IRRIGATION PLANS
FOR

PUNTA RASSA BOAT RAMP IMPROVEMENTS
SECTION 09, TOWNSHIP 46 S., RANGE 23 E.
LEE COUNTY, FLORIDA

UTILITIES PROVIDING SERVICE:

WATER AND SEWER:
LEE COUNTY UTILITIES
1500 MONROE ST
FORT MYERS, FLORIDA 33901
PHONE: (239) 533-8181

TELEPHONE:
CENTURYLINK
1520 LEE STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 336-2030

CABLE:
CENTURYLINK
1520 LEE STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 336-2030

ELECTRIC:
LEE COUNTY ELECTRIC COOPERATIVE
4980 BAYLINE DRIVE
FORT MYERS, FLORIDA 33917
PHONE: (239) 656-2300
FAX: (239) 995-4287

GARBAGE COLLECTION:
WASTE MANAGEMENT
11990 STATE ROAD 82
FORT MYERS, FLORIDA 33913
PHONE: (239) 334-1224

FIRE CONTROL DISTRICT:
IONA-MCGREGOR FIRE DISTRICT
6061 SOUTH POINTE BOULEVARD
FORT MYERS, FLORIDA 33919
PHONE: (239) 433-0660
FAX: (239) 425-9301

GAS:
TECO PEOPLES GAS
5901 ENTERPRISE PKWY
FORT MYERS, FLORIDA 33905
PHONE: (877) 832-6747

OWNER / DEVELOPER

LEE COUNTY
PO BOX 398
FORT MYERS FL 33902
PHONE: (239) 533-2111

STRAP NUMBER

09-46-23-00-00002.0060

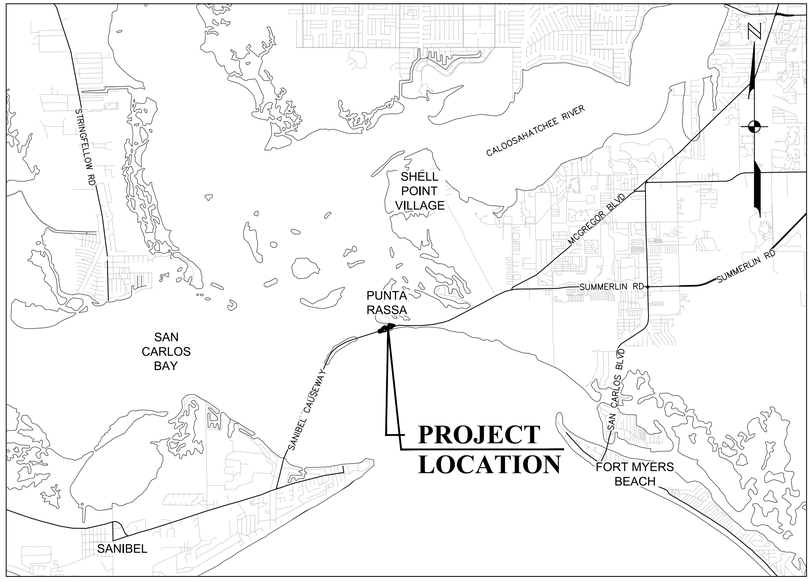
ZONING

AG-2 (LCO)

SITE ADDRESS

18700 MCGREGOR BLVD
FORT MYERS FL 33908

INDEX OF PLANS



LOCATION MAP

0 6,000 12,000
(INTENDED DISPLAY SCALE: 1"=6,000')

JANUARY 2025

NOTICE TO ALL CONTRACTORS

IT'S THE LAW IN FLORIDA
2 BUSINESS DAYS BEFORE YOU DIG
CALL SUNSHINE
1-800-432-4770

STATE, COUNTIES & CITIES ARE "NOT" PART OF THE ONE CALL SYSTEM.THEY MUST BE CALLED INDIVIDUALLY.

BEFORE YOU DIG STOP CALL SUNSHINE 1-800-432-4770 AVOID DAMAGE TO UNDERGROUND FACILITIES

JOHNSON ENGINEERING
— An Apex Company —
REGISTERED LANDSCAPE ARCHITECT
FLORIDA LICENSE NO. LA-6667059

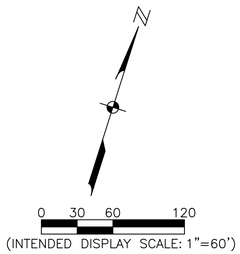
JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 334-0046
E.R. #642 & L.B. #642

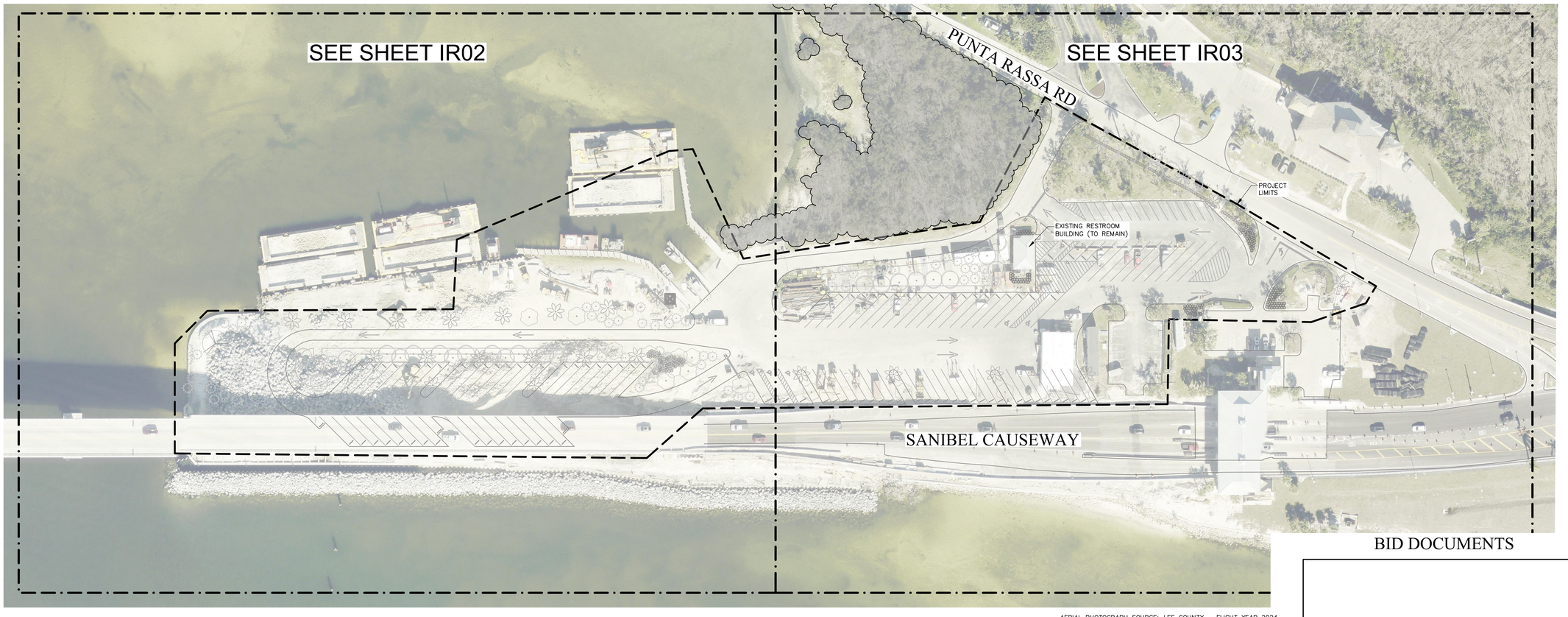
JEFFREY NAGLE, RLA

DATE

BID DOCUMENTS

SHEET NUMBER
C01





BID DOCUMENTS

AERIAL PHOTOGRAPH SOURCE: LEE COUNTY – FLIGHT YEAR 2024

0:\2024\20247063-000\Landscape\DRAWINGS\247063-000-IRR KEY.dwg (IR01) csb Jan 09, 2025 - 2:58pm

JOHNSON ENGINEERING
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JOHNSON ENGINEERING, LLC.
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JEFFREY MACLE, PLA
FL License No. LA-6667059

Lee County Southwest Florida

PUNTA RASSA BOAT RAMP IMPROVEMENTS
LEE COUNTY, FLORIDA

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	JANUARY 2025
PROJECT NO.	20247063-000
FILE NO.	09-46-23
SCALE:	AS SHOWN

IRRIGATION KEY PLAN

SHEET NUMBER

IR01

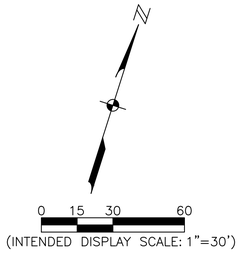
IRRIGATION SCHEDULE

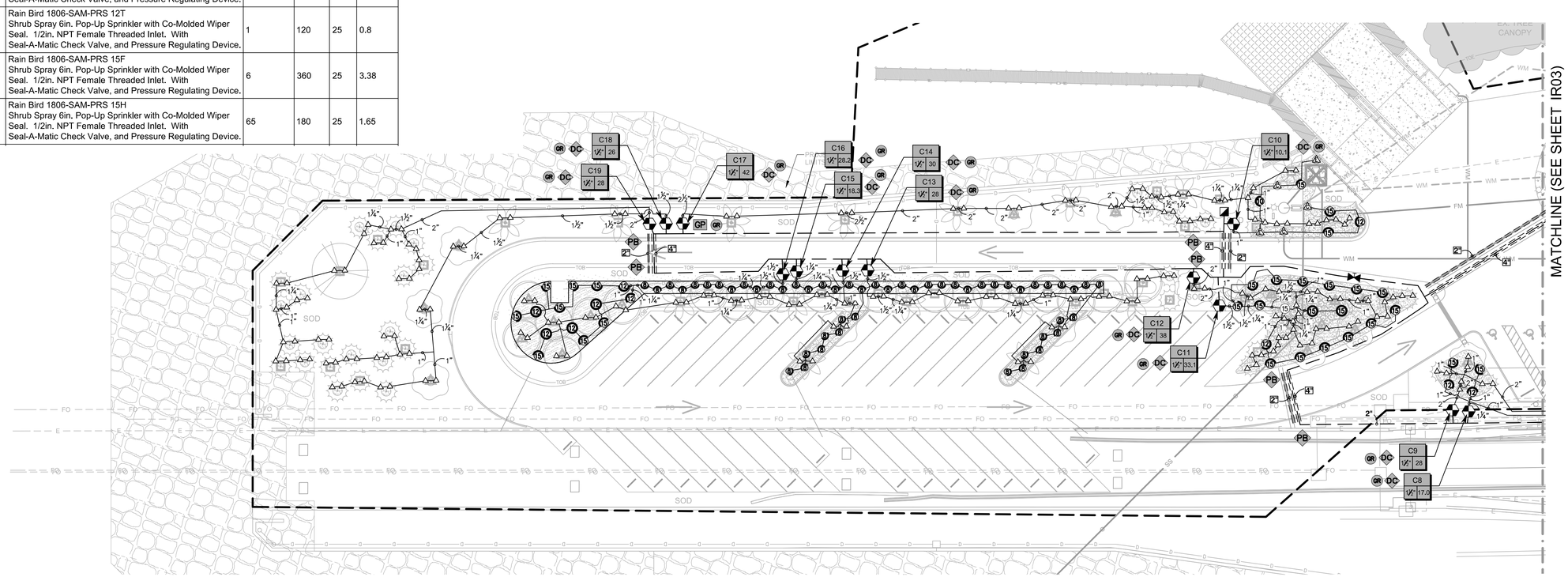
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM
A	Rain Bird 1806-SAM-PRS 15CST Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	3	CST	25	1.11
A	Rain Bird 1806-SAM-PRS 15EST Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	2	EST	25	0.56
A	Rain Bird 1806-SAM-PRS 15LCS Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	2	LCS	25	0.45
A	Rain Bird 1806-SAM-PRS 15RCS Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	4	RCS	25	0.45
A	Rain Bird 1806-SAM-PRS 15SST Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	11	SST	25	1.11
8	Rain Bird 1806-SAM-PRS 08H Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	79	180	25	0.47
8	Rain Bird 1806-SAM-PRS 08Q Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	11	90	25	0.24
8	Rain Bird 1806-SAM-PRS 08T Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	2	120	25	0.32
10	Rain Bird 1806-SAM-PRS 10H Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	4	180	25	0.72
10	Rain Bird 1806-SAM-PRS 10T Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	1	120	25	0.48
12	Rain Bird 1806-SAM-PRS 12F Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	9	360	25	2.16
12	Rain Bird 1806-SAM-PRS 12H Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	15	180	25	1.2
12	Rain Bird 1806-SAM-PRS 12T Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	1	120	25	0.8
15	Rain Bird 1806-SAM-PRS 15F Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	6	360	25	3.38
15	Rain Bird 1806-SAM-PRS 15H Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	65	180	25	1.65
15	Rain Bird 1806-SAM-PRS 15Q Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	7	90	25	0.82
15	Rain Bird 1806-SAM-PRS 15T Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	4	120	25	1.1
15	Rain Bird 1806-SAM-PRS 15TQ Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	1	270	25	2.48
15	Rain Bird 1806-SAM-PRS 15V Shrub Spray 6in. Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2in. NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	1	Adj	25	≤ 3.28
△	Rain Bird 1800-1400 Flood 1404 Fixed flow rate 0.25 GPM - 2.0 GPM, full circle bubbler, 1/2in. FIPT.	324	360	20	1

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PESB-PRS-D 1-1/2" 1in., 1-1/2in., 2in., 3in., 3in. Plastic Industrial Remote Control Valve. Low Flow Operating Capability, Globe Configuration. With Pressure Regulating Module, and Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	19
	Rain Bird 44-NP 1" 1in. Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Non-Potable Purple Rubber Cover, and 2-Piece Body.	1
	Landscape Products Inc. BGV 2in Brass Gate Valve. Threaded bonnet, Non-rising stem, Pressure rated to 200 psi. Same size as mainline.	3
MV	Hunter ICV-G-DC-R 2" 1in., 1-1/2in., 2in., and 3in. Plastic Electric Master Valve, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use. With DC Latching Solenoid Factory Installed Option. Reclaimed Water ID, Purple Handle.	1
C	Hunter A2C-75D-P 75-Station decoder controller in an outdoor plastic wall mount enclosure.	1
DC	Hunter ICD-100 Single Station Decoder w/Surge Suppression and Ground Wire. To be installed on Universal Decoder Stake Kit (DECSTAKE10).	19
RS	Hunter MINI-CLIK Rain Sensor, mount as noted	1

MB	Blow Off Assembly Main and submain flush/blow off assemblies per plan notes an details. Sizes to match main size. Install in a Carson Spec Grade (or approved equal) 14" x 19" x 12"H rectangle valve box purple box/purple lid overlapping RWDNDES w/ bolt stamped 'LCDOT IRRIGATION' with gravel, bricks, fabric, etc.	1			
GP	Grounding Plate 4" X 96" ground plate at controller and each end of the two wire path (if applicable). Connect ground plate to a 5/8" x 10' copper clad ground rod with a #6 bare copper wire	2			
GR	Grounding Rod Furnish and install 5/8" x 10' copper clad ground rod	21			
LT	HUNTER A2C-LTEM Cellular Communication Module (4G LTE) for ACC2 Controllers; service plan required.	1			
PB	Pull Box Furnish and install splice/pull/ junction boxes. Include a Carson Spec Grade (or approved equal) 14" x 19" x 12"H rectangle valve box purple box/purple lid overlapping RWDNDE w/ bolt stamped 'LCDOT IRRIGATION' with gravel, bricks, fabric, pull strings, etc.	12			
POC1	Point of Connection 2"	1			
	Irrigation Lateral Line: PVC Class 200 SDR 21 1"	5,057.5 l.f.			
	Irrigation Lateral Line: PVC Class 200 SDR 21 1 1/4"	945.9 l.f.			
	Irrigation Lateral Line: PVC Class 200 SDR 21 1 1/2"	544.4 l.f.			
	Irrigation Lateral Line: PVC Class 200 SDR 21 2"	779.3 l.f.			
	Irrigation Lateral Line: PVC Class 200 SDR 21 2 1/2"	95.0 l.f.			
	Irrigation Mainline: PVC Schedule 40 2"	2,780 l.f.			
	Pipe Sleeve: PVC Schedule 40 2"	269.5 l.f.			
	Pipe Sleeve: PVC Schedule 80 2"	96.4 l.f.			
	Pipe Sleeve: PVC Schedule 80 3"	39.7 l.f.			
	Pipe Sleeve: PVC Schedule 80 4"	336.9 l.f.			

Valve Callout
Valve Number
#" Valve Flow
Valve Size





BID DOCUMENTS

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Lee County Southwest Florida

PUNTA RASSA BOAT RAMP IMPROVEMENTS
LEE COUNTY, FLORIDA

REVISIONS

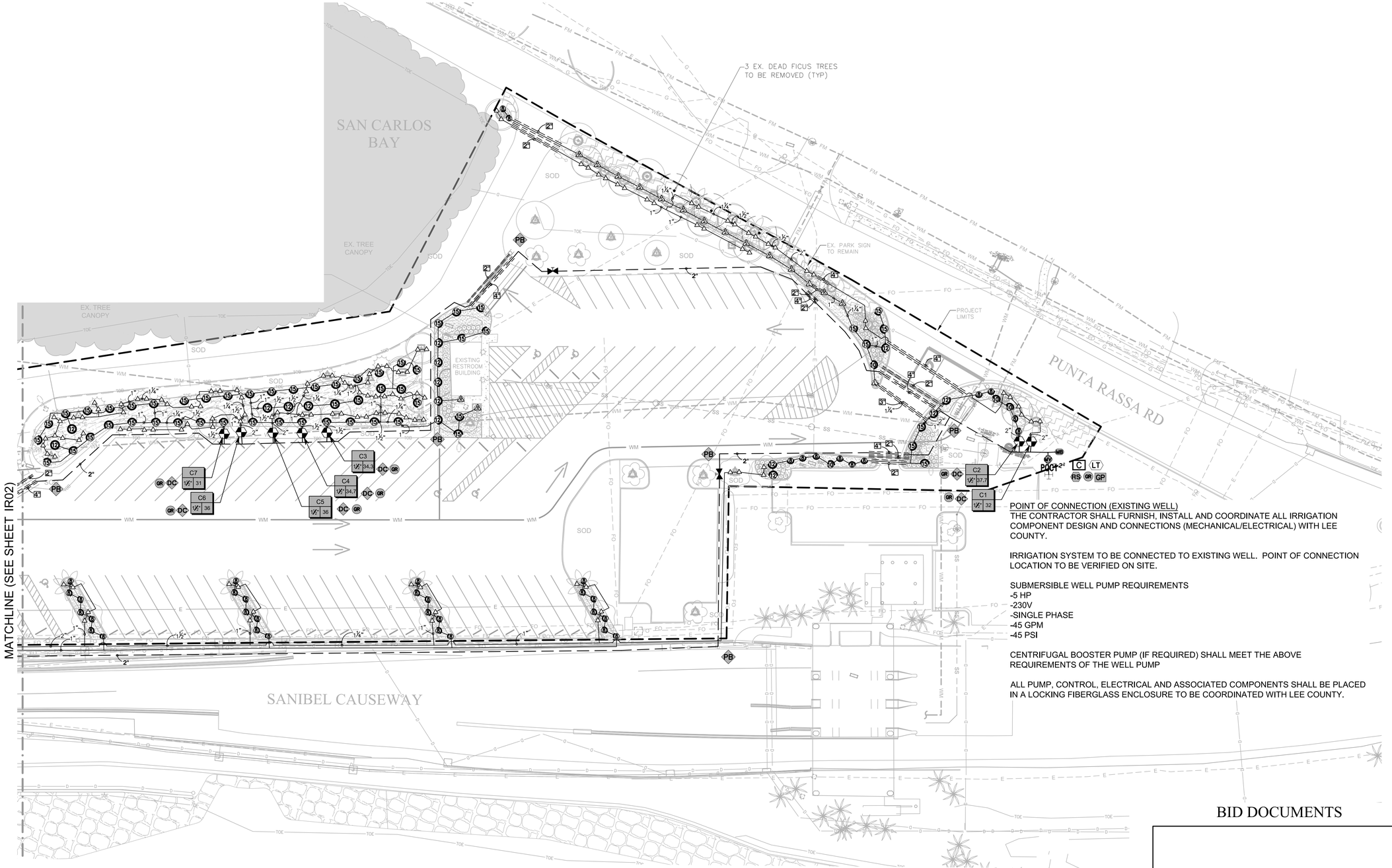
NO.	DESCRIPTION	DATE

DATE:	JANUARY 2025
PROJECT NO.	20247063-000
FILE NO.	09-46-23
SCALE:	AS SHOWN

IRRIGATION PLAN

SHEET NUMBER

IR02



N

0 15 30 60

(INTENDED DISPLAY SCALE: 1"=30')

POINT OF CONNECTION (EXISTING WELL)
THE CONTRACTOR SHALL FURNISH, INSTALL AND COORDINATE ALL IRRIGATION COMPONENT DESIGN AND CONNECTIONS (MECHANICAL/ELECTRICAL) WITH LEE COUNTY.

IRRIGATION SYSTEM TO BE CONNECTED TO EXISTING WELL. POINT OF CONNECTION LOCATION TO BE VERIFIED ON SITE.

SUBMERSIBLE WELL PUMP REQUIREMENTS
-5 HP
-230V
-SINGLE PHASE
-45 GPM
-45 PSI

CENTRIFUGAL BOOSTER PUMP (IF REQUIRED) SHALL MEET THE ABOVE REQUIREMENTS OF THE WELL PUMP

ALL PUMP, CONTROL, ELECTRICAL AND ASSOCIATED COMPONENTS SHALL BE PLACED IN A LOCKING FIBERGLASS ENCLOSURE TO BE COORDINATED WITH LEE COUNTY.

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PUNTA RASSA BOAT RAMP IMPROVEMENTS
LEE COUNTY, FLORIDA

REVISIONS

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PROJECT NO.	20247063-000
FILE NO.	09-46-23
SCALE:	AS SHOWN

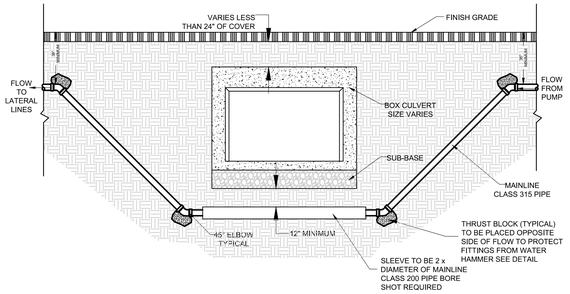
IRRIGATION PLAN

SHEET NUMBER

IR03

IRRIGATION INSTALLATION DETAILS:

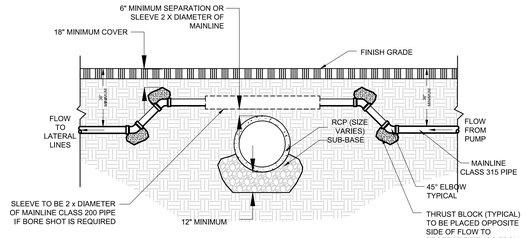
IRRIGATION DETAILS (Substitutions Only with Written Approval):



1 MAINLINE/LATERAL CULVERT CROSSING DETAIL -TYPICAL

N.T.S.

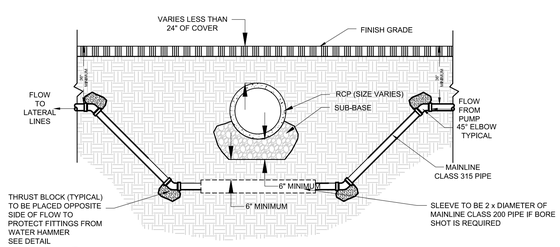
NOTES:
THIS DETAIL REPRESENTS SOLUTION WHERE 36" OF COVER CAN BE ACHIEVED WHEN MAINLINE CROSSES A CULVERT.



2 MAINLINE/LATERAL RCP CROSSING DETAIL -TYPICAL

N.T.S.

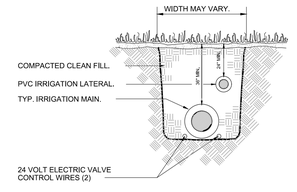
NOTES:
THIS DETAIL REPRESENTS SOLUTION WHERE 36" OF COVER CAN BE ACHIEVED WHEN MAINLINE CROSSES A RCP.



3 MAINLINE/LATERAL RCP CROSSING DETAIL -TYPICAL

N.T.S.

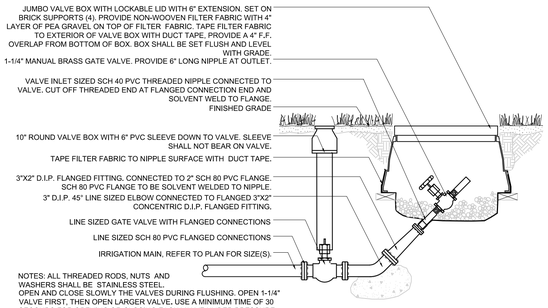
NOTES:
1. THIS DETAIL REPRESENTS SOLUTION WHERE 36" OF COVER CANNOT BE ACHIEVED WHEN MAINLINE CROSSES A RCP.
2. BORE SHOT AND SLEEVE IS NECESSARY ONLY WHEN RCP IS 36" OR LARGER



4 TRENCHING DETAIL -TYPICAL

N.T.S.

NOTES:
PULLING PIPE IS PROHIBITED ALL IRRIGATION PIPES AND ELECTRICAL WIRES SHALL BE IN SEPERATE SLEEVES.
ANY PIPE RUNNING UNDER ANY PAVED SURFACE SHALL BE SLEEVED WHETHER SHOWN OR NOT.



5 IRRIGATION MAIN BLOW OFF

N.T.S.

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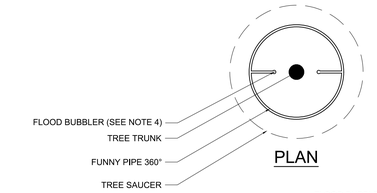
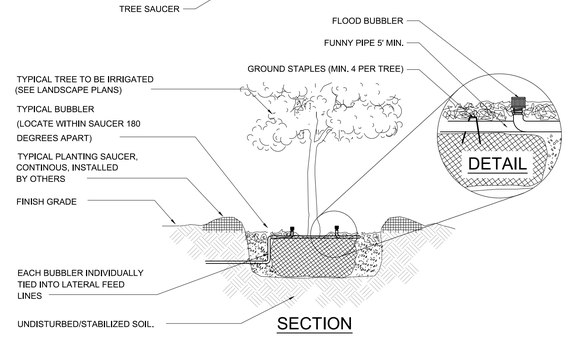


PLAN

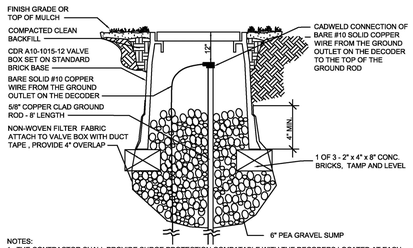


SECTION

9 BUBBLER APPLICATION DETAIL

N.T.S.

NOTES:
1. BUBBLERS ARE TO PLACED AT THE MIDPOINT BETWEEN THE EDGE OF THE ROOTBALL AND THE MAIN TRUNK, PER REQUEST BY OTHERS.
2. THE BUBBLERS SHALL BE PLACED 180° APART, IN SLOPING GROUNDS, THE BUBBLERS SHALL BE PLACED UPHILL FROM THE TREE TRUNK AND 150° APART.
3. PROVIDE (6' MINIMUM LENGTH) SUFFICIENT FUNNY PIPE HOSE SO THAT BUBBLERS CAN BE MOVED TO A DIFFERENT LOCATION IN THE FUTURE.
4. PROVIDE TWO 1 GPM BUBBLERS FOR EACH TREE OR PALM.
5. BUBBLERS ARE ILLUSTRATED PLACED AT THE ROOTBALL PERIMETER FOR GRAPHIC CLARITY. ACTUAL LOCATION SHALL BE AS INDICATED ABOVE.
6. SECURE BUBBLER TO TOP OF ROOTBALL WITH A SOIL ANCHORING STAKE.



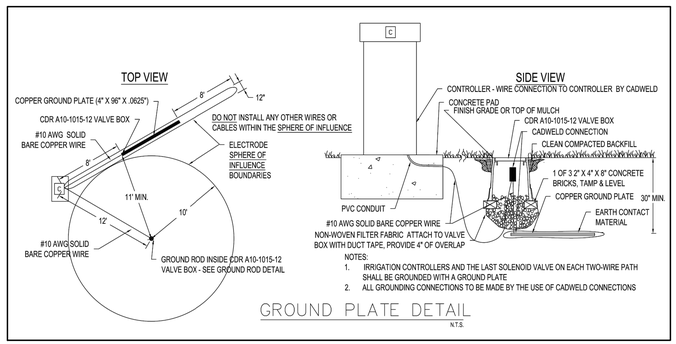
NOTES:
1. THE CONTRACTOR SHALL PROVIDE SURGE PROTECTION COMPATABLE WITH THE DECODERS LOCATED AT EACH SOLENOID VALVE.
2. THE IRRIGATION CONTROLLER AND LAST SOLENOID VALVE ON EACH TWO-WIRE PATH SHALL BE GROUNDED UTILIZING THE MANUFACTURER'S RECOMMENDATIONS. SEE GROUND PLATE DETAIL.
3. ALL CONNECTIONS TO THE GROUNDING SOURCE SHALL BE MADE BY A CADWELD CONNECTION.

GROUND ROD DETAIL

N.T.S.

6 GROUND ROD -TYPICAL

N.T.S.



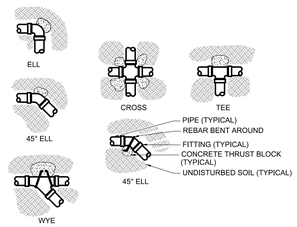
NOTES:
1. IRRIGATION CONTROLLERS AND THE LAST SOLENOID VALVE ON EACH TWO-WIRE PATH SHALL BE GROUNDED WITH A GROUND PLATE
2. ALL GROUNDING CONNECTIONS TO BE MADE BY THE USE OF CADWELD CONNECTIONS

GROUND PLATE DETAIL

N.T.S.

7 GROUND PLATE DETAIL -TYPICAL

N.T.S.



8 THRUST BLOCK DETAILS -TYPICAL

N.T.S.

NOTES:
1. SUPPLY LINES 2.0 INCHES IN DIAMETER AND LARGER SHALL RECEIVE CONCRETE THRUST BLOCKS AS SPECIFIED HEREIN & AS APPLICABLE.
2. ALL CONCRETE TO BE 2800 PSI OR STRONGER.
3. ALL REBAR SHALL BE RUST-FREE.
4. FITTINGS TO BE WRAPPED IN VISQUEEN BEFORE POURING THE THRUST BLOCK

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LEE COUNTY, FLORIDA

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	DECEMBER 2024
PROJECT NO.	20247063-000
FILE NO.	09-46-23
SCALE:	AS SHOWN

IRRIGATION DETAILS

SHEET NUMBER

IR04

IRRIGATION INSTALLATION DETAILS:

IRRIGATION DETAILS (Substitutions Only with Written Approval):

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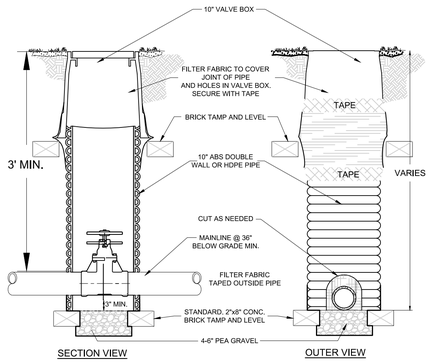
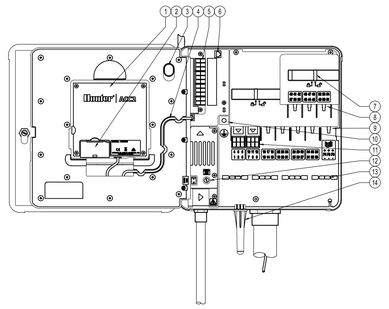


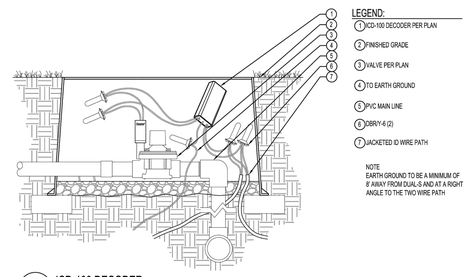
1 GATE/ ISOLATION VALVE DETAIL
N.T.S.



LEGEND:
1. FACEPACK
2. WI-FI OR LAN SLOT
3. FACE FRAME RELEASE
4. FACEPACK CONNECTION CABLE
5. POWER SUPPLY BOARD
6. SYNCPORT
7. SLIDE LOCKS
8. EXPANSION MODULE SLOT
9. FLOW EXPANSION MODULE SLOT
10. EARTH GROUND LUG
11. EXPANSION MODULE
12. TRANSFORMER FUSE
13. WIRE TIE HOLDERS
14. ANTENNA

NOTE:
MOUNT CONTROLLER LCD SCREEN AT EYE LEVEL. CONTROLLER SHALL BE HARD-WIRED TO GROUNDED 110 VAC POWER SOURCE

2 HUNTER AC2 CONTROLLER
N.T.S.



LEGEND:
1. ICD-100 DECODER PER PLAN
2. FINISHED GRADE
3. VALVE PER PLAN
4. TO EARTH GROUND
5. PVC MAIN LINE
6. DBRY-6 (2)
7. JACKETED ID WIRE PATH

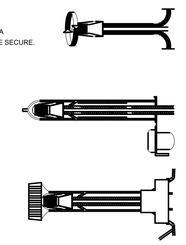
NOTE
EARTH GROUND TO BE A MINIMUM OF 8' AWAY FROM DUAL-S AND AT A RIGHT ANGLE TO THE TWO WIRE PATH

3 ICD-100 DECODER
C.DICD.01
NOT TO SCALE

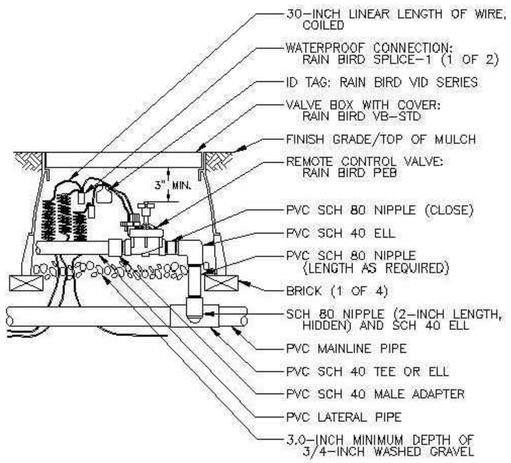
STEP NO. 1.
STRIP WIRE INSULATION 3/4" INSERT WIRES INTO THE CONNECTOR AND TIGHTEN IN A CLOCKWISE DIRECTION UNTILE SECURE.

STEP NO. 2.
INSERT SPLICE TO BOTTOM OF GEL-FILED TUBE. VISUALLY CHECK TO MAKE SURE DBRY-6 CONNECTOR HAS BEEN PUSHED PAST THE LOCKING FINGERS AND IS SEATED ON THE BOTTOM OF THE TUBE.

STEP NO. 3.
FOLD THE WIRES INTO THE CHANNELS AND CLOSE INSULATOR TUBE COVER.

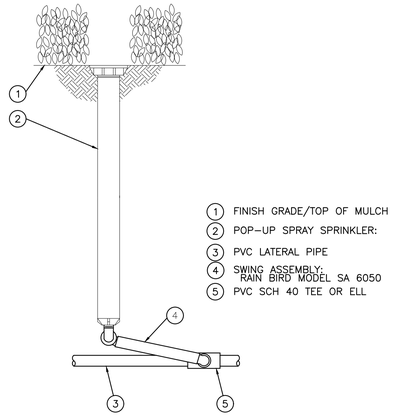


4 24-VOLT WIRE CONNECTION DETAIL -TYPICAL
N.T.S.



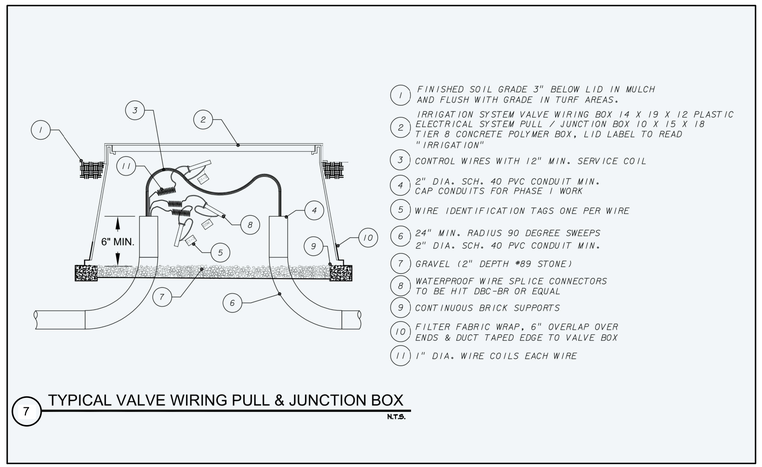
5 ELECTRIC REMOTE-CONTROL VALVE 1-23-04
N.T.S. PEB OR PEBS SERIES

V-PEB or PEBS.DWG



1. FINISH GRADE/TOP OF MULCH
2. POP-UP SPRAY SPRINKLER:
3. PVC LATERAL PIPE
4. SWING ASSEMBLY: RAIN BIRD MODEL SA 6050
5. PVC SCH 40 TEE OR ELL

6 POP-UP SPRAY SPRINKLER
N.T.S.



1. FINISHED SOIL GRADE 3" BELOW LID IN MULCH AND FLUSH WITH GRADE IN TURF AREAS.
2. IRRIGATION SYSTEM VALVE WIRING BOX 14 X 19 X 12 PLASTIC ELECTRICAL SYSTEM PULL / JUNCTION BOX 10 X 15 X 18 TIER 8 CONCRETE POLYMER BOX. LID LABEL TO READ "IRRIGATION"
3. CONTROL WIRES WITH 12" MIN. SERVICE COIL
4. 2" DIA. SCH. 40 PVC CONDUIT MIN. CAP CONDUITS FOR PHASE I WORK
5. WIRE IDENTIFICATION TAGS ONE PER WIRE
6. 24" MIN. RADIUS 90 DEGREE SWEEPS 2" DIA. SCH. 40 PVC CONDUIT MIN.
7. GRAVEL (2" DEPTH #89 STONE)
8. WATERPROOF WIRE SPLICE CONNECTORS TO BE HIT DBC-BR OR EQUAL
9. CONTINUOUS BRICK SUPPORTS
10. FILTER FABRIC WRAP, 6" OVERLAP OVER ENDS & DUCT TAPED EDGE TO VALVE BOX
11. 1" DIA. WIRE COILS EACH WIRE

7 TYPICAL VALVE WIRING PULL & JUNCTION BOX
N.T.S.

BID DOCUMENTS

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An Apex Company
JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 334-0046
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FL License No. LA-6667059

Lee County Southwest Florida

PUNTA RASSA BOAT RAMP IMPROVEMENTS
LEE COUNTY, FLORIDA

REVISIONS

NO.	DESCRIPTION	DATE

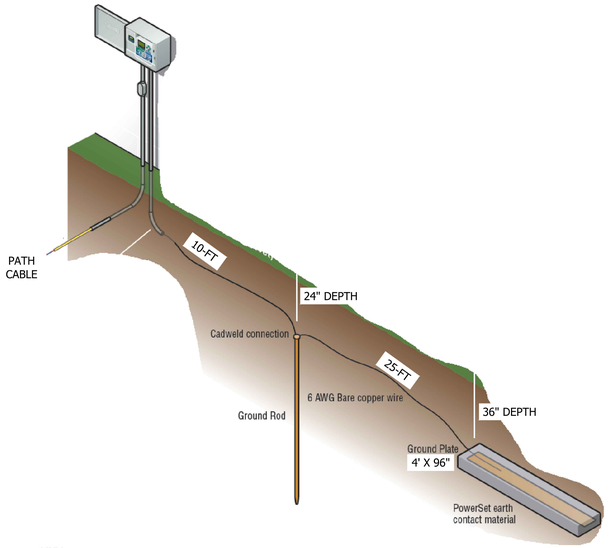
DATE:	JANUARY 2025
PROJECT NO.	20247063-000
FILE NO.	09-46-23
SCALE:	AS SHOWN

IRRIGATION DETAILS

SHEET NUMBER
IR05

IRRIGATION INSTALLATION DETAILS:

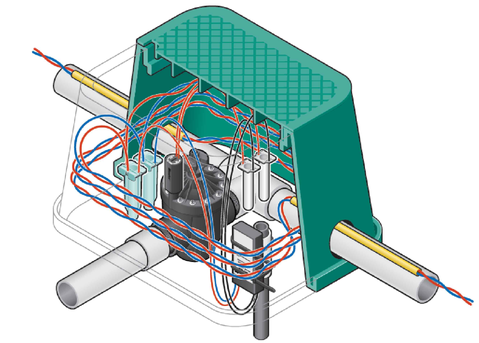
IRRIGATION DETAILS (Substitutions Only with Written Approval):



NOTES:
INSTALLATION OF GROUNDING COMPONENTS WILL BE PER MANUFACTURER'S RECOMMENDATIONS.

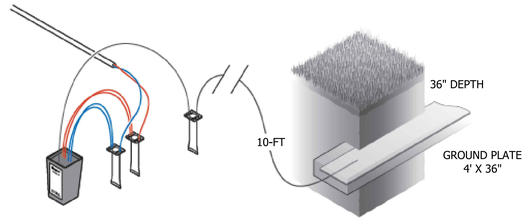
1 CONTROLLER GROUNDING

N.T.S.



2 DECODER IN VALVE BOX (TYP.)

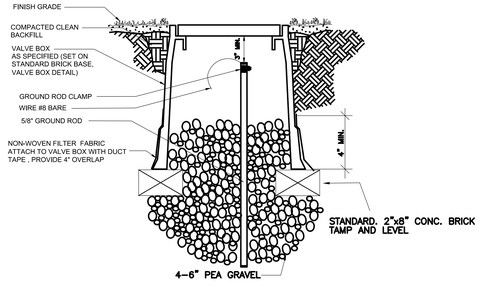
N.T.S.



NOTES:
INSTALLATION OF GROUNDING COMPONENTS WILL BE PER MANUFACTURER'S RECOMMENDATIONS.

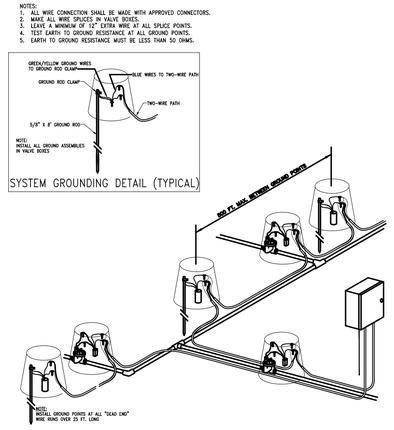
3 END-OF-LINE SURGE ARRESTOR WIRING AND GROUNDING (TYP.)

N.T.S.



4 GROUND ROD SURGE PROTECTOR DETAIL

N.T.S.



5 SYSTEM GROUNDING (TYP.)

N.T.S.

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1-800-432-4770

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PUNTA RASSA BOAT RAMP IMPROVEMENTS
LEE COUNTY, FLORIDA

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	JANUARY 2025
PROJECT NO.	20247063-000
FILE NO.	09-46-23
SCALE:	AS SHOWN

IRRIGATION DETAILS

SHEET NUMBER

IR06

IRRIGATION NOTES

1. THE PLANS AND DRAWINGS ARE DIAGRAMMATIC OF THE WORK TO BE PERFORMED. SOME COMPONENTS MAY BE SHOWN OUTSIDE THE WORK AREA FOR CLARITY. THE WORK SHALL BE EXECUTED IN A MANNER TO AVOID CONFLICTS WITH UTILITIES AND OTHER ELEMENTS OF CONSTRUCTION, INCLUDING LANDSCAPE MATERIALS. ALL DEVIATIONS FROM THE PLANS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE BEING INSTALLED. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY ASPECT OF THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS AND DRAWINGS, WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DISCREPANCIES EXIST THAT MIGHT NOT HAVE BEEN KNOWN DURING THE DESIGN OF THE IRRIGATION SYSTEM. IN THE EVENT THAT NOTIFICATION OF THE CONFLICT IS NOT APPROVED BY THE OWNER'S REPRESENTATIVE, THE CONTRACTOR WILL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS.
2. THE COMPLETED IRRIGATION SYSTEM SHALL FULLY OPERATIONAL AND INSTALLED IN ACCORDANCE WITH THE PLANS, IRRIGATION SYSTEM SPECIFICATIONS AND ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH ALL PREVAILING LOCAL CODES, ORDINANCES, AND REGULATIONS.
3. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, INCLUDING UTILITY LOCATIONS, BEFORE INSTALLATION OF THE IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THE PLANS - CONTRACTOR TO VERIFY. COORDINATE ALL IRRIGATION SYSTEM CONSTRUCTION WITH EXISTING AND NEW PLANTINGS TO AVOID CONFLICT OR INTERFERENCE WITH LOCATION OF PIPING, SLEEVING, CABLES, AND SERVICE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION WITH ALL OTHER CONSTRUCTION ON SITE, ESPECIALLY LANDSCAPE INSTALLATION. IRRIGATION SYSTEM SHALL BE RELOCATED AT NO ADDITIONAL COST FOR ANY CONFLICT WITH LANDSCAPE INSTALLATION OR ANY OTHER SITE CONSTRUCTION OR EXISTING CONDITIONS. ALL COMPONENTS THAT ARE NOT CONTAINED WITHIN THE SPECIFIC AREAS SHOWN OR CALLED OUT ON THE DRAWINGS WILL NOT BE ACCEPTED. ALL PIPING AND OTHER COMPONENTS ARE TO REMAIN WITHIN THE PROPERTY OF THE OWNER.
4. WHERE EXISTING OR NEW TREES, LIGHT STANDARDS, SIGNS, ELECTRONIC CONTROLLERS AND/OR OTHER OBJECTS ARE AN OBSTRUCTION TO AN IRRIGATION SPRINKLER'S PATTERN, THE COMPONENT AND PIPING SHALL BE RELOCATED AS NECESSARY (A MIN. OF 10 L.F. OF SEPARATION FROM ALL UNDERGROUND UTILITIES) TO OBTAIN PROPER COVERAGE OF AN IRRIGATION SPRINKLER'S PATTERN, THE COMPONENT AND PIPING SHALL BE RELOCATED AS NECESSARY TO OBTAIN THE PROPER COVERAGE WITHOUT DAMAGING THE OBSTRUCTION. OWNER'S REPRESENTATIVE SHALL DETERMINE WHETHER AN OBSTRUCTION OCCURS OR NOT.
5. COMPONENT SPACING AS SHOWN ARE MAXIMUMS. DO NOT EXCEED SPACING SHOWN OR NOTED ON THE PLANS. COMPONENT SPACING MAY BE ADJUSTED TO ACCOMMODATE CHANGES IN TERRAIN AND PLANTING LAYOUT AS LONG AS THE MODIFIED SPACING DOES NOT EXCEED THE SPACING SHOWN IN THE PLANS. UNLESS SHOWN OTHERWISE, CONTRACTOR SHALL PROVIDE 100% COVERAGE.
6. ALL MATERIALS AND EQUIPMENT SHOWN SHALL BE NEW AND INSTALLED AS DETAILED ON THE PLANS. IF THE DRAWINGS DO NOT THOROUGHLY DESCRIBE THE TECHNIQUES TO BE USED, THE INSTALLER SHALL FOLLOW THE INSTALLATION METHODS AND INSTRUCTIONS RECOMMENDED BY THEIR MANUFACTURER.
7. THE LOCATION OF THE IRRIGATION MAINLINE SHALL BE IDENTIFIED IN THE FIELD AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
8. IRRIGATION CONTRACTOR SHALL ADJUST ALL SPRINKLERS, CONTROLLER AND OTHER DEVICES TO OBTAIN SPECIFIED OPERATING PARAMETERS, INCLUDING COVERAGE, OPERATING PRESSURE, FLOW RATES AND OPERATION TIME, AS INDICATED ON THE DRAWINGS AND IN THE IRRIGATION SYSTEM SPECIFICATIONS.
9. CONTRACTOR TO PROVIDE INSTALLATION SHOP DRAWINGS AND MANUFACTURER PRODUCT INFORMATION FOR ALL IRRIGATION COMPONENTS, FOR APPROVAL PRIOR TO INSTALLATION. ALL INSTALLATIONS SHALL BE AS RECOMMENDED BY MANUFACTURERS. THE QUANTITIES SHOWN IN THE LEGENDS AND SYMBOL SHEETS SHALL NOT BE USED FOR BIDDING PURPOSES. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONDUCTING A COMPREHENSIVE MATERIALS TAKEOFF TO DETERMINE THE ACTUAL QUANTITIES OF MATERIAL NECESSARY TO EXECUTE THE WORK DESCRIBED IN THE DOCUMENTS.
10. ALL TRENCHES SHALL BE BACKFILLED WITH CLEAN, DEBRIS-FREE MATERIALS. CLEAN SAND SHALL BE USED FOR BEDDING MATERIAL IF PARENT SOIL CANNOT BE ADEQUATELY RID OF ROCK AND OTHER EXTRANEOUS DEBRIS. PULLING PIPE SHALL BE PROHIBITED.
11. ALL SOLVENT WELDING SHALL BE PRECEDED BY PRIMING OF THE FITTINGS AND PIPE AS RECOMMENDED BY THE MANUFACTURER.
12. ALL PVC SLEEVES SHALL BE JOINED WITH GLUE FITTINGS. ANY GASKETED JOINTS WILL BE REJECTED.
13. DURING INSTALLATION AND UPON COMPLETION OF THE IRRIGATION SYSTEM, DECODERS SHALL BE PROGRAMMED TO THE CONTROLLER STATION AS PER THE IRRIGATION ZONE NUMBER. CONTRACTOR TO LABEL ALL VALVE BOX COVERS WITH THE CORRESPONDING CONTROLLER ZONE NUMBER. NUMBERING SIZE 1". PROVIDE TAGS TO ALL VALVES AS SHOWN PER DETAILS.
14. CONTRACTOR TO PLACE TREE BUBBLERS AT OUTER EDGE OF ROOT BALL, NOT OUTER EDGE OF PLANTING HOLE. TREE BUBBLERS TO BE VISIBLE FOR INSPECTION.
15. PIPING INCLUDING MAINLINES AND LATERALS SHALL BE COLOR CODED PANTONE PURPLE 522C FOR FUTURE CONVERSION OF THE SYSTEM TO REUSE WATER PER COUNTY ORDINANCES AND STATE STATUTES. THE IRRIGATION SYSTEM COMPONENTS SHALL BE COMPATIBLE FOR USE WITH REUSE WATER AND FLORIDA ADMINISTRATIVE CODE 62-610 REUSE OF RECLAIMED WATER AND LAND APPLICATION. ALL VALVES, VALVE BOX COVERS, AND OTHER APPLICABLE EQUIPMENT SHALL BE COLOR CODED PANTONE PURPLE 522C.
16. THE TWO-WIRE PATH SHALL BE PAIGE ELECTRIC AWG 12-2 BLACK COMMUNICATION WIRE LAID BELOW THE IRRIGATION MAINLINE.
17. ALL CONNECTIONS FROM THE 2-WIRE PATH TO THE DECODERS GROUND RODS, GROUND PLATES AND CONTROLLER SHALL BE WITH 3M DBR-6 WIRE CONNECTORS. ALL CONNECTIONS BETWEEN THE SOLENOID VALVES AND DECODERS SHALL BE WITH HIT DBC-Y CONNECTORS. WHERE ADDITIONAL WIRE IS REQUIRED FROM THE DECODER TO THE CONTROL VALVE SOLENOID, THE WIRE SHALL BE DIRECT BURIAL STANDARD PAIR 14 AWG.
18. ELECTRICAL CONNECTIONS: CONTRACTOR WILL BE RESPONSIBLE FOR THE ELECTRICAL CONNECTION(S) TO THE ELECTRICAL SUPPLY(S). THE ELECTRICAL CONNECTION FOR EACH PUMP STATION WILL BE WITHIN 25' OF THE DESIGNATED WELL/PUMP LOCATION(S) AS SHOWN ON THE IRRIGATION PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING ALL PROJECT RELATED ELECTRICAL CONNECTIONS BEYOND THIS POINT FOR THE PUMP STATION AND IRRIGATION SYSTEM EQUIPMENT.
19. ALL CONNECTIONS TO THE IRRIGATION MAINLINE (2 1/2" OR LARGER) SHALL BE ACCOMPLISHED VIA THE USE OF DUCTILE IRON SERVICE TEES. ALL CHANGES OF DIRECTION SHALL BE ACCOMPLISHED VIA THE USE OF DUCTILE IRON 45 DEGREE ELBOWS W/ PROPER THRUST BLOCKING.
20. LOCATE ALL VALVES IN PLANTING BEDS OR MULCHED AREAS WITH A MINIMUM OFFSET OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT. VALVES LOCATED IN MEDIANS SHALL BE INSTALLED AS CLOSE TO THE MEDIAN CENTER AS POSSIBLE.
21. ALL VALVES (SOLENOID, GATE, ISOLATION, AIR RELIEF AND FLUSH), SURGE PROTECTORS AND FILTERS SHALL BE LOCATED WITHIN THE SPECIFIED VALVE BOXES AS SHOWN ON THE VALVE BOX SIZING TABLE.
22. ALL PULL BOXES SHALL CONTAIN A MIN. OF 6' OF SLACK COILED VALVE WIRES WITHOUT ANY SPLICES.
23. IRRIGATION COMMUNICATION CABLE SHALL HAVE IT'S OWN SEPARATE SCH 80 PVC CONDUIT UNLESS NOTED OTHERWISE. ELECTRICAL CONNECTING WIRE BETWEEN POINT OF CONNECTION AND CONTROLLER SHALL BE INSTALLED IN ITS OWN SCH. 80 PVC CONDUIT. WIRE FROM THE POINT OF CONNECTION TO THE CONTROLLER SHALL BE IN CONDUIT FOR ITS ENTIRE LENGTH.
24. SWEEPS SHALL BE PROVIDED FOR ALL WIRES TO CONNECT CONDUIT TO VALVE BOXES.
25. ALL PROPOSED IMPERVIOUS SURFACE IRRIGATION PIPE CROSSINGS WILL BE DIRECTIONAL BORE PIPE INSTALLATIONS TO BE COMPLETED BY CONTRACTOR FOLLOWING COMPLETION OF ROADWAY CONSTRUCTION. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR ALL DIRECTIONAL BORES, UNLESS OTHERWISE NOTED.
26. ALL UN-SIZED PIPE SHALL BE MINIMUM 1".
27. EACH TREE AND PALM SHALL HAVE TWO (2) PRESSURE COMPENSATING FLOOD BUBBLERS (OR AS SHOWN ON THE PLANS). EACH BUBBLER SHALL BE ON A MINIMUM 5'-0" LENGTH OF FUNNY PIPE TO ALLOW ITS POSITIONING AT THE TREE. LOCATE BUBBLERS ON THE UPHILL SIDE OF TREES ON ALL SLOPES. LOCATE BUBBLERS IN THE CENTER OF THE ROOTBALL AND EQUAL DISTANCE APART.
28. DURING INSTALLATION AND UPON COMPLETION OF THE IRRIGATION SYSTEM, DECODERS SHALL BE PROGRAMMED TO THE CONTROLLER STATION AS PER THE IRRIGATION ZONE NUMBERS.
29. PER MANUFACTER'S DIRECTIONS, THE IRRIGATION CONTRACTOR SHALL INSTALL A CONTINUOUS COLOR CODED DETECTABLE METAL MARKING TAPE IN CONJUNCTION WITH ALL MAINLINE IRRIGATION PIPE LOCATIONS, 12" BELOW FINISHED GRADE, WHICH CLEARLY NOTES: "CAUTION: WATER LINE BURIED BELOW", FOR FUTURE LOCATING PURPOSES. TAPE SHALL BE MANUFACTURED BY LINEGUARD, INC., OR APPROVED EQUAL.
30. ALL VALVES SHALL BE LOCATED WITH REFLECTIVE PAVEMENT MARKERS (GREEN) ON EITHER SIDE OF THE MEDIAN.
31. AT EACH END OF EACH BORING THE CONTRACTOR SHALL INSTALL ONE OMNI LOCATER BALL PER BORING PER MANUFACTURER'S INSTRUCTIONS, AND NOTE ON AS-BUILTS THE LOCATIONS OF THE MARKERS AS INSTALLED.
32. IRRIGATION LATERAL LINES TO BE BURIED AT A DEPTH OF 24" UNLESS NOTED OTHERWISE.
33. IRRIGATION MAINLINES TO BE BURIED AT A DEPTH OF 36" UNLESS NOTED OTHERWISE.
34. ALL COMPONENTS INSTALLED BY THE IRRIGATION CONTRACTOR, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE EXACT LOCATION AND DEPTH BELOW FINISH GRADE OF ALL COMPONENTS SHALL BE NOTED ON THE "AS-BUILT" DRAWINGS. EACH POINT OF IRRIGATION SHALL BE MEASURED FROM 2 FIXED POINTS OF REFERENCE.
35. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE LANDSCAPE SUPERVISOR. WORK IN THE RIGHT OF WAY SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE HIGHWAY JURISDICTION.
36. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY FLOW OF VEHICULAR TRAFFIC AND COMPLETION OF ALL WORK ON THE SITE.
37. CONTRACTOR SHALL GRADE AND SOD ALL DISTURBED AREAS TO MATCH PRE-EXISTING CONDITIONS. RESTORATION WORK WILL PROVIDE A SMOOTH TRANSITION BETWEEN ALL DISTURBED AREAS TO EXISTING UNDISTURBED AREAS.
38. PIPE LOCATIONS SHOWN ARE SCHEMATIC. THE MAINLINE SHALL BE INSTALLED 36" FROM THE EDGE OF PAVEMENT BUT NO CLOSER THAN 12". THE CONTRACTOR IS RESPONSIBLE FOR LOCATION ADJUSTMENTS WHEN NECESSARY TO AVOID CONFLICTS.
39. ALL PROPOSED SLEEVES THAT CONNECT MEDIANS FROM NOSING TO NOSING SHALL EXTEND A MIN. OF 7' INTO THE PROPOSED 6 -LANE PHASE OF THE MEDIAN LANDSCAPE BEDS.
40. BACKFLUSH FILTER DRAIN PIPE SHALL DISCHARGE INTO WILD BLUE WATER BODY (UNLESS OTHERWISE DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE). THE SEPARATION DISTANCE BETWEEN THE WATER SOURCE INTAKE PIPE AND THE FILTER BACKFLUSH DISCHARGE PIPE SHALL BE A MINIMUM OF 60 (SIXTY) LINEAR FEET.
41. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL IRRIGATION OF ALL PROPOSED LANDSCAPE MATERIALS REGARDLESS OF AVAILABILITY OF ELECTRICAL POWER. USE OF WATERING BAGS ON PLANTS IS NOT AN ACCEPTABLE ALTERNATIVE.

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Carson Spec Valve Box Rectangle 12 in. x 20 in. x 12 in.H Purple Box/Purple Lid Overlapping RWDNDES w/Bolt

~~CDR VALVE BOX NUMBER A10-1015-12~~	~~CDR VALVE BOX NUMBER A10-1118-12~~	~~CDR VALVE BOX NUMBER A10-1118-18~~
GROUND RODS & PLATES	ELECTRIC SOLENOID VALVE & GATE VALVE	ELECTRIC SOLENOID VALVE &
QUICK COUPLING VALVE	Carson Spec Valve Box	PRESSURE REDUCING VALVE
MAINLINE GATE/ISOLATION VALVE	Rectangle 12 in. x 20 in.	
MAINLINE AIR RELIEF VALVE	x 12 in.H Purple	
PRESSURE GAUGE CHECK POINTS	Box/Purple Lid	
	Overlapping RWDNDES	
~~CDR VALVE BOX NUMBER A10-1324-12~~	~~CDR VALVE BOX NUMBER WA09-1432-12~~	~~CDR VALVE BOX NUMBER A10-1324-18~~
WHEN A JUMBO BOX IS REQUIRED	GATE/ISOLATION VALVE	GATE/ISOLATION VALVE & LARGE DISC
Carson Spec Valve Box	SMALL DISC FILTER	FILTER (1 1/2" OR 2" SUPER FILTER), W/
Rectangle 12 in. x 20 in	ELECTRIC SOLENOID VALVE	SOLENOID VALVE & PRESSURE REDUCING
x 12 in.H Purple	PRESSURE REDUCING VALVE	VALVE. *INSTALL SOLENOID VALVE AND
Box/Purple Lid		PRESSURE REDUCING VALVE IN MODEL
Overlapping RWDNDES		~~A10-1118-18 VALVE BOX~~
w/Bolt		
CARSON VALVE BOX NUMBER 910 - AIR RELIEF VALVE, LINE FLUSHING VALVE		

NOTES:
1. CDR VALVE BOXES SHALL BE POLYMER/CONCRETE WITH PURPLE LIDS STAMPED LEE COUNTY IRRIGATION
2. CARSON VALVE BOXES SHALL BE CONSTRUCTION GRADE WITH PURPLE LIDS
3. VALVE BOXES SHALL HAVE FILTER FABRIC SECURELY ATTACHED TO THE SIDES OF THE BOX AND HAVE 6" OF WASHED PEA GRAVEL ON TOP OF THE FILTER FABRIC INSIDE THE BOX
4. PROVIDE A 2" MINIMUM AIR GAP BETWEEN THE TOP OF THE GRAVEL AND THE BOTTOM OF THE DEVICES, AND A 2" AIR GAP BETWEEN THE TOP OF THE DEVICES AND THE BOTTOM OF THE VALVE BOX COVER
5. CONCRETE PAVERS OR BRICKS SHALL BE USED TO LEVEL AND SUPPORT THE VALVE BOX ON EACH SIDE

VALVE BOX SIZING TABLE

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. FINAL WALK-THRU AND CORRECTION OF ALL PUNCH LIST ITEMS.
2. COMPLETION AND ACCEPTANCE OF `AS-BUILT' DRAWINGS.
3. ACCEPTANCE OF REQUIRED CONTROLLER CHARTS AND PLACEMENT INSIDE OF CONTROLLERS.
4. TURN OVER OF ALL REQUIRED PARTS AND TOOLS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
5. TURN OVER OF THE "IRRIGATION MANUAL" AS OUTLINED IN THE PROJECT SPECIFICATIONS.

GUARANTEE: THE IRRIGATION SYSTEMS SHALL BE GUARANTEED TO BE FULLY OPERATIONAL AND AUTOMATIC FOR A MINIMUM OF ONE CALENDAR YEAR FROM THE TIME OF FINAL ACCEPTANCE.

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:
   1.1. TURN ON EACH ZONE FROM THE CONTROLLER TO VERIFY AUTOMATIC OPERATION.
   1.2. 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.
   1.3. CHECK REMOTE CONTROL VALVE TO ENSURE PROPER OPERATION.
   1.4. CHECK SETTING ON PRESSURE REGULATOR TO VERIFY PROPER SETTING, IF PRESENT.
   1.5. CHECK FLOW CONTROL AND ADJUST AS NEEDED; ENSURE VALVE CLOSURE WITHIN 10-15 SECONDS AFTER DEACTIVATION BY CONTROLLER.
   1.6. CHECK FOR LEAKS - MAINLINE, LATERAL LINES, VALVES, HEADS, ETC.
2. CHECK CONTROLLER/C.C.U. GROUNDS FOR RESISTANCE (10 OHMS OR LESS) ONCE PER YEAR. SUBMIT WRITTEN REPORTS.
3. CHECK RAIN SHUT-OFF DEVICE MONTHLY TO ENSURE IT FUNCTIONS PROPERLY.
4. INSPECT ALL FILTERS MONTHLY AND CLEAN/REPAIR/REPLACE AS NEEDED.
5. INSPECT BACKFLOW DEVICES BY UTILIZING A PROPERLY LICENSED BACKFLOW INSPECTOR. THIS SHOULD BE DONE ANNUALLY, AT MINIMUM.
6. INSPECT ALL VALVE BOXES TO ENSURE THEY ARE IN GOOD CONDITION, LIDS ARE IN PLACE AND LOCKED.
7. CHECK CONTROLLER STATIONS FOR PROPER OPERATION, PRESSURES, FILTRATION, SETTINGS, ETC. - REFER TO PUMP STATION OPERATIONS MANUAL.
8. CHECK AND CLEAN INTAKE SCREENS ON ALL SUCTION LINES QUARTERLY, AT MINIMUM. CLEAN AND/OR REPAIR, AS NEEDED.
9. CONDUCT ADDITIONAL INSPECTIONS, MAINTENANCE TASKS, ETC. THAT ARE PARTICULAR FOR YOUR Site.

BID DOCUMENTS

JOHNSON ENGINEERING
An Apex Company
JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 334-0046
E.R. #642 & L.B. #642

JEFFREY MACLE PLA
FL License No. LA-6667059

Lee County Southwest Florida

PUNTA RASSA BOAT RAMP IMPROVEMENTS
LEE COUNTY, FLORIDA

REVISIONS

NO.	DESCRIPTION	DATE

DATE: JANUARY 2025
PROJECT NO. 20247063-000
FILE NO. 09-46-23
SCALE: AS SHOWN

IRRIGATION NOTES

SHEET NUMBER
IR07

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	WIRE	DESIGN PSI	PRECIP
C1	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	32	40.8	20	3.53 in/h
C2	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	37.72	48.0	25	1.04 in/h
C3	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	34.28	627.6	25	0.9 in/h
C4	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	34.69	643.2	25	1.04 in/h
C5	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	36	662.6	20	3.48 in/h
C6	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	36	683.3	20	3.5 in/h
C7	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	31	693.5	25	1.05 in/h
C8	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	17.02	861.3	25	0.85 in/h
C9	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	28	869.6	20	3.45 in/h
C10	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	10.09	1,051	25	0.9 in/h
C11	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	33.09	1,035	25	1.07 in/h
C12	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	38	1,040	20	3.58 in/h
C13	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	28	1,218	20	3.44 in/h
C14	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	30	1,231	20	3.45 in/h
C15	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	18.27	1,255	25	0.9 in/h
C16	Rain Bird PESB-PRS-D	1-1/2"	Shrub Spray	28.22	1,264	25	1.05 in/h
C17	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	42	1,334	20	3.51 in/h
C18	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	26	1,343	20	3.49 in/h
C19	Rain Bird PESB-PRS-D	1-1/2"	Bubbler	28	1,350	20	3.48 in/h
	Common Wire				2,780		

CRITICAL ANALYSIS

Generated: 2024-12-03 16:18

P.O.C. NUMBER: 01
Water Source Information:

FLOW AVAILABLE
Point of Connection Size: 2"
Flow Available 44.25 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 45 PSI
Pressure Available: 45 PSI

DESIGN ANALYSIS
Maximum Station Flow: 37.72 GPM
Flow Available at POC: 44.25 GPM
Residual Flow Available: 6.53 GPM

Critical Station: C16
Design Pressure: 25 PSI
Friction Loss: 3.35 PSI
Fittings Loss: 0.34 PSI
Elevation Loss: 0 PSI
Loss through Valve: 3.65 PSI
Pressure Req. at Critical Station: 32.3 PSI
Loss for Fittings: 0.33 PSI
Loss for Main Line: 3.33 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 0 PSI
Loss for Master Valve: 0.8 PSI
Critical Station Pressure at POC: 36.8 PSI
Pressure Available: 45 PSI
Residual Pressure Available: 8.2 PSI

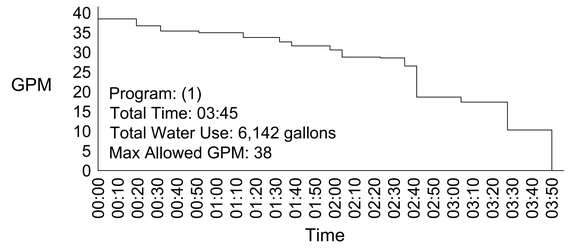
WATERING SCHEDULE

NUMBER	MODEL	TYPE	PRECIP	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
C1	Rain Bird PESB-PRS-D	Bubbler	3.53 in/h	1	17	544	181
C2	Rain Bird PESB-PRS-D	Shrub Spray	1.04 in/h	1	58	2,188	729
C3	Rain Bird PESB-PRS-D	Shrub Spray	0.9 in/h	1	67	2,297	766
C4	Rain Bird PESB-PRS-D	Shrub Spray	1.04 in/h	1	58	2,012	671
C5	Rain Bird PESB-PRS-D	Bubbler	3.48 in/h	1	18	648	216
C6	Rain Bird PESB-PRS-D	Bubbler	3.5 in/h	1	18	648	216
C7	Rain Bird PESB-PRS-D	Shrub Spray	1.05 in/h	1	58	1,798	599
C8	Rain Bird PESB-PRS-D	Shrub Spray	0.85 in/h	1	71	1,208	403
C9	Rain Bird PESB-PRS-D	Bubbler	3.45 in/h	1	18	504	168
C10	Rain Bird PESB-PRS-D	Shrub Spray	0.9 in/h	1	67	676	225
C11	Rain Bird PESB-PRS-D	Shrub Spray	1.07 in/h	1	56	1,853	618
C12	Rain Bird PESB-PRS-D	Bubbler	3.58 in/h	1	17	646	215
C13	Rain Bird PESB-PRS-D	Bubbler	3.44 in/h	1	18	504	168
C14	Rain Bird PESB-PRS-D	Bubbler	3.45 in/h	1	18	540	180
C15	Rain Bird PESB-PRS-D	Shrub Spray	0.9 in/h	1	67	1,224	408
C16	Rain Bird PESB-PRS-D	Shrub Spray	1.05 in/h	1	58	1,637	546
C17	Rain Bird PESB-PRS-D	Bubbler	3.51 in/h	1	18	756	252
C18	Rain Bird PESB-PRS-D	Bubbler	3.49 in/h	1	18	468	156
C19	Rain Bird PESB-PRS-D	Bubbler	3.48 in/h	1	18	504	168
		TOTALS:			738	20,655	6,885

RUNTIME SCHEDULE

TIME	CONTROLLER	NUMBER	ACTION
00:00	C	C2	ON
00:19	C	C2	OFF
00:19	C	C6	ON
00:25	C	C6	OFF
00:25	C	C5	ON
00:31	C	C5	OFF
00:31	C	C4	ON
00:50	C	C4	OFF
00:50	C	C3	ON
01:12	C	C3	OFF
01:12	C	C11	ON
01:30	C	C11	OFF
01:30	C	C1	ON
01:36	C	C1	OFF
01:36	C	C7	ON
01:55	C	C7	OFF
01:55	C	C14	ON
02:01	C	C14	OFF
02:01	C	C16	ON
02:20	C	C16	OFF
02:20	C	C13	ON
02:26	C	C13	OFF
02:26	C	C9	ON
02:32	C	C9	OFF
02:32	C	C18	ON
02:38	C	C18	OFF
02:38	C	C15	ON
03:00	C	C15	OFF
03:00	C	C8	ON
03:23	C	C8	OFF
03:23	C	C10	ON
03:45	C	C10	OFF

RUNTIME SUMMARY



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IRRIGATION SCHEDULES

SHEET NUMBER
IR08