown on the plan are schematic and shall be adjusted in the field. When laying out mainlines place a maximum of 18" away from either the back of curb, front of walk, back of walk, or other hardscape to allow for ease in locating and protection from physical damage. Install all lateral pipe near edges of pavement or against buildings whenever possible to allow space for plant root balls. Always install piping inside project's property boundary.

All pipes are to be placed in planting beds. If it is necessary to have piping under hardscapes, such as roads, walks, and patios, the pipes must be sleeved using Class 200 PVC with the sleeve diameter being twice the size of the pipe it is carrying with a minimum sleeve size of 2". No sleeve shall have turns or fittings that prevent a pipe from being manually pushed/pulled through after it is installed.

Pipe sizes shall conform to those shown on the drawings. No substitutions of smaller pipe sizes shall be permitted, but substitutions of larger sizes may be approved. All damaged and rejected pipe shall be removed from the site at the time of said

Mainline shall be Sch 40 solvent-weld 2" PVC with Sch 40 PVC solvent-weld fittings.

Contractor to ensure all mainline piping is properly restrained using mechanical joint fittings, restraining collars, threaded rods, thrust blocks, etc.., as and where required. Contractor shall refer to pipe manufacturers recommended installation practices for

PVC pipe joint compound and primer: The PVC cement shall be Weld-On 711 (grey, slow-drying, heavy duty) and the primer shall be Weld-On P70 (purple tinted, compatible with cement), or approved equals.

ELECTRICAL POWER SUPPLY

Electrical supply for irrigation controller to be provided by irrigation contractor. Contractor to coordinate with local utilities as required for the installation of, and connection to, site available power supplies for required electrical components as set forth in the irrigation plans.

All electrical work is to comply with the National Electrical Code and any, and all, other applicable electrical codes, laws and regulations. A licensed electrician shall perform all electrical hook—ups. Power for controller shall be a dedicated 120 volt, 20 amp circuit unless otherwise specified in the plans.

WIRING

Irrigation control wire shall be thermoplastic solid copper, single conductor, low voltage irrigation controller wire; suitable for direct burial and continuous operation at

Tape and bundle control wires every 10' and run alongside the mainline. At all turns in direction make a 2' coil of wire. At all valve boxes coil wire around a 3/4" piece of PVC pipe to make a coil using 30 linear inches of wire. Make electrical connections with 3MDBY/R connectors.

Number all wires, using an electrical book of numbers, according to the plans. Number wires in all valve boxes, junction boxes and at the controller.

Wire sized, numbered and colored as follows:

- #14 white for common #14 spare black common
- #14 individual color coded hot wire #14 spare yellow hot wire

Leaving the controller, run two spare wires. Install as 1 common spare wire and 1 hot spare wire. Loop these wires into each RCV along their path and terminate in the last valve box controlled by the controller. The loop into each valve box shall extend up into the valve box a minimum of 8" and be readily accessible by opening the valve box lid. These wires must be all numbered and color coded as required in these plans.

Controller grounding — Contractor to utilize 4"X96"X0.0625" copper grounding plates, 5/8"X10' copper clad grounding rods, 'One Strike' CAD wells at all connection points, #6 insulated copper wire, and earth contact material. Install these and other required components as outlined in the detail. Contractor to verify that the earth to ground resistance does not exceed 10 ohms. Contractor shall provide a written certification, on a licensed electrical contractors letter head, showing the date of the test, controller/pump location, and test results.

LAYOUT

Lay out irrigation system mainlines and lateral lines. Make the necessary adjustments as required to take into account all site obstructions and limitations prior to excavating trenches.

Stake all sprinkler head locations. Adjust location and make the necessary modifications to nozzle types, etc. required to ensure 100% head to head coverage. Refer to the Edge of Pavement Detail on the Irrigation Detail Sheet.

Spray heads shall be installed 4" from sidewalks or curbed roadways and 12" from uncurbed roadways and building foundations. Rotors shall be installed 4" from sidewalks or curbed roadways, 12" from building foundations, and 36" from uncurbed

Shrub heads shall be installed on 3/4" Sch 40 PVC risers. The risers shall be set at a minimum of 18" off sidewalks, roadway curbing, building foundations, and/or any other hardscaped areas. Shrub heads shall be installed to a standard height of 4" below maintained height of plants and shall be installed a minimum of 6" within planted masses to be less visible and offer protection. Paint all shrub risers with flat black or forest green paint, unless irrigation system will utilize reuse water; in this case the risers shall be purple PVC and shall not be painted.

Locate valves prior to excavation. Ensure that their location provides for easy access and that there is no interference with physical structures, plants, trees, poles, etc. Valve boxes must be placed a minimum of 12" and a maximum of 15" from the edge of payement, curbs, etc. and the top of the box must be 2" above finish grade. No valve boxes shall be installed in turf areas without approval by the irrigation designer — only in shrub beds. Never install in sport field areas.

VALVES

Sequence all valves so that the farthest valve from the P.O.C. operates first and the closest to the P.O.C. operates last. The closest valve to the P.O.C. should be the last valve in the programmed sequence.

Adjust the flow control on each RCV to ensure shut off in 10 seconds after deactivation by the irrigation controller.

Using an electric branding iron, brand the valve I.D. letter/number on the lid of each valve box. This brand must be 2"-3" tall and easily legible.

EQUIPMENT

All pop—up heads and shrub risers shall be pressure compensating. All pop—up heads shall be mounted on flex-type swing joints. All rotors shall be installed with PVC triple swing joints unless otherwise detailed.

All sprinkler equipment, not otherwise detailed or specified on these plans, shall be installed as per manufacturer's recommendations and specifications, and according to local and state laws.

TRENCHING

Excavate straight and vertical trenches with smooth, flat or sloping bottoms. Trench width and depth should be sufficient to allow for the proper vertical and horizontal separation between piping as shown in the pipe installation detail on the detail sheet.

Protect existing landscaped areas. Remove and replant any damaged plant material upon job completion. The replacement material shall be of the same genus and species, and of the same size as the material it is replacing. The final determination as to what needs to be replaced and the acceptability of the replacement material shall be solely up to the owner or owner's representative.

INSTALLATION

Solvent Weld Pipe: Cut all pipe square and deburr. Clean pipe and fittings of foreign material; then apply a small amount of primer while ensuring that any excess is wiped off immediately. Primer should not puddle or drip from pipe or fittings. Next apply a thin coat of PVC cement; first apply a thin layer to the pipe, next a thin layer inside the fitting, and finally another very thin layer on the pipe. Insert the pipe into the fitting. Insure that the pipe is inserted to the bottom of the fitting, then turn the pipe a 1/4 turn and hold for 10 seconds. Make sure that the pipe doesn't recede from the fitting. If the pipe isn't at the bottom of the fitting upon completion, the glue joint is unacceptable and must be discarded.

Pipes must cure a minimum of 30 minutes prior to handling and placing into trenches. A longer curing time may be required; refer to the manufacturer's specifications. The pipe must cure a minimum of 24 hours prior to filling with water.

The Back fill 6" below, 6" above, and around all piping shall be of clean sand and anything beyond that in the trench can be of native material but nothing larger than 2" in diameter. All piping and excavations shall be backfilled and compacted to a density of 95% modified Proctor, or greater.

Main line pipe depth measured to the top of pipe shall be:

24" minimum for 3/4"-2 1/2" PVC with a 30" minimum at vehicular crossings;

Lateral line depths measured to top of pipe shall be:

18" minimum for 3/4"-3" PVC with a 30" minimum at vehicular crossings;

Contractor shall backfill all piping, both mainline and laterals, prior to performing any pressure tests. The pipe shall be backfilled with the exception of 2' on each side of every joint (bell fittings, 90's, tees, 45's, etc.). These joints shall not be backfilled until all piping has satisfactorily passed its appropriate pressure test as outlined below.

FLUSHING

Prior to the placement of valves, flush all mainlines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Prior to the placement of heads, flush all lateral lines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Use screens in heads and adjust heads for proper coverage avoiding excess water on walls, walks and paving. **TESTING**

Soil: At a minimum of 2 locations on the site, soil tests for infiltration and texture shall be performed according to the USDA Soil Quality Test Kit Guide. The tests shall be documented in a USDA Soil Worksheet. (All of the above is available at http://soils.usda.gov/sqi/assessment/test_kit.html) The completed worksheet shall be submitted to the owners representative for review/approval. Do not proceed without written direction from the owner/owner's representative.

Schedule testing with Owner's Representative a minimum of three (3) days in advance

Mainline: Remove all remote control valves and cap using a threaded cap on SCH 80 nipple. Hose bibs and gate valves shall not be tested against during a pressure test unless authorized by written permission from the owner. Fill mainline with water and pressurize the system to 125 PSI using a hydrostatic pump. Monitor the system pressure at two gauge locations; the gauge locations must be at opposite ends of the mainline. With the same respective pressures, monitor the gauges for two hours. There can be no loss in pressure at either gauge for solvent-welded pipe. If these parameters are exceeded, locate the problem; repair it; wait 24 hours and retry the test. This procedure must be followed until the mainline passes the test.

<u>Lateral Lines:</u> The lateral lines must be fully filled to operational pressure and visually checked for leaks. Any leaks detected must be repaired.

Operational Testing —Once the mainline and lateral lines have passed their respective tests, and the system is completely operational, a coverage test and demonstration of the system is required. The irrigation contractor must demonstrate to the owner, or his/her representative, that proper coverage is obtained and the system works automatically from the controller. This demonstration requires each zone to be turned on, in the proper sequence as shown on the plans, from the controller. Each zone will be inspected for proper coverage and function. The determination of proper coverage and function is at the sole discretion of the owner or owner's representative.

Upon completion of the operational test, run each zone until water begins to puddle or run off. This will allow you to determine the number of irrigation start times necessary to meet the weekly evapotranspiration requirements of the planting material in each zone. In fine sandy soils, it is possible no puddling will occur. If this is experienced, then theoretical calculations for run times will be required for controller programming.

SUBMITTALS

<u>Pre-Construction:</u> Deliver five (5) copies of submittals to Owner's Representative within ten (10) working days from date of Notice to Proceed. Furnish information in 3-ring binder with table of contents and index sheet. Index sections for different components and label with specification section number and name of component. Furnish submittals for components on material list. Indicate which items are being supplied on catalog cut sheets when multiple items are shown on one sheet. Incomplete submittals will be returned without review. In lieu of hardcopies, an electronic package in PDF format can be submitted.

As a condition of final acceptance, the irrigation contractor shall provide the owner

- 1. Irrigations As—builts shall be provided utilizing a sub—foot Global Navigation Satellite System (GNSS) to accurately locate all mainlines, sleeves, remote control valves, gate valves, independent wire runs, wire splice boxes, controllers, high voltage supply sources/conduit path, control mechanisms, sensors, wells and water source connections in Florida East State Plane, NAD 83, and CORS 96 format. The data collected shall be in POINT format and include an ID for each data point with Manufacturer, Type, Size, and Depth. All mainline and independent runs of wire shall be located every 30' for straight runs and at every change of direction. Sleeves will be located at end points and every 20' of length. All underground items shall include depth in inch format. These POINTS once collected shall be imported into an AutoCAD DWG geo-referenced base file to be labeled accordingly. The completed AS-Built shall be a Geo-Referenced DWF file and delivered to the owner on a
- 2. Controller chart Upon completion of "as—built" prepare controller chart. Indicate on chart the area controlled by a remote control valve (using a different color for each zone). This chart shall be reduced to a size that will fit inside of the controller door. The reduction shall be hermetically sealed inside two 2ml pieces of clear plastic.
- 3. Grounding Certification Provide ground certification results for installed controller grounding grid. This must be on a licensed electrician letter head indicating location tested (using IR plan symbols), date, time, test method, and testing

INSPECTIONS AND COORDINATION MEETINGS REQUIRED - Contractor is required to schedule, perform, and attend the following, and demonstrate to the owner and/or owners representative to their satisfaction, as follows:

- 1. Pre-construction meeting Designer and contractor to review entire install
- process and schedule with owner/general contractor. 2. Mainline installation inspection(s) — all mainline must be inspected for
- proper pipe, fittings, depth of coverage, backfill. and installation method 3. Mainline pressure test — All mainline shall be pressure tested according to
- this design's requirements
- 4. Water Meter calibration Water meter must be calibrated, provide certified
- 5. USDA Soil Quality Tests for infiltration/texture
- 6. Coverage and operational test
- 7. Final inspection 8. Punch list inspection

FINAL ACCEPTANCE

Final acceptance of the irrigation system will be given after the following documents and conditions have been completed and approved. Final payment will not be released until these conditions are satisfied.

- 1. All above inspections are completed, documented, and approved by owner.
- 2. Completion and acceptance of 'as-built' drawings. 3. Acceptance of required controller charts and placement inside of
- controllers. 4. All other submittals have be made to the satisfaction of the owner.

GUARANTEE: The irrigation system shall be augranteed for a minimum of one calendar year from the time of <u>final acceptance</u>.

MINIMUM RECOMMENDED IRRIGATION MAINTENANCE PROCEDURES

- 1. Every irrigation zone should be checked monthly and written reports generated describing the date(s) each zone was inspected, problems identified, date problems repaired, and a list of materials used in the repair. At minimum, these inspections should include the following tasks:
- A. Turn on each zone from the controller to verify automatic operation.
- B. Check schedules to ensure they are appropriate for the season, plant and soil type, and irrigation method. Consult an I.A. certified auditor for methods used in determining proper irrigation scheduling requirements.
- C. Check remote control valve to ensure proper operation.
- D. Check setting on pressure regulator to verify proper setting, if present.
- E. Check flow control and adjust as needed; ensure valve closure within 10-15 seconds after deactivation by controller.
- F. Check for leaks mainline, lateral lines, valves, heads, etc.
- G. Check all heads as follows:
 - Proper set height (top of sprinkler is 1" below mow height)
 - 2. Verify head pop-up height -6" in turf, 12" in ground cover, and pop-up on riser in shrub beds.
 - Check wiper seal for leaks if leaking, clean head and re—inspect. 4. If still leaking, replace head with the appropriate head with
 - pressure regulator and built—in check valve. 5. All nozzles checked for proper pattern, clogging, leaks, correct make
 - & model, etc. replace as needed
- 6. Check for proper alignment perfectly vertical; coverage area is correct; minimize over spray onto hardscapes.
- 7. Riser height raised/lowered to accommodate plant growth patterns
- and ensure proper coverage. 8. Verify the pop-up riser retracts after operation. If not, repair/replace
- H. Check controller/C.C.U. grounds for resistance (10 ohms or less) once per year.
- Submit written reports.
- I. Check rain shut—off device monthly to ensure it functions properly. J. Inspect all filters monthly and clean/repair/replace as needed.
- K. Inspect backflow devices by utilizing a properly licensed backflow inspector. This should be done annually, at minimum.
- L. Inspect all valve boxes to ensure they are in good condition, lids are in place
- M. Check pump stations for proper operation, pressures, filtration, settings, etc. —
- refer to pump station operations manual. N. Check and clean intake screens on all suction lines quarterly, at minimum. Clean and/or repair, as needed.
- O. Winterize, if applicable, as weather in your area dictates. Follow manufacturer recommendations and blow out all lines and equipment using compressed air. Perform seasonal startup of system as per manufacturer recommendations.
- P. Conduct additional inspections, maintenance tasks, etc. that are particular for your site.

Soil Moisture Sensor

- 1. Place all soil moisture sensor wiring in 1" SCH 40 PVC conduit
- 2. Soil moisture sensor should be placed in the middle of a spray or drip area as per manufacturer's recommendations.
- 3. Controller shall be set to the Florida Automated Weather Network's urban scheduler settings using the SMS as a moisture cut off device (like a rain switch) per manufacturer directions.

Okeechobee, FL 34951 Telephone (866) 928-1533 Fax (800) 928-1534 PROUDLY DESIGNED AND PRODUCED IN THE USA

Masuen Consulting LLC

Water Resource Consultants

32801 Hwy 441 North, #293

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DATE: SCALE: DESIGNED BY: DJS DRAWN BY: DJS CHECKED BY: DJS APPROVED BY: | JDH BY: DATE: DESCRIPTION

CRAVEN THOMPSON AND ASSOCIATES, INC. ENGINEERS • PLANNERS • SURVEYORS 3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309

FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271 FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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12TH STREET PARK RENOVATIONS

LOCATED AT NW 12TH STREET AND NW 58TH TERRACE SUNRISE. FL PREPARED FOR: CITY OF SUNRISE, FLORIDA

IRRIGATION NOTES

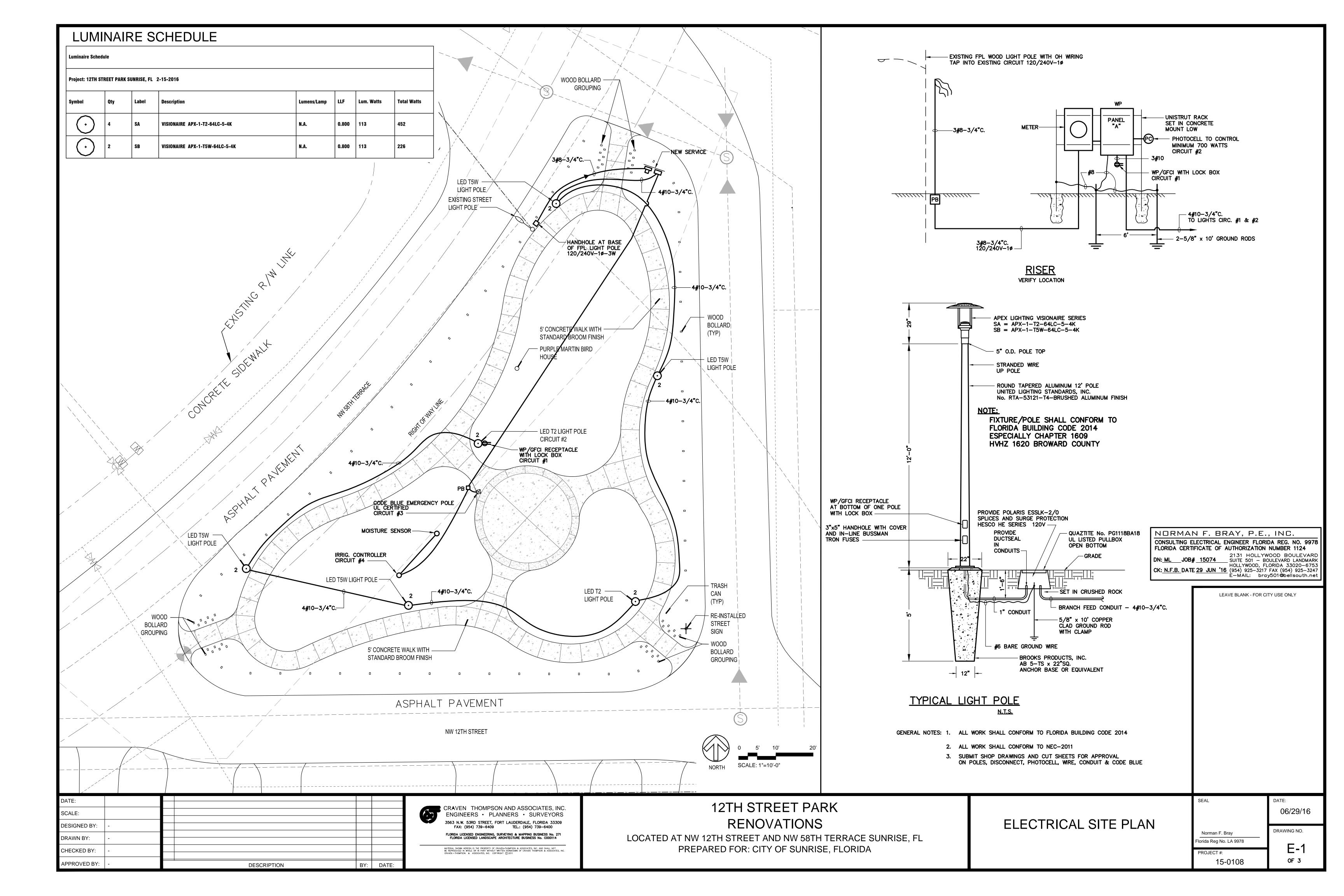
04/8/16 DRAWING NO. Douglas James Schultz Florida RLA No. LA 666693

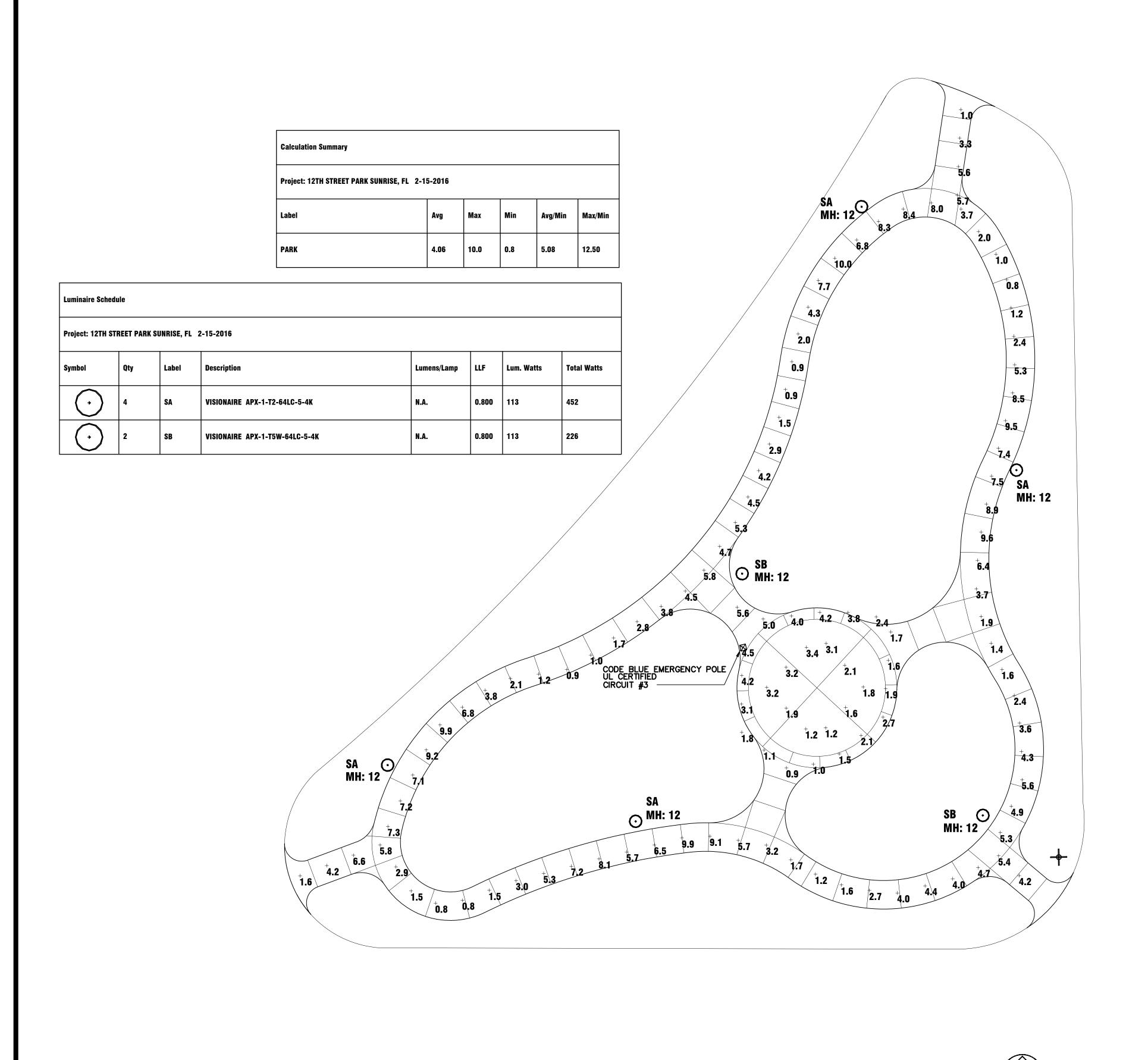
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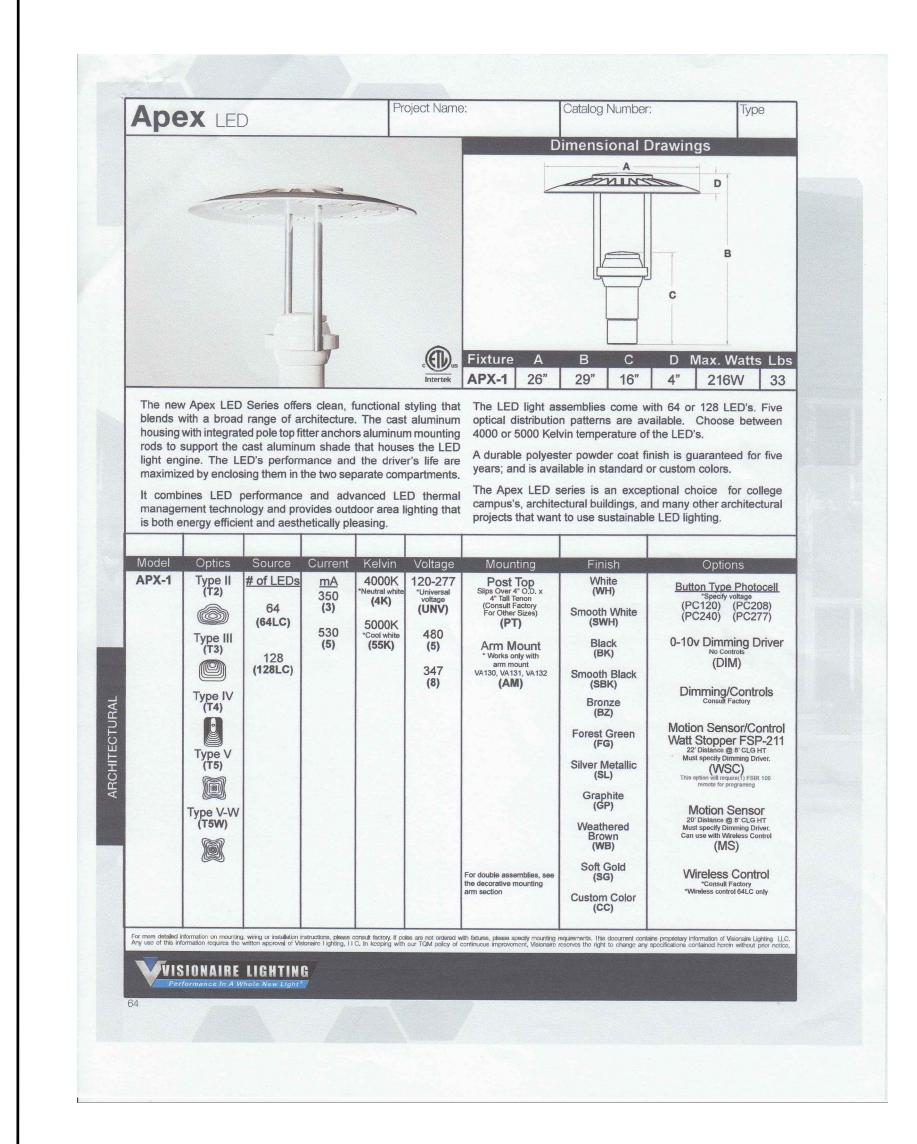
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NORMAN F. BRAY, P.E., INC. CONSULTING ELECTRICAL ENGINEER FLORIDA REG. NO. 9978 FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER 1124 DN: ML JOB# 15074 2131 HOLLYWOOD BOULEVARD SUITE 501 - BOULEVARD LANDMARK HOLLYWOOD, FLORIDA 33020-6753 (954) 925-3217 FAX (954) 925-3247 E-MAIL: bray501@bellsouth.net

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Panel Data	Circuit No.	Circuit Breaker	VA	Description of Load	Wire & Conduit	
A 277/240V 1 Phase 3 Wre 40A-2P Main CB NEMA 3R	1 2 3 4 5 6 7,8 9,10 11,12	20A-1P 20A-1P 20A-1P 20A-1P 20A-1P 20A-1P 30A-2P Space Space	400 678 100 100 - -	Receptacles Pole Lights Code Blue Irrigation Controls Spare Spare SPD	#10 + 10 Gnd #10 + 10 Gnd. #12 + #12 Gnd. #12 + #12 Gnd.	
10 KAIC	$\overline{1278} / 240V = 5.3Amps$					
	Feeder: 3 #8- 1"C fromFPL					

DATE:	:.			
DITTE.				
SCALE:				
DESIGNED BY:	-			
DRAWN BY:	-			
CHECKED BY:	BY: -			
APPROVED BY:	-	DESCRIPTION	BY:	DATE:

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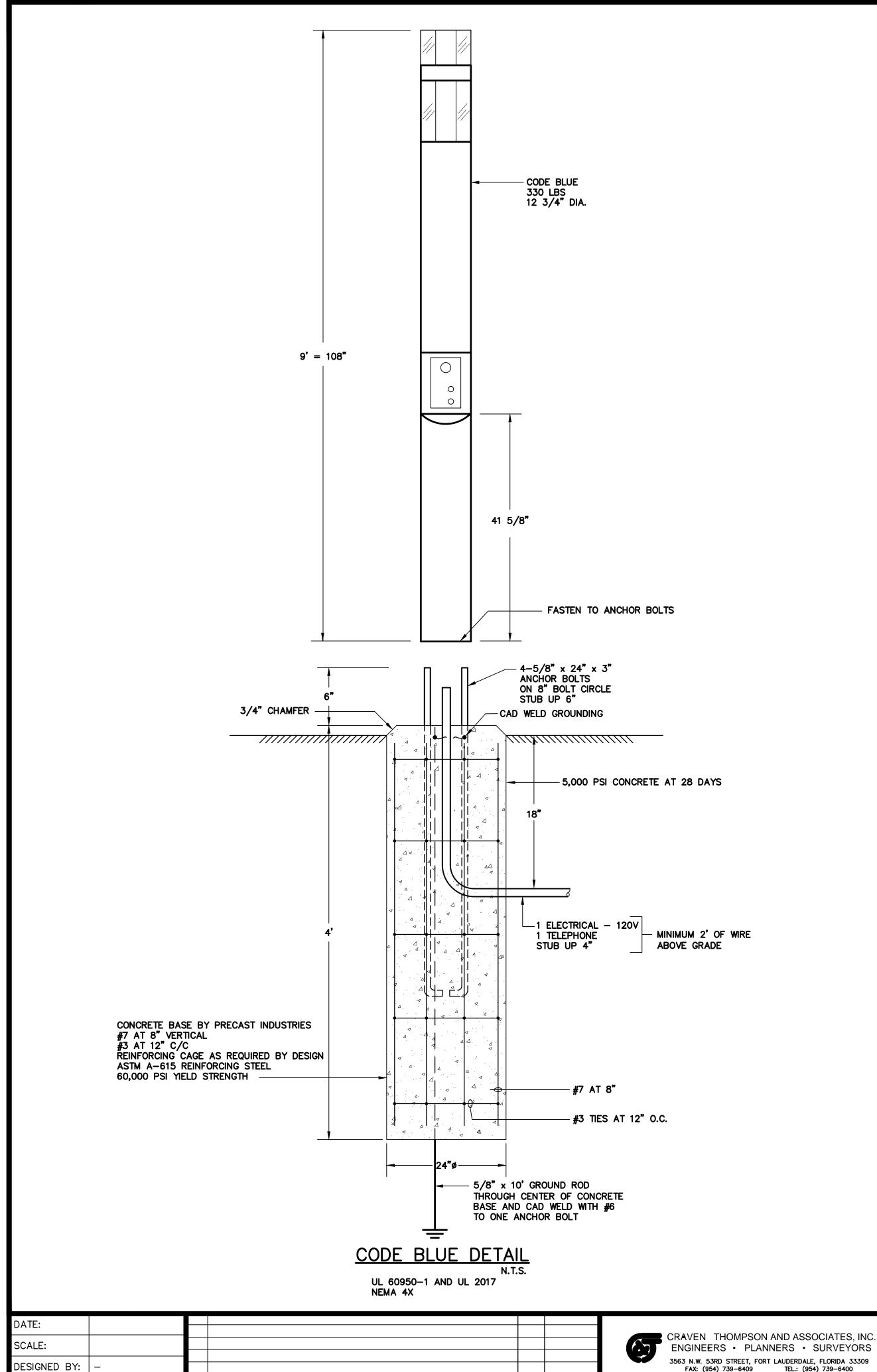
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12TH STREET PARK RENOVATIONS

LOCATED AT NW 12TH STREET AND NW 58TH TERRACE SUNRISE, FL PREPARED FOR: CITY OF SUNRISE, FLORIDA

PHOTOMETRICS PLAN

SEAL	DATE:
	06/29/16
Norman F. Bray	DRAWING NO.
Florida Reg No. LA 9978	E 2
PROJECT #:	E-2
15-0108	OF 3



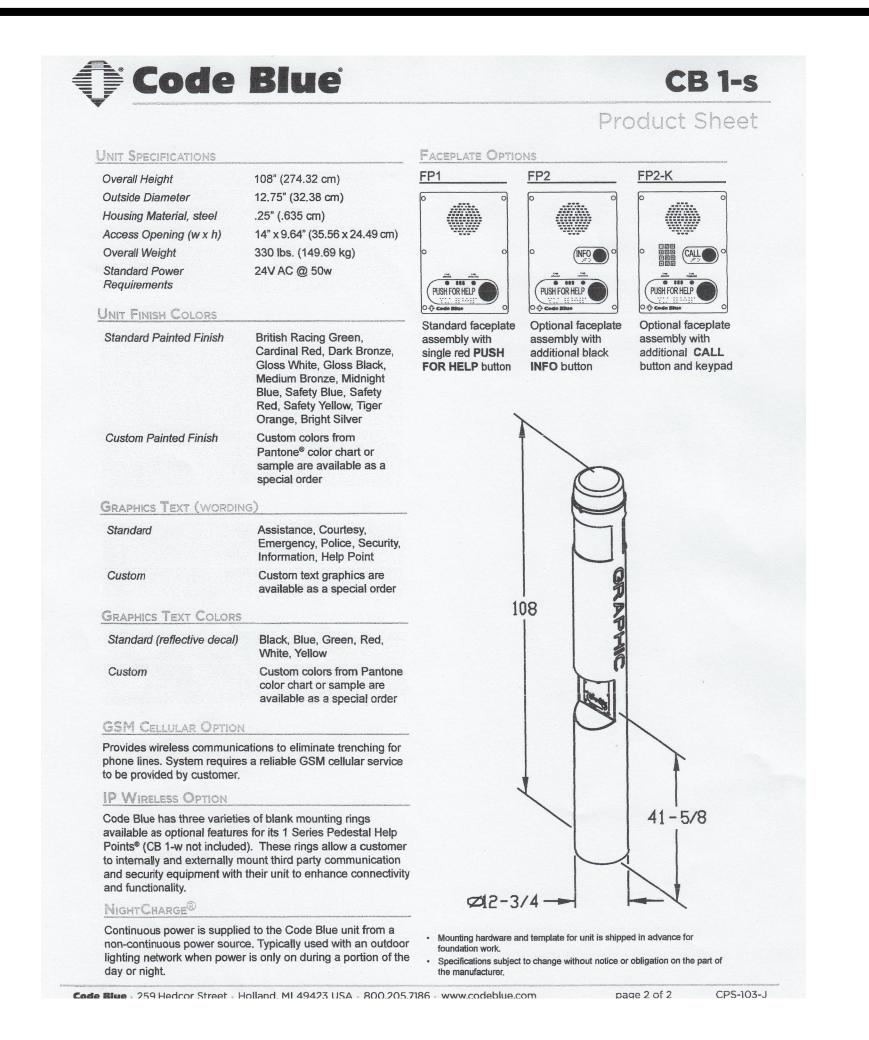
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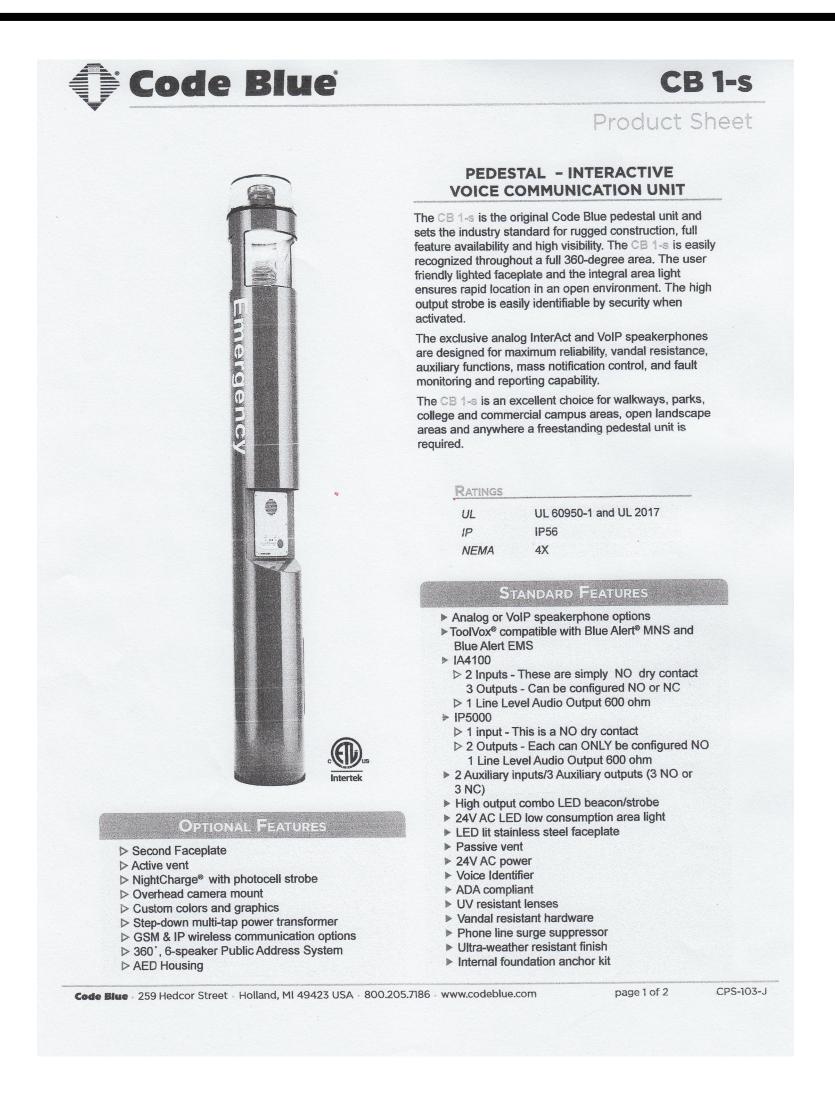
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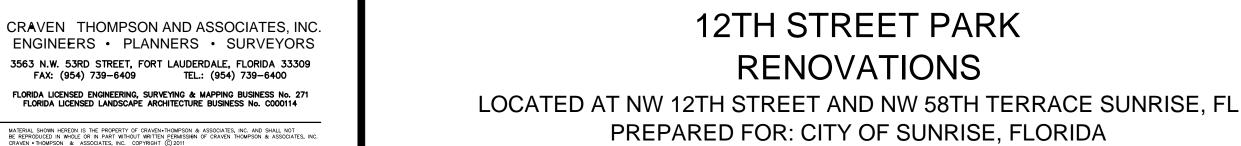
APPROVED BY:





NORMAN F. BRAY, P.E., INC. CONSULTING ELECTRICAL ENGINEER FLORIDA REG. NO. 9978 FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER 1124 2131 HOLLYWOOD BOULEVARD DN: ML JOB# 15074 SUITE 501 - BOULEVARD LANDMARK CK: N.F.B. DATE 29 JUN '16 (954) 925-3217 FAX (954) 925-3247 E-MAIL: bray501@bellsouth.net

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OF 3 15-0108