

FINAL PLANS FOR:

JACKSONVILLE BEACH GOLF COURSE IRRIGATION EXPANSION

PREPARED FOR:

CITY OF JACKSONVILLE BEACH DUVAL COUNTY FLORIDA

CITY BID # 2526-02

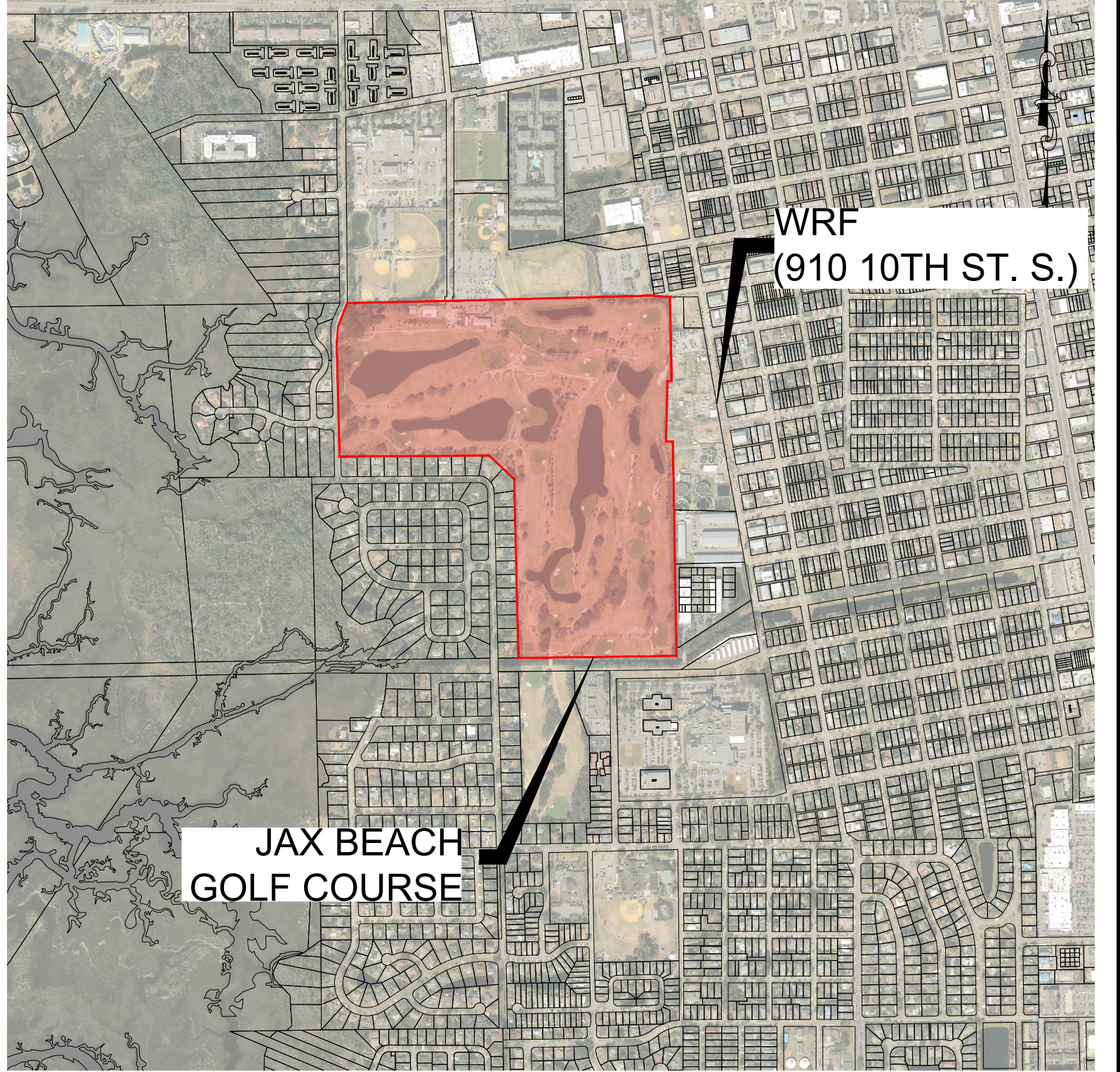


FINAL PLANS
ISSUING FOR BIDDING

CITY OF JAX BEACH

Christine Hoffman	Mayor
Bruce Wouters	At-Large, Seat 1
Dan Janson	At-Large, Seat 2
Greg Sutton	At-Large, Seat 3
John Wagner	District 1, Seat 4
Bill Horn	District 2, Seat 5
Sandy Golding	District 3, Seat 6
Mike Staffopoulos	City Manager
Karen Nelson	Deputy City Manager
Dennis Barron	Public Works Director

SITE VICINITY MAP



DRAWING INDEX

Sht. No.	TITLE
	COVER
G101	SIGNATURE SHEET
G102	GENERAL NOTES
G103	ABBREVIATIONS & STANDARD SYMBOLS
G104	SWPPP & EROSION CONTROL DETAILS
C101	MASTER SITE AND DRAINAGE PLAN
C102	ABBREVIATIONS & STANDARD SYMBOLS
C103	TRANSFER PUMP STATION PROFILE VIEW
C104	POND D TO POND E1 CONNECTION (NOT PART OF THIS CONTRACT)
C105	POND D TO POND E1 CONNECTION
C106	POND D TO POND E1 CONNECTION
C107	POND STRUCTURE DETAILS
C108	SITE PLAN - ELECTRICAL CONDUIT
C501	TRANSFER PUMP DISCHARGE DETAIL
E101	ELECTRICAL SITE PLAN
E102	ELECTRICAL SITE PLAN ENLARGED
E601	ELECTRICAL RTU LAYOUT
E701	ELECTRICAL DETAILS
E702	ELECTRICAL DETAILS
1	AQUA TURF INTERNATIONAL PLAN SET

PREPARED BY:



200 West Forsyth St, Suite 1100
Jacksonville, FL 32202

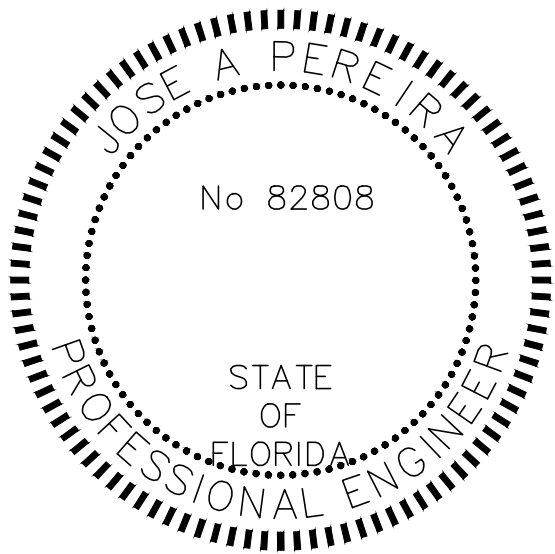
ERRORS AND OMISSIONS IN THESE CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

GENERAL CONTRACTOR TO THOROUGHLY INSPECT EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS SHALL BE NOTED AT ONCE AND CALLED TO THE ENGINEER'S ATTENTION PRIOR TO SUBMITTING BIDS.

ALL CORRESPONDENCE IN REGARDS TO THESE CONSTRUCTION/BID DOCUMENTS SHALL BE DIRECTED TO
JEFF PEQUEEN AT DEWBERRY ENGINEERS INC.

PROJECT NUMBER - 50184819
DATE: SEPTEMBER 2025

JACKSONVILLE BEACH GOLF COURSE
IRRIGATION EXPANSION
CITY BID # 2526-02



THIS ITEM HAS BEEN ELECTRONICALLY
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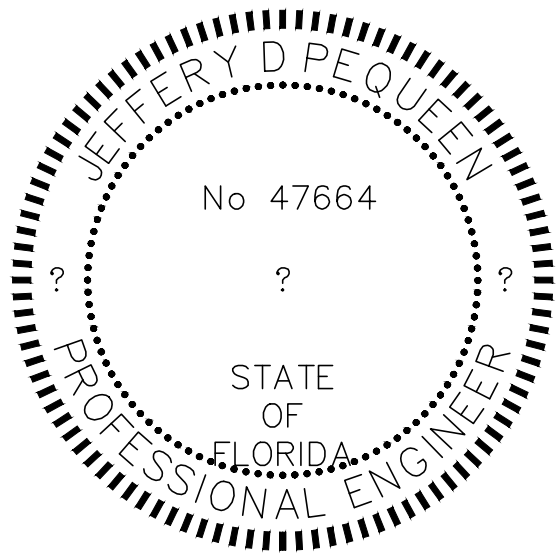
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DEWBERRY ENGINEERS INC.
200 WEST FORSYTH ST, SUITE 1100
JACKSONVILLE, FLORIDA 32202
JOSE A PEREIRA, P.E. NO. 82808

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
G101	SIGNATURE SHEET
C102	TRANSFER PUMP STATION SITE PLAN
C103	TRANSFER PUMP STATION PROFILE VIEW
C501	TRANSFER PUMP DISCHARGE DETAIL



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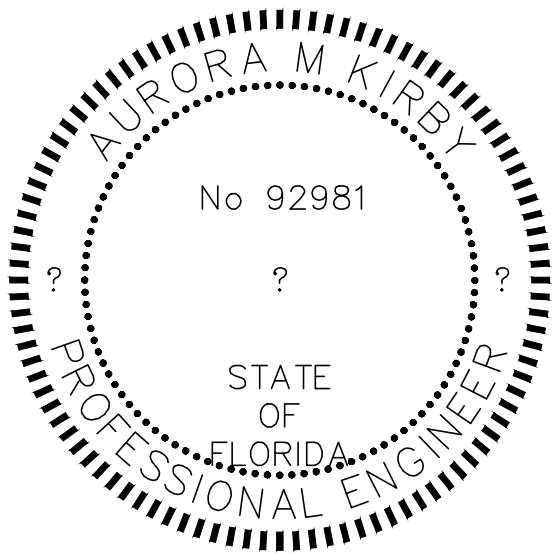
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DEWBERRY ENGINEERS INC.
200 WEST FORSYTH ST, SUITE 1100
JACKSONVILLE, FLORIDA 32202
JEFFERY D PEQUEEN, P.E. NO. 47664

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
G101	SIGNATURE SHEET
G102	GENERAL NOTES
G104	SWPPP & EROSION CONTROL DETAILS
C101	OVERALL SITE PLAN
C104	POND B TO POND A CONNECTION
C105	POND D TO POND E1 CONNECTION
C106	SITE PLAN - ELECTRICAL CONDUIT



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DEWBERRY ENGINEERS INC.
200 WEST FORSYTH ST, SUITE 1100
JACKSONVILLE, FLORIDA 32202
AURORA M KIRBY, P.E. NO. 92981

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
G101	SIGNATURE SHEET
E001	ELECTRICAL LEGEND
E101	ELECTRICAL SITE PLAN
E102	ELECTRICAL SITE PLAN ENLARGED
E103	ELECTRICAL FIBER CONDUIT PLAN
E601	ELECTRICAL RTU LAYOUT
E701	ELECTRICAL DETAILS
E702	ELECTRICAL DETAILS



Dewberry Engineers Inc.
200 West Forsyth St, Suite 1100
Jacksonville, FL 32202
904.332.8601

JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

EB 0008794

FINAL PLANS
ISSUE FOR BIDDING

SCALE

NO SCALE

REVISIONS

[illegible]

NO.	DESCRIPTION	DATE
DRAWN BY _____		S. RAY
APPROVED BY _____		J. PEQUEEN / J. PEREIRA
CHECKED BY _____		J. DUNCAN
DATE _____		SEPTEMBER 2025

TITLE

SIGNATURE SHEET

PROJECT NO.	50185819
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G101

SHEET NO. _____ OF _____

September 22, 2025 (14:46:19 EST)
NEWBERRY FOOT LOCK OFFICES/LAKELAND PROJECTS/CITY OF JACKSONVILLE BEACH/50184819 GOLF COURSE_IRRIGATION EXPANSION/CADD/DWG_PRODUCED/ON50184819 CIVIL NOTES/DWG G102 GENERAL NOTES BY: SRAY

E

CONTRACTOR GENERAL NOTES:

- UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL BE PERFORMED CONSISTENT WITH THE MOST RECENT PUBLICATION OF THE FOLLOWING CODES, STANDARDS AND SPECIFICATIONS AS WELL AS THE LATEST EDITIONS OF ALL OTHER APPLICABLE SPECIFICATIONS & STANDARDS:

DUVAL COUNTY
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD)
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP)
FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT)
AMERICANS WITH DISABILITIES ACT (ADA) BY U.S. DEPARTMENT OF JUSTICE
"MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION
- ALL CONSTRUCTION IS TO BE GOVERNED BY ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, BUILDING AND SAFETY CODES.
- IN THE EVENT THAT ANY STANDARDS OR SPECIFICATIONS AS DESCRIBED HEREIN ARE IN CONFLICT WITH EACH OTHER, OR THAT SHOWN IN THE PLANS, THE MORE STRINGENT CRITERIA WILL APPLY. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY AND IN WRITING SHOULD THE MORE STRINGENT CRITERIA BE UNCLEAR, FOR ENGINEER'S INTERPRETATION OF THE MORE STRINGENT CRITERIA TO BE USED.
- ALL ELEVATIONS SHOWN ON THESE DRAWINGS REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF PERMITS FOR ALL AGENCIES HAVING JURISDICTION, SUCH AS GOVERNMENTAL, REGULATORY OR LOCAL ENTITIES. THE CONTRACTOR SHALL BE EXPECTED TO REVIEW AND ABIDE BY ALL THE TERMS, CONDITIONS, REQUIREMENTS AND LIMITATIONS SET FORTH IN ALL OF THESE PERMITS. A COPY OF THE PERMITS SHALL BE KEPT ON THE CONSTRUCTION SITE AND MADE AVAILABLE FOR REVIEW AT ALL TIMES.

DEMOLITION AND CLEARING

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CLEARLY DESIGNATE THE LIMITS OF CONSTRUCTION ON-SITE. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE THE LIMITS OF CONSTRUCTION
- THE CONTRACTOR SHALL BE EXTREMELY CAUTIOUS WHEN WORKING NEAR TREES THAT ARE TO BE SAVED, WHETHER SHOWN IN THE PLANS OR DESIGNATED IN THE FIELD.
- ALL PRACTICAL AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO PREVENT UNNECESSARY TREE REMOVAL.
- ANY PROPOSED CUT OR FILL MATERIAL TO BE REMOVED OR PLACED WITHIN THE DRIP LINE OF SPECIMEN TREES TO REMAIN, INCLUDING TRENCHING FOR PROPOSED IMPROVEMENTS SUCH AS UTILITIES, WILL REQUIRE THE ADVANCED PRE-TREATMENT OF EACH IMPACTED TREE BY A QUALIFIED ARBORIST OR AT THE DIRECTION OF THE LANDSCAPE ARCHITECT TO MINIMIZE THE POTENTIALLY ADVERSE IMPACTS OF CONSTRUCTION.
- TREE PROTECTION BARRICADES OR EQUIVALENT PROTECTIVE MEASURES WILL BE CONSTRUCTED ACCORDING TO THE LOCAL JURISDICTIONS' CRITERIA FOR TREES TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION.
- IN AREAS REQUIRING FILL MATERIAL, THE CONTRACTOR SHALL STRIP OR OTHERWISE REMOVE ALL VEGETATION SUCH AS BRUSH, HEAVY SODS, HEAVY GROWTH OF GRASS, DECAYED VEGETATION MATTER, RUBBISH AND ANY OTHER DELETERIOUS MATERIAL BEFORE EMBANKMENT IS PLACED. IMMEDIATELY PRIOR TO THE PLACING OF FILL MATERIAL, THE ENTIRE AREA UPON WHICH FILL IS TO BE PLACED, SHALL BE SCARIFIED IN A DIRECTION APPROXIMATELY PARALLEL TO THE AXIS OF FILL. THE GEOTECHNICAL ENGINEER SHALL APPROVE THE AREA PRIOR TO THE PLACEMENT OF FILL.

PAVING, GRADING, AND DRAINAGE

- THE CONTRACTOR SHALL PERFORM ALL WORK PERTAINING TO DRAINAGE INCLUDING EXCAVATION OF STORMWATER MANAGEMENT PONDS OR EQUIVALENT FACILITIES PRIOR TO THE COMMENCEMENT OF OTHER WORK INCLUDED IN THESE PLANS.
- PRIOR TO INITIATING ANY EXCAVATION (INCLUDING BUT NOT LIMITED TO TUNNELS, DITCHES, STORM WATER PONDS, CANALS, ARTIFICIAL LAKES) CONTRACTOR SHALL INSTALL FENCES AND TAKE ALL OTHER REASONABLE AND PRUDENT STEPS TO INSURE THAT ACCESS TO EXCAVATION BY UNAUTHORIZED PERSONNEL IS PREVENTED.
- ALL DRAINAGE STRUCTURES ARE TO BE TRAFFIC BEARING UNLESS OTHERWISE NOTED. ALL PRECAST CIRCULAR STRUCTURES SHALL BE CONSTRUCTED WITH A MINIMUM 5-INCH WALL THICKNESS.
- ALL PROPOSED PAVING SURFACES IN INTERSECTIONS AND ADJACENT EXISTING SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY IN THE DIRECTION SHOWN BY THE PROPOSED GRADES AND FLOW ARROWS ON THE PLANS AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. APPROACHES TO INTERSECTIONS AND ENTRANCE AND EXIT GRADES TO INTERSECTIONS MAY REQUIRE MINOR LOCAL FIELD ADJUSTMENTS SHOULD ACTUAL CONDITIONS VARY FROM THE SURVEYED INFORMATION THE DESIGN WAS BASED UPON IN ORDER TO ACCOMPLISH THE INTENT OF THE PLANS. IN ADDITION, THE STANDARD CROWN WILL HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND CONSULT THE ENGINEER AS NEEDED TO MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS SHOULD THE INTENT OF THE PLANS BE UNCLEAR.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY EXCESS CURBS OR SUPPLYING FILL AS NECESSARY TO GRADE THE SITE TO THE PROPOSED ELEVATIONS AS DESIGNED WITHIN THE CONSTRUCTION DOCUMENTS.
- IF LIMESTONE BEDROCK IS ENCOUNTERED DURING EXCAVATION OF THE RETENTION BASINS OR A SINKHOLE OR SOLUTION CAVITY FORMS DURING CONSTRUCTION, EXCAVATION OF THE BASIN MUST BE HALTED IMMEDIATELY. THE OWNER, ENGINEER, AND WATER MANAGEMENT DISTRICT MUST BE NOTIFIED, AND REMEDIAL ACTION WILL BE REQUIRED. THE PERMITEE MUST INSPECT ALL PERMITTED SURFACE WATER MANAGEMENT BASINS MONTHLY FOR THE OCCURRENCE OF SINKHOLES AND DOCUMENT THESE INSPECTIONS ON WATER MANAGEMENT DISTRICT CONDITION COMPLIANCE FORM NUMBER EN-33. TWO COPIES OF THE COMPLETED FORMS MUST BE SENT TO THE WATER MANAGEMENT DISTRICT AND THE LOCAL AGENCY HAVING JURISDICTION ANNUALLY BY MAY 31ST. OF EACH YEAR. THE PERMITEE MUST REPORT ANY SINKHOLE THAT DEVELOPS WITHIN THE SURFACE WATER MANAGEMENT SYSTEM. THE PERMITEE MUST NOTIFY THE WATER MANAGEMENT DISTRICT AND LOCAL AGENCY HAVING JURISDICTION OF ANY SINKHOLE DEVELOPMENT IN THE SURFACE WATER MANAGEMENT SYSTEM WITHIN 48 HOURS OF ITS DISCOVERY AND COMPLETE SINKHOLE REPAIR WITHIN 10 DAYS OF SUCH DISCOVERY USING A DISTRICT APPROVED METHODOLOGY.
- STORM PIPE LENGTHS SHOWN ON THE PLANS INCLUDE MITERED END SECTIONS. IF THE CONTRACTOR ELECTS TO USE AN APPROVED ALTERNATE, THE PIPE LENGTHS MUST BE ADJUSTED.
- INLET OFFSETS ARE TO THE CENTERLINES SHOWN ON F.D.O.T. DESIGN STANDARDS INDEXES.
- ALL REINFORCED CONCRETE PIPE (R.C.P.) SHALL BE MINIMUM CLASS III, UNLESS OTHERWISE APPROVED OR NOTED ON THE PLANS OR SPECIFICATIONS.
- ALL STORM WATER PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.

EROSION CONTROL

- THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND ALL REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT.
- THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ACCORDING TO EPA/FDEP NPDES CRITERIA TO MINIMIZE EROSION AND INSURE PROPER FUNCTIONING OF STORM WATER MANAGEMENT SYSTEM UPON COMPLETION OF CONSTRUCTION. IN ADDITION TO MEETING EPA/FDEP NPDES CRITERIA, THE SWPPP SHALL BE SUBMITTED TO AND COMPLY WITH LOCAL AGENCY (CITY OF JACKSONVILLE BEACH) HAVING JURISDICTION'S MINIMUM EROSION CONTROL CRITERIA.
- CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORTATION OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT AS THOSE THAT EXIST PRIOR TO COMMENCEMENT OF CONSTRUCTION. THIS CONDITION MUST BE SATISFIED UNTIL PROJECT IS FULLY COMPLETED AND ACCEPTED. CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE ON TEMPORARY EROSION CONTROL FEATURES AT HIS EXPENSE. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY AND CAPACITY OF CHECK WEIRS, SEDIMENT BASINS, SLOPE DRAINS, GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGH OUT THE LIFE OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE HAY BALES, SILT BARRIERS, MURFAT FILTERS, TEMPORARY GRASSING, ETC., AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION. CONTRACTOR SHALL PROVIDE CONTINUOUS MONITORING OF EROSION AND SEDIMENT CONTROLS TAKEN AND SHALL DOCUMENT ALL CORRECTIVE MEASURES. A COPY OF THE APPROVED SWPPP SHALL BE KEPT ON SITE AT ALL TIMES FOR REVIEW BY OWNER'S REPRESENTATIVE AND BY NPDES INSPECTORS. THIS PERMIT MUST BE SUBMITTED TO CITY OF JACKSONVILLE BEACH BY THE CONTRACTOR PRIOR TO THE ISSUANCE OF PERMITS.
- THE OWNER AND/OR CONTRACTOR SHALL PROVIDE A NOTICE OF INTENT IN ACCORDANCE WITH CRITERIA SET FORTH IN THE NPDES PERMIT REQUIREMENTS 48 HOURS PRIOR TO BEGINNING CONSTRUCTION, CLEARING, OR DEMOLITION.
- PROVIDE EFFECTIVE TEMPORARY AND PERMANENT EROSION CONTROL FOLLOWING THE REQUIREMENTS IN SECTION 104 OF THE STATE DEPT. OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION (F.D.O.T. SECTION 104) AND FDOT EROSION AND SEDIMENT CONTROL MANUAL AND THE FDEP NPDES REGULATIONS.
- INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENTATION RESULTING FROM SURFACE RUNOFF UNTIL COMPLETION OF ALL CONSTRUCTION OPERATION THAT MAY CAUSE SEDIMENT RUNOFF. FILTER FABRIC SHALL BE PLACED AND MAINTAINED UNDER THE GRATE AND FILTER SOCKS PLACED IN FRONT OF THE THROAT OF CURB INLETS, DURING CONSTRUCTION.
- TURBIDITY BARRIERS MUST BE INSTALLED AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SEDIMENTS AND SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO CONSTRUCTION. TURBIDITY BARRIERS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED, SOILS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.
- ALL SLOPES 5:1 OR GREATER SHALL BE SODDED. ALL POND SLOPES AND RIGHTS-OF-WAY SHALL BE SODDED.
- IN ACCORDANCE WITH FDEP AND WATER MANAGEMENT DISTRICT PERMITS, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS OF NO CONSTRUCTION ACTIVITIES.

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CONTRACTOR RESPONSIBILITIES:

- CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, INCLUDING ALL SURFACE AND SUBSURFACE CONDITIONS, THE WORK REQUIRED AND ALL OTHER CONDITIONS THAT MAY EFFECT THE SUCCESSFUL COMPLETION OF THE JOB PRIOR TO COMMENCEMENT OF WORK.
- THE LOCATIONS OF EXISTING UTILITY SERVICES, FACILITIES, AND STRUCTURAL FEATURES SHOWN ON THESE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF THE LOCATION INFORMATION PROVIDED. ANY INACCURACY OR OMISSION IN SUCH INFORMATION SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROTECT THE EXISTING FEATURES FROM DAMAGE OR UNSCHEDULED INTERRUPTION OF SERVICE. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL STOP ALL CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND PERMIT CONDITIONS BEARING ON THE CONDUCT OF THE WORK, AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER, IN WRITING, AND ANY NECESSARY CHANGES SHALL BE ADJUSTED, AS PROVIDED IN THE AGREEMENT FOR CHANGES IN THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS, RETENTION AND DETENTION FACILITIES UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO EQUAL OR BETTER CONDITION.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER AND THE ENGINEER FOR THE ACTS AND OMISSIONS OF CONTRACTOR'S EMPLOYEES AND ALL HIS SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES AND OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.
- ALL WORK AND FURNISHED MATERIALS SHALL BE IN REASONABLE CONFORMITY WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT, PLANS, DETAILS OR SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, PUBLIC CARRIERS, SERVICE COMPANIES, AND CORPORATIONS OWNING OR CONTROLLING ROADWAYS, RAILWAYS, WATER, SEWER, GAS, ELECTRICAL, TELEPHONE, AND TELEGRAPH FACILITIES SUCH AS PAVEMENTS, TRACKS, PIPING, WIRES, CABLES, CONDUITS, POLES, GUYS, OR OTHER SIMILAR FACILITIES, INCLUDING INCIDENTAL STRUCTURES CONNECTED THEREWITH THAT ARE ENCOUNTERED IN THE WORK IN ORDER THAT SUCH ITEMS MAY BE PROPERLY SUPPORTED, PROTECTED OR LOCATED.
- IN THE EVENT THE CONTRACTOR DISCOVERS ANY ERRORS OR OMISSIONS IN THE PLANS HE SHALL IMMEDIATELY NOTIFY THE OWNER OR OWNER'S AGENT.
- THE CONTRACTOR SHALL COMPLY WITH ALL LEGAL LOAD RESTRICTIONS IN THE HAULING OF MATERIALS ON PUBLIC ROADS BEYOND THE LIMITS OF THE WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR ANY DAMAGE THAT MAY RESULT FROM THE MOVING OF MATERIALS AND EQUIPMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURVEY MONUMENTATION, SUCH AS THE PRESERVATION OF ALL PERMANENT REFERENCE MONUMENTS, PERMANENT CONTROL POINTS, PERMANENT BENCH MARKS, PROPERTY CORNERS, POINTS OR MARKERS. IN THE EVENT ANY MONUMENTATION IS DISTURBED, IT SHALL BE RESTORED BY A FLORIDA LICENSED SURVEYOR AND MAPPER SELECTED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- THE OWNER, OWNER'S REPRESENTATIVES AND INSPECTORS OF APPLICABLE GOVERNMENT AGENCIES HAVING JURISDICTION, SHALL AT ALL TIMES HAVE ACCESS TO THE WORK SITE WHEREVER AND WHENEVER IT IS IN PREPARATION OR PROGRESS. THE CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR SUCH ACCESS AND INSPECTIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL REASONABLE AND PRUDENT PRECAUTIONS TO INSURE THAT ALL COMPLETED WORK, MATERIALS AND EQUIPMENT STORED ON SITE ARE SAFE AND SECURED FROM UNAUTHORIZED ACCESS OR USE. SUCH PRECAUTIONS MAY INCLUDE INSTALLATION OF SIGNS, FENCES, OR POSTING OF SECURITY GUARDS.
- CONTRACTOR SHALL, AT ALL TIMES, UTILIZE ALL NORMALLY ACCEPTED AND REASONABLY EXPECTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND GUIDELINES PERTAINING TO SAFE UTILIZATION OF EQUIPMENT OR MATERIALS AS PUBLISHED BY MANUFACTURER.
- THOSE PARTS OF WORK IN PLACE THAT ARE SUBJECT TO DAMAGE BECAUSE OF OPERATIONS BEING CARRIED ON ADJACENT THERETO SHALL BE COVERED, BOARDED UP OR SUBSTANTIALLY ENCLOSED WITH ADEQUATE PROTECTION BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE, PROTECTING WORK COMPLETED.
- THE CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AND ALL RULES AND REGULATIONS NOW OR HEREAFTER IN EFFECT UNDER SAID ACT, AND THE CONTRACTOR FURTHER AGREES TO COMPLY WITH ANY AND ALL APPLICABLE STATE LAWS AND REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH.
- THE CONTRACTOR SHALL PROTECT AND KEEP OWNER (INCLUDING THEIR AGENTS AND EMPLOYEES) FREE AND HARMLESS FROM ANY AND ALL LIABILITY, PUBLIC OR PRIVATE, PENALTIES, CONTRACTUAL OR OTHERWISE, LOSSES, DAMAGES, COSTS, ATTORNEY'S FEES, EXPENSES, CAUSES OF ACTION, CLAIMS OR JUDGMENTS RESULTING FROM THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AS AMENDED OR ANY RULE OR REGULATION PROMULGATED THEREUNDER OR OF ANY STATE LAWS OR REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, AND CONTRACTOR SHALL INDEMNIFY OWNER FROM ANY SUCH CLAIMS, PENALTIES, SUITS OR ACTIONS, PUBLIC OR PRIVATE, ADMINISTRATIVE OR JUDICIAL, INCLUDING ATTORNEY'S FEES PAID OR INCURRED BY OR ON BEHALF OF OWNER, JOINTLY OR SEVERALLY, AND/OR THEIR AGENTS AND EMPLOYEES. THE CONTRACTOR FURTHER AGREES, IN THE EVENT OF A CLAIMED VIOLATION OF ANY FEDERAL OR STATE SAFETY AND HEALTH LAW OR REGULATION ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, OWNER MAY IMMEDIATELY TAKE WHATEVER ACTION IS DEEMED NECESSARY BY OWNER TO REMEDY THE CLAIMED VIOLATION, ANY AND ALL COSTS OR EXPENSES PAID OR INCURRED BY OWNER IN TAKING SUCH ACTION SHALL BE BORNE BY CONTRACTOR, AND CONTRACTOR AGREES TO PROTECT, HOLD HARMLESS AND INDEMNIFY OWNER AGAINST ANY AND ALL SUCH COSTS OR EXPENSES.
- THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE ALL REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:
 - ALL EMPLOYEES ON THE WORK SITE AND ALL OTHER PERSONS WHO MAY BE AFFECTED THEREBY;
 - ALL THE WORK AND ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE, UNDER THE CARE, CUSTODY OR CONTROL OF THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS; AND
 - OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAY, STRUCTURES AND UTILITIES NOT DESIGNATED FOR DEMOLITION IN THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC, QUASI PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR FOR THEIR PROTECTION AGAINST DAMAGE, INJURY OR LOSS, OR DESIGNED TO PROTECT THE ENVIRONMENT. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION, INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES OF THE EXISTENCE OF HAZARDS AND OF THE SAFETY REGULATIONS.
- ALL DAMAGE OR LOSS TO ANY PROPERTY REFERRED TO HEREIN CAUSED IN WHOLE OR IN PART BY THE CONTRACTOR, A SUBCONTRACTOR, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SHALL BE REMEDIED BY THE CONTRACTOR, EXCEPT DAMAGE OR LOSS PROPERLY ATTRIBUTABLE SOLELY TO THE ACTS OR OMISSIONS OF THE OWNER, OR THE ENGINEER OR ANYONE EMPLOYED BY THEM, OR FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, AND NOT PROPERLY ATTRIBUTABLE IN WHOLE OR IN PART, TO THE FAULT OR NEGLIGENCE OF THE CONTRACTOR.
- UNTIL FINAL ACCEPTANCE OF THE WORK BY OWNER, THE CONTRACTOR SHALL HAVE THE CHARGE AND CARE OF AND SHALL BEAR THE RISK OF INJURY OR DAMAGE, LOSS OR EXPENSE TO ANY PART THEREOF, OR TO ANY MATERIALS STORED ON SITE, BY THE ACTION OF THE ELEMENTS OR FROM ANY OTHER CAUSE WHETHER ARISING FROM THE EXECUTION OR NON-EXECUTION OF THE WORK. THE CONTRACTOR SHALL REBUILD, REPAIR, RESTORE AND MAKE GOOD ALL INJURIES OR DAMAGES TO ANY PORTION OF THE WORK OCCASIONED BY ANY OF THE ABOVE CAUSES BEFORE FINAL ACCEPTANCE AND SHALL BEAR THE EXPENSES THEREOF.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA AND SCHEDULES, AND SIGNING FOR SAID INSPECTIONS.
- THE CONTRACTOR SHALL CONTROL AND BE RESPONSIBLE FOR THEIR OPERATIONS AND THOSE OF THEIR SUBCONTRACTORS AND ALL SUPPLIERS, TO ASSURE THE LEAST INCONVENIENCE TO THE PUBLIC. THE CONTRACTOR SHALL MAINTAIN FREE AND UNOBSTRUCTED MOVEMENT OF VEHICULAR TRAFFIC AND SHALL LIMIT THEIR OPERATIONS IN RELATION TO THE SAFETY AND CONVENIENCE OF THE TRAVELING PUBLIC. UNDER ALL CIRCUMSTANCES, SAFETY SHALL BE THE MOST IMPORTANT CONSIDERATION.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE POLICIES AND GUIDELINES ESTABLISHED BY ALL AGENCIES HAVING JURISDICTION FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE OR INJURY TO PROPERTY OF ANY CHARACTER, DURING THE EXECUTION OF THE WORK, RESULTING FROM ANY ACT, OMISSION, NEGLIGENCE, OR MISCONDUCT IN THEIR MANNER OR METHOD OF EXECUTING THE WORK, OR AT ANYTIME DUE TO DEFECTIVE WORK OR MATERIALS.
- THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE, OR OTHERWISE DISTURB ANY MATERIAL, STRUCTURE OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADES OR GRADING SECTIONS ESTABLISHED FOR THIS PROJECT, EXCEPT WHERE SUCH EXCAVATION OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS OR SPECIFICATIONS.
- THE CONTRACTOR SHOULD VERIFY THE QUANTITIES AND LENGTHS OF MATERIALS SHOWN ON THE PLANS. ANY DISCREPANCY BETWEEN MATERIAL CALLOUTS AND ACTUAL SHOWN IN PLAN VIEW IS TO BE BROUGHT TO THE ENGINEER'S ATTENTION BY THE CONTRACTOR PRIOR TO BIDDING. IT IS THE ENGINEER'S INTENTION TO CONSTRUCT WHAT IS SHOWN ON THE PLANS.
- ANY DISCREPANCY BETWEEN THE DIMENSIONS AND MEASUREMENTS SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ENGINEER'S ATTENTION. FAILURE TO DO SO AND TO CONTINUE CONSTRUCTION SHALL MAKE THE CONTRACTOR RESPONSIBLE FOR ALL ERRORS AND NECESSARY CORRECTIONS THAT MAY SUBSEQUENTLY ARISE.

GENERAL NOTES:

- CONSTRUCT UTILITIES IN ACCORDANCE TO OWNER APPROVED PLANS AND SHOP DRAWINGS, ANY DEVIATION FROM THE APPROVED PLANS SHALL BE APPROVED BY THE ENGINEER AND THE OWNER.
- A PRE CONSTRUCTION MEETING WITH THE OWNER'S STAFF IS REQUIRED PRIOR TO INITIATING CONSTRUCTION.
- A STAMPED APPROVED SET OF PLANS BY THE EOR SHALL BE PRESENT ON THE SITE AT ALL TIMES. CONTRACTOR SHALL MAINTAIN AN UPDATED SET OF RED-LINED RECORD DRAWINGS ON-SITE DURING THE PERFORMANCE OF THE WORK.
- A MINIMUM OF THREE SETS OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS CAN BE SUBMITTED ELECTRONICALLY.
- INSTALLATION OF MATERIALS AND/OR STRUCTURES PRIOR TO SHOP DRAWING APPROVAL IS DONE AT THE CONTRACTOR'S OWN RISK.
- TWO HARD COPIES AND ONE ELECTRONIC COPY OF ENGINEER APPROVED RECORD DRAWINGS SHALL BE SUBMITTED TO OWNER AT OR BEFORE THE FINAL INSPECTION.
- COORDINATE AND SCHEDULE WITH GOLF COURSE OPERATIONS 72 HOURS PRIOR TO PERFORMING THE WORK. COMPLY WITH ANY TIME SCHEDULE LIMITATIONS REQUIRED FOR OPERATION OF THE FACILITY.
- ALL REQUIRED MATERIALS SHALL BE ON HAND PRIOR TO BEGINNING THE WORK.
- UNDERGROUND UTILITIES SHOWN ARE TAKEN FROM EXISTING RECORDS AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONFIRM LOCATIONS OF THE UTILITIES AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION.
- ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE
- ALL EXCAVATIONS SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL (INCLUDING OSHA), STATE AND LOCAL REQUIREMENTS. CONTRACTOR SHALL COMPLY FULLY WITH THE REQUIREMENTS OF THE UNDERGROUND DAMAGE PREVENTION AND SAFETY ACT, P.S. 556. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO ANY UNDERGROUND UTILITIES AFFECTED BY THE WORK.
- IF UNSATISFACTORY MATERIAL FOR ADEQUATE BEARING IS ENCOUNTERED AT THE NORMAL SUBGRADE, THE UNSATISFACTORY MATERIAL SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL WITH NO MORE THAN 10% FINES PASSING A NO. 200 SIEVE, AND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION AS PER ASTM D1557.
- THE BIDDERS SHALL VISIT AND INSPECT THE AREAS SHOWN BY THESE PLANS AND MAKE INDEPENDENT DETERMINATIONS OF THE NATURE AND EXTENT OF THE WORK RELATIVE TO FIELD CONDITIONS, PRIOR TO BIDDING THIS WORK.
- NO SUBSURFACE EXPLORATIONS OR GEOTECHNICAL EVALUATION HAS BEEN PERFORMED FOR THIS PROJECT. THE CONTRACTOR, IF DESIRED IS ADVISED TO PERFORM INDEPENDENT EVALUATIONS, DETERMINATIONS AND CONCLUSIONS REGARDING THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND AS SPECIFIED HEREIN.
- WHERE A CONNECTION IS TO BE MADE IN THE FIELD TO AN EXISTING PIPE, THE CONTRACTOR SHALL EXCAVATE THE CONNECTION POINT AREA IN ADVANCE TO VERIFY THE SIZE, TYPE AND ORIENTATION OF THE PIPE UNLESS STATED OTHERWISE ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE WITH EOR, GOLF COURSE STAFF, AND RECEIVE WRITTEN APPROVAL OF PROPOSED METHOD OF CONNECTION PRIOR TO ORDERING AND INSTALLING MATERIALS.
- ALL PROPOSED PIPING SHALL HAVE A MINIMUM OF 36" COVER OVER TOP OF PIPE. COVER SHALL VARY TO PROVIDE UNIFORM GRADIENT OR SLOPE TO PIPE WHERE REQUIRED UNLESS OTHERWISE.
- ALL AREAS WHERE LANDSCAPING, SOD, OR IRRIGATION HAS BEEN REMOVED OR DISTURBED BY CONTRACTOR'S OPERATIONS SHALL BE RE-SODDED, LANDSCAPED, OR REPAIRED IN LIKE KIND. ALL COSTS ASSOCIATED SHALL BE INCLUDED WITH PROJECT.
- ALL EXISTING PROPERTY, FENCING, DRIVEWAYS, PIPING, SIGNS AND OTHER ITEMS SHALL BE RESTORED TO ORIGINAL LINE AND GRADE UNLESS APPROVED BY THE ENGINEER.
- UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR IN SPECIFICATIONS ALL ITEMS NOTED TO BE REMOVED OR DEMOLISHED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OFF-SITE BY THE CONTRACTOR'S MEANS. ITEMS NOTED TO BE PROVIDED TO THE OWNER SHALL BE STORED AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE. THE OWNER RESERVES THE RIGHT TO TAG ALL EQUIPMENT TO BE DEMOLISHED FOR SALVAGE.
- NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS OF ALL EXISTING AND PROPOSED FACILITIES PRIOR TO FABRICATION OF PIPING AND EQUIPMENT TO ENSURE PROPER ASSEMBLY OF ALL ITEMS.
- EQUIPMENT PAD DIMENSIONS AND EQUIPMENT ANCHOR BOLT REQUIREMENTS ARE DEPENDENT UPON EQUIPMENT SELECTED. DIMENSIONS INDICATED ON THE DRAWINGS SHALL BE VERIFIED WITH MANUFACTURER FOR ACTUAL SIZE OF EQUIPMENT SELECTED.
- THE CONTRACTOR SHALL PROVIDE DEWATERING MEASURES AS REQUIRED DURING CONSTRUCTION TO PREVENT A DISCHARGE OF TURBID WATER TO ON-SITE AND OFF-SITE SURFACE WATERS AND/OR WETLANDS. PLANNED MEASURES SHALL BE SUBMITTED IN WRITING TO THE JACKSONVILLE BEACH PUBLIC WORKS FOR APPROVAL PRIOR TO BEGINNING ANY DEWATERING ACTIVITIES. THESE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, DEWATERING BASINS, TRAPS, OR FILTER MECHANISMS, AS A FIRST STEP IN THE LAND ALTERING PROCESS. THESE MEASURES SHALL BE FULLY OPERATIVE AND INSPECTED BY THE OWNER PRIOR TO INITIATING ANY DEWATERING ACTIVITIES.
- ALL WORK AND MATERIALS FURNISHED SHALL BE IN REASONABLE CONFORMITY WITH THE LINES, GRADES, PROFILES, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS AND TESTING REQUIREMENTS SPECIFIED IN THE CONTRACT DRAWINGS AND TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE OR OTHERWISE DISTURB ANY MATERIALS, STRUCTURES OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADE OR CONSTRUCTION LIMITS ESTABLISHED FOR THIS PROJECT.
- THE CONTRACTOR SHALL EXAMINE THE SITE FOR ALL CONDITIONS WHICH MAY AFFECT HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCOVERY, LOCATION AND IDENTIFICATION OF ALL EXISTING FACILITIES WITHIN THE LIMITS OF THE PROJECT. THE OWNER AND HIS ENGINEER ASSUME NO RESPONSIBILITY FOR SUBSURFACE CONDITIONS OR FOR THE CONTRACTOR'S FAILURE TO IDENTIFY, LOCATE AND PROTECT EXISTING FACILITIES ABOVE AND BELOW GROUND.
- THE CONTRACTOR SHALL REMOVE ALL WASTE MATERIAL FROM THE SITE AND DISPOSE OF IT IN AN APPROVED MANNER. BURNING ON SITE WILL NOT BE ALLOWED.
- THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES AND UTILITIES, OR TO MINIMIZE THE IMPACT OF ANY EXCAVATION. SHEETING AND SHORING TO BE DESIGNED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BECOME FAMILIAR AND FIELD VERIFY THE LOCATION OF EXISTING PIPELINES, UTILITIES, TRACKS AND STRUCTURES OF EVERY TYPE BELOW, ON OR ABOVE THE SURFACE OF THE GROUND WHICH MAY INTERFERE WITH HIS/HER OPERATIONS. CONTRACTOR SHALL PREPARE HIS/HER BID AND ENTER INTO THE CONTRACT IN FULL UNDERSTANDING OF THE CONDITIONS THAT MAY BE ENCOUNTERED AND HIS/HER RESPONSIBILITY IN CONNECTION THERE WITH. UPON AWARD OF THE CONTRACT, THE CONTRACTOR SHALL INFORM THE E.O.R.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES RELATED TO CONSTRUCTING THIS PROJECT AS PROVIDED IN THE GENERAL CONDITIONS EXCEPT AS OTHERWISE PROVIDED HEREIN. THE CONTRACTOR SHALL ALSO IF IN EFFECT AND APPLICABLE AT THE DATE OF BID OPENING, PAY ANY GOVERNMENTAL AGENCY CHARGES AND INSPECTION FEES REQUIRED FOR THE WORK IF THE CONTRACTOR DESIRES CONNECTION OF UTILITY SERVICES (TELEPHONE OR ELECTRICITY) TO PERFORM THE WORK, OR TO SERVE A FIELD OFFICE. HE WILL BE RESPONSIBLE FOR SECURING THE NECESSARY PERMITS AND ANY CONNECTION OR DISCONNECTION CHARGES INVOLVED. THE CONTRACTOR SHALL OBTAIN CITY OF JACKSONVILLE BEACH BUILDING PERMITS AND HAVE PAID THE ASSOCIATED PROCESSING FEES PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE EXISTING (WRF) FACILITY MUST BE KEPT IN CONTINUOUS OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THAT NO INTERRUPTION WILL BE PERMITTED WHICH ADVERSELY WILL AFFECT THE DEGREE OF TREATMENT PROVIDED. THE CONTRACTOR SHALL PROVIDE TEMPORARY FACILITIES AND MAKE TEMPORARY MODIFICATIONS AS NECESSARY TO KEEP THE EXISTING FACILITIES IN OPERATION DURING CONSTRUCTION PERIOD AND SHALL BASE HIS/HER BID ON WORKING CONTINUOUSLY ON ALL TIE-INS AND CONNECTIONS THAT REQUIRE INTERRUPTION OF SERVICE OR TREATMENT.
- CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE EXISTING GOLF COURSE FACILITY WILL BE OPEN DURING THE CONSTRUCTION OF THE PROJECT AND SHALL ENSURE THAT THE CONSTRUCTION DOES NOT INTERRUPT THE REMAINING COURSE AND IS ONLY CONTAINED TO THE AREA OF THE PROPOSED IMPROVEMENTS. CONTRACTOR SHALL ENSURE THAT GOLF COURSE CART TRAFFIC IS PROPERLY SECURELY MAINTAINED. WHEN TRAVELING NEAR THE PROPOSED IMPROVEMENTS.



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JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

EB 0008794

FINAL PLANS
ISSUE FOR BIDDING

SCALE

NO SCALE

REVISIONS

NO.	DESCRIPTION	DATE
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DRAWN BY S. RAY

APPROVED BY J. PEQUEEN / J. PEREIRA

CHECKED BY J. DUNCAN

DATE SEPTEMBER 2025

TITLE

GENERAL NOTES

PROJECT NO. 50185819

G102

SHEET NO.

OF

September 22, 2025 (14:46:10 EST)
NEWBERRY DEWBERRY FOOT LOCAL OFFICES/LAKELAND PROJECTS/ITY OF JACKSONVILLE BEACH/450184819 GOLF COURSE_IRRIGATION EXPANSION/CADD/DWG/_PRODUCTION/50184819 CIR_NOTES.DWG G103 ABBREVIATIONS & STANDARD SYMBOLS BY: SRAY

E

D

C

B

A

	SCADA DISPLAY OR CONTROL		GLOBE VALVE		SIMPLEX RECEPTACLE
	CONTROL TYPE (DI, DO, AI, AO)		BALL VALVE		DUPLEX RECEPTACLE
	(I) DATA LINK		GATE VALVE		SELF ACTUATED REGULATOR
	INTERLOCKING FUNCTION		PLUG VALVE		PILOT OPERATED PRESSURE REGULATOR
	PANEL		CHECK VALVE		PILOT OPERATED BACKPRESSURE REGULATOR
	GROUND		NEEDLE VALVE		MOTOR OPERATED
	POLYMER FEED HOPPER DRY FEEDER		PINCH VALVE		CYLINDER OR PISTON OPERATED
	PROGRESSIVE CAVITY PUMP		FOOT VALVE		DIAPHRAGM ACTUATOR W/DOUBLE ACTING OPERATOR W/O ACCESSORIES
	ULTRA SONIC SENSOR		DIAPHRAGM		DIAPHRAGM ACTUATOR W/DOUBLE ACTING OPERATOR w/ HANDWHEEL
	DOUBLE LEAF CHECK VALVE		BUTTERFLY VALVE		DIAPHRAGM ACTUATOR W/DOUBLE ACTING OPERATOR w/ ADJUSTABLE OPENING LIMIT STOP
	WYE STRAINER		FILL VALVE		VANE TYPE ACTUATOR
	VIC COUPLING		BACK PRESSURE VALVE		AIR OPERATOR W/POSITIONER
	3-WAY VALVE		REDUCER		FAIL OPEN
	4-WAY VALVE		FLEXIBLE CONNECTOR		FAIL CLOSED
	HOSE CONNECTION		INLINE STATIC MIXER		FAIL LAST POSITION
	VENT WITH SCREEN		CENTRIFUGAL PUMP		STEAM TRAP
	LEVEL GAUGE		BLOWER PUMP		RESIN OR MEDIA TRAP
	HOSE PUMP		SUBMERSIBLE PUMP		DESICCANT BREATHERR
	GAS CYLINDERS		METERING PUMP		VENT PIPE
	DRAIN		ROTAMETER		RUPTURE DISC
	EDUCTOR		MOTOR		DIAPHRAGM SEAL
			MIXER		SPECTACLE BLIND
			FLANGE		PULSATION DAMPENER
			VACUUM BREAKER		TURBINE DRIVE
			RELIEF AND/OR SAFETY		PNEUMATIC PISTON
			SOLENOID VALVE		PADDLE WHEEL FLOW SENSOR
			3-WAY SOLENOID		END CLOSURE (CLEANING CONNECTION)
			4-WAY SOLENOID		EJECTOR
					ANALOG SIGNAL
					DISCRETE SIGNAL
					ANALOG & DISCRETE SIGNALS

	VACUUM PUMP		FLOW SIGHT GLASS
	POSITIVE DISPLACEMENT PUMP W/MANUAL STROKE ADJUSTMENT		SIGHTGLASS (ON VESSEL)
	POSITIVE DISPLACEMENT PUMP W/PNEUMATIC STROKE ADJUSTMENT		LEVEL GAUGE
	POSITIVE DISPLACEMENT PUMP W/ELECTRIC STROKE ADJUSTMENT		AIR SUPPLY
	HEAT EXCHANGER		NITROGEN SUPPLY
	VENT TO ATMOSPHERE		FLOW ELEMENT (ORIFICE PLATE)
	ROTARY COMPRESSOR OR BLOWER		INLINE FLOW INDICATOR (ROTAMETER)
	VENTURI		FLOW ELEMENT (ANNUBAR)
	VORTEX SENSOR		FLOW TOTALIZING INDICATOR (TURBINE METER)
	FLOW NOZZLE		FLOW ELEMENT (MAGNETIC)
	SONIC FLOW SENSOR		FLOW ELEMENT (VENTURI)
	INJECTION SPARGER		
	RO BLOCK OR TUBE		
	DOUBLE SKIN UF CARTRIDGE		

LETTER	FIRST LETTER (S)		SUCCEEDING LETTERS		
	PROCESS OF INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER FLAME		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
C	USERS CHOICE (+)			CONTROL	
D	USERS CHOICE	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT/SENSOR		
F	FLOW RATE	RATIO/FRACTION			
G	USERS CHOICE		GLASS/VIEWING DEVICE		
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRIC)		INDICATE		
J	POWER/TORQUE	SCAN			
K	TIME OR SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTOR	MOMENTARY			MIDDLE/INTERMEDIATE
N	DATA		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
O	USERS CHOICE (+)		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE			INTEGRATE/TOTALIZE
R	RADIATION		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	STARTER
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION (+)	MULTIFUNCTION (+)	MULTIFUNCTION (+)
V	VIBRATION MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT OR FORCE		WELL		
X	MALFUNCTION/FAULT	X AXIS	UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	EVENT STATE OR PRESENCE	Y AXIS		RELAY OR COMPUTE (+)	
Z	POSITION	Z AXIS		DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTERS SYMBOLS.

TRANSDUCER SUBSCRIPTS

A	ANALOG	I	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	PF	PULSE FREQUENCY
F	FREQUENCY	PD	PULSE DURATION
H	HYDRAULIC	R	RESISTANCE
		POT	POTENTIOMETER

— — — — —	ELECTRICAL SIGNAL
— ~ — ~ — ~ —	3 PHASE AC POWER
— o — o — o —	DATALINK
— / — / — / — / —	24VDC SIGNAL
— - / - - - - -	DC POWER

LINE DESIGNATION

PIPE DIAMETER	PIPE MATERIAL
2" - CLS - PVC	
CA	COMPRESSED AIR
CLS	CHLORINE SOLUTION
GST	GROUND STORAGE TANK
NaCLO	SODIUM HYPOCHLORITE
RW	RAW WATER
W	POTABLE WATER
WW	WASTE WATER
FWW	FILTERED WASTE WATER



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DUVAL COUNTY
FLORIDA

SEAL

EB 0008794

FINAL PLANS
ISSUE FOR BIDDING

SCALE

NO SCALE

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY _____ S. RAY
APPROVED BY _____ J. PEQUEEN / J. PEREIRA
CHECKED BY _____ J. DUNCAN
DATE _____ SEPTEMBER 2025

TITLE

ABBREVATIONS &
STANDARD
SYMBOLS

PROJECT NO. 50185819

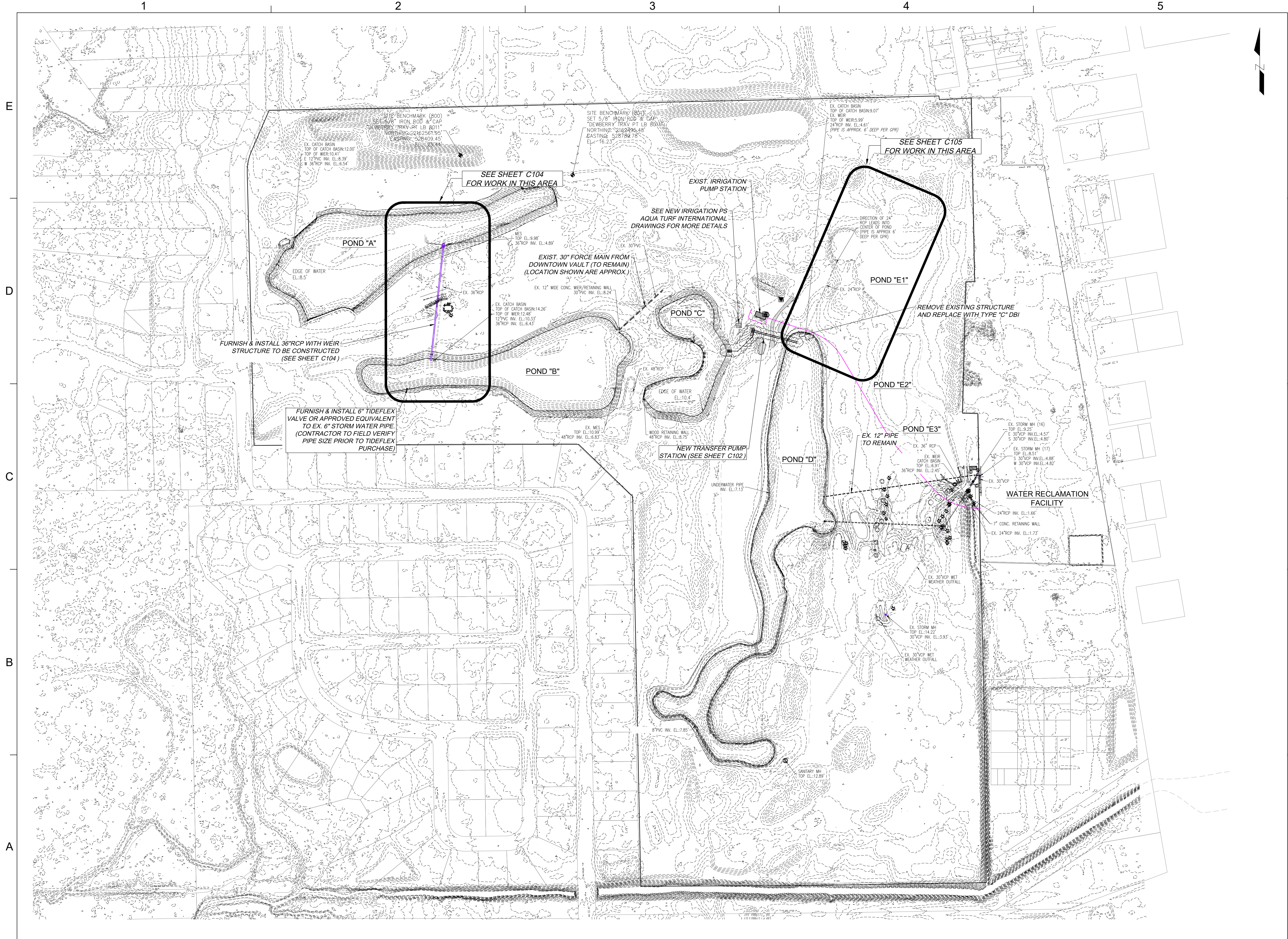
G103

SHEET NO.

OF

OF

September 22, 2025 (4:54:37 EST)
DEWBERRY, DEWBERRY FOOT LOCAL OFFICES/LAND/PROJECTS/CITY OF JACKSONVILLE BEACH/5018488, JAX BEACH GOLF COURSE/POND RETROFIT/CADDINGS/5018488, JBCP MASTER DWG, C101 MASTER SITE AND DRAINAGE PLAN, BY: SRAY



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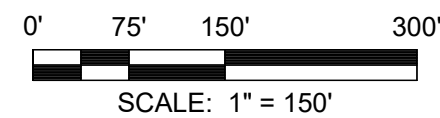
JACKSONVILLE BEACH GOLF
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DRAWN BY _____ S. RAY
APPROVED BY _____ J. PEQUEEN / J. PEREIRA
CHECKED BY _____ J. DUNCAN
DATE _____ SEPTEMBER 2025

TITLE

MASTER SITE
AND DRAINAGE
PLAN

PROJECT NO. 50185819

C101

SHEET NO.

OF

September 22, 2025 (14:29:48 EST)
D:\DEWBERRY\DEWBERRY\ROOT\LOCAL\OFFICES\LAKELAND\PROJECTS\CITY OF JACKSONVILLE BEACH\50184819 GOLF COURSE_IRRIGATION EXPANSION\CADD\DWG_C102_TRANSFER PUMP STATION SITE PLAN.BY:SRAY



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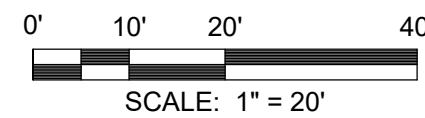
JACKSONVILLE BEACH GOLF
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EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

EB 0008794

FINAL PLANS
ISSUE FOR BIDDING

SCALE



REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY _____ S. RAY
APPROVED BY _____ J. PEQUEEN / J. PEREIRA
CHECKED BY _____ J. DUNCAN
DATE _____ SEPTEMBER 2025

TITLE

TRANSFER PUMP
STATION SITE
PLAN

PROJECT NO. 50185819

C102

SHEET NO. OF

September 22, 2025 (14:49:45 EST)
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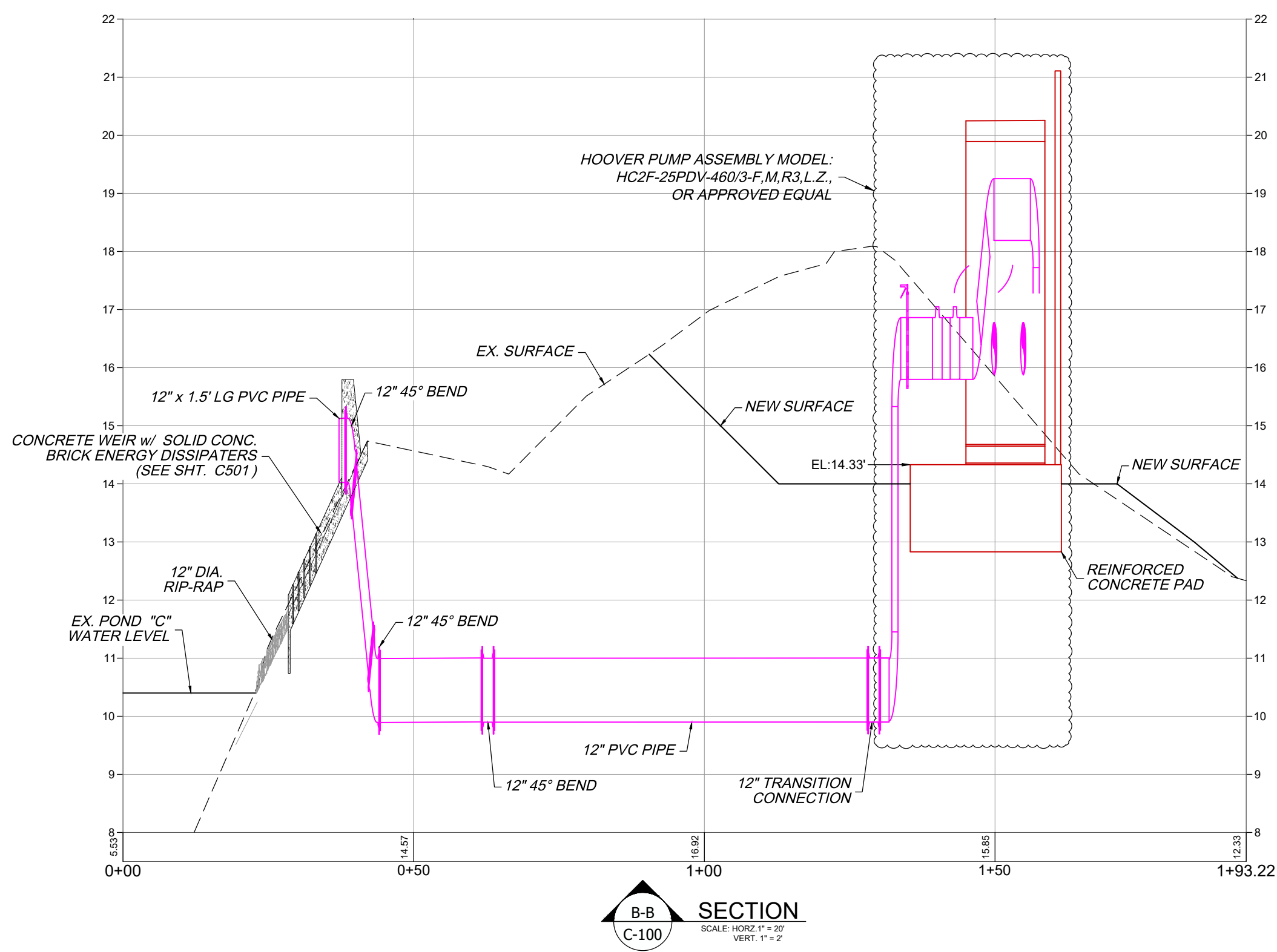
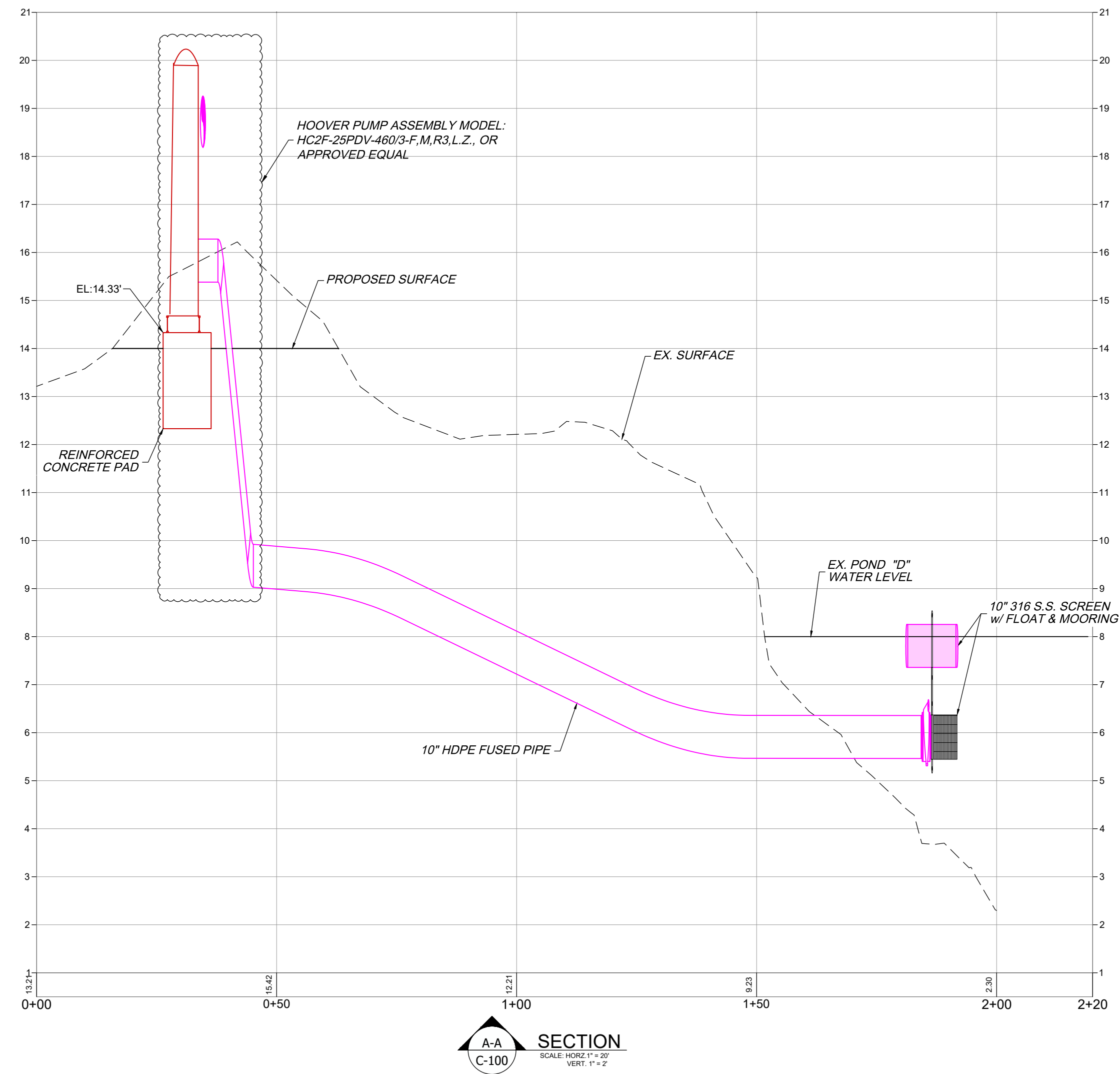
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JACKSONVILLE BEACH GOLF
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FINAL PLANS
ISSUE FOR BIDDING

SCALE

AS SHOWN

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY S. RAY
APPROVED BY J. PEQUEEN / J. PEREIRA
CHECKED BY J. DUNCAN
DATE SEPTEMBER 2025

TITLE

TRANSFER PUMP
STATION PROFILE
VIEW

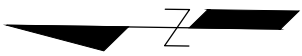
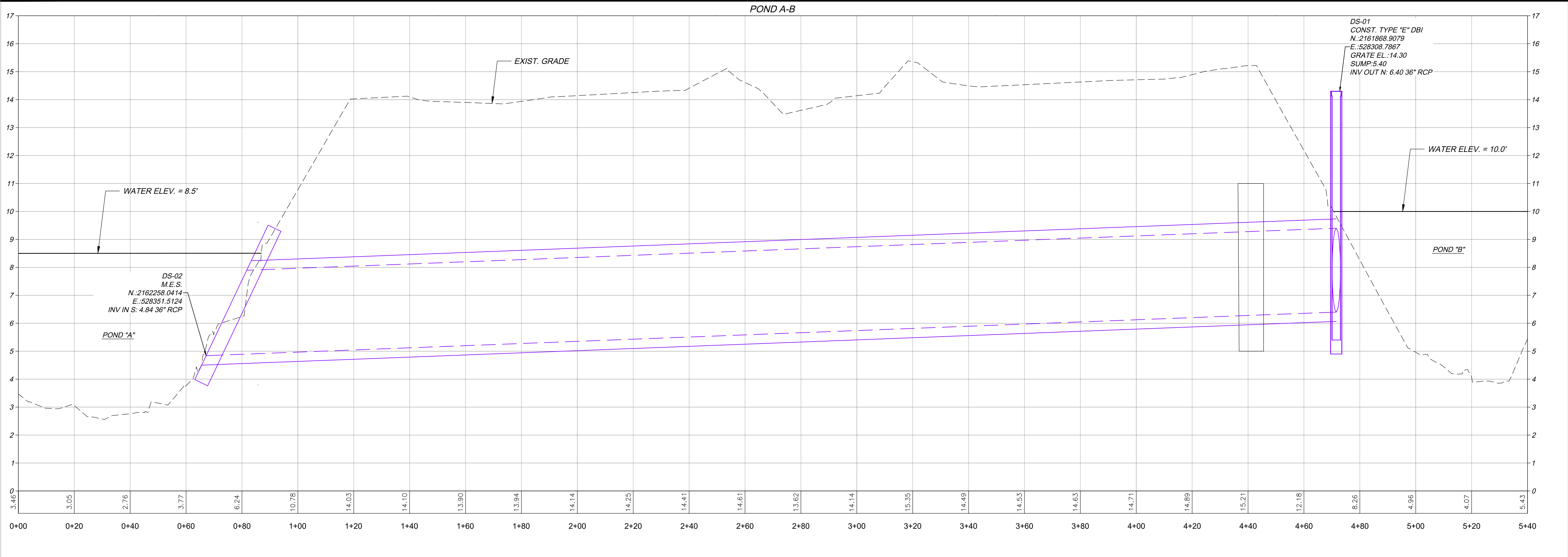
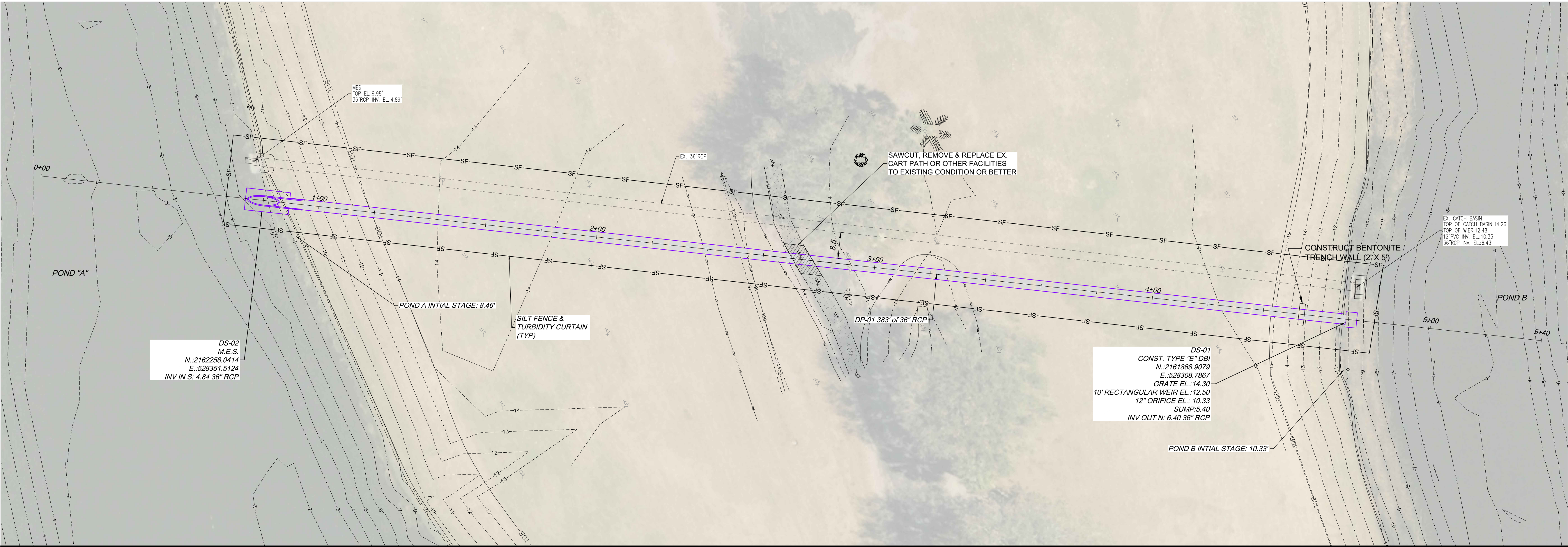
PROJECT NO. 50185819

C103

SHEET NO. OF

September 22, 2025 (4:54:37 EST)
IDEWBERRY DEWBERRY ROOT LOCAL OFFICES/LAKE AND PROJECTS/LOTTY OF JACKSONVILLE BEACH/4501/8488/LAX BEACH GOLF COURSE/POND RETROFIT/CADDIS/501/8488/LBGP MASTER DWG. C104: POND B TO POND A CONNECTION BY: SRAY

E
D
C
B
A



Dewberry Engineers Inc.
200 West Forsyth St, Suite 1100
Jacksonville, FL 32202
904.332.8601

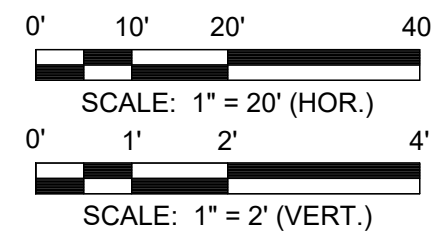
JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

EB 0008794

FINAL PLANS
ISSUE FOR BIDDING

SCALE



REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY _____ S. RAY
APPROVED BY _____ J. PEQUEEN / J. PEREIRA
CHECKED BY _____ J. DUNCAN
DATE _____ SEPTEMBER 2025

TITLE

POND B TO POND
A CONNECTION

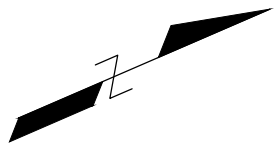
PROJECT NO. 50185819

C104

SHEET NO.

OF

September 22, 2025 (15:51:27 EST)
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Jacksonville, FL 32202
904.332.8601

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CHECKED BY _____ J. DUNCAN
DATE _____ SEPTEMBER 2025

TITLE

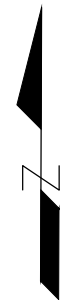
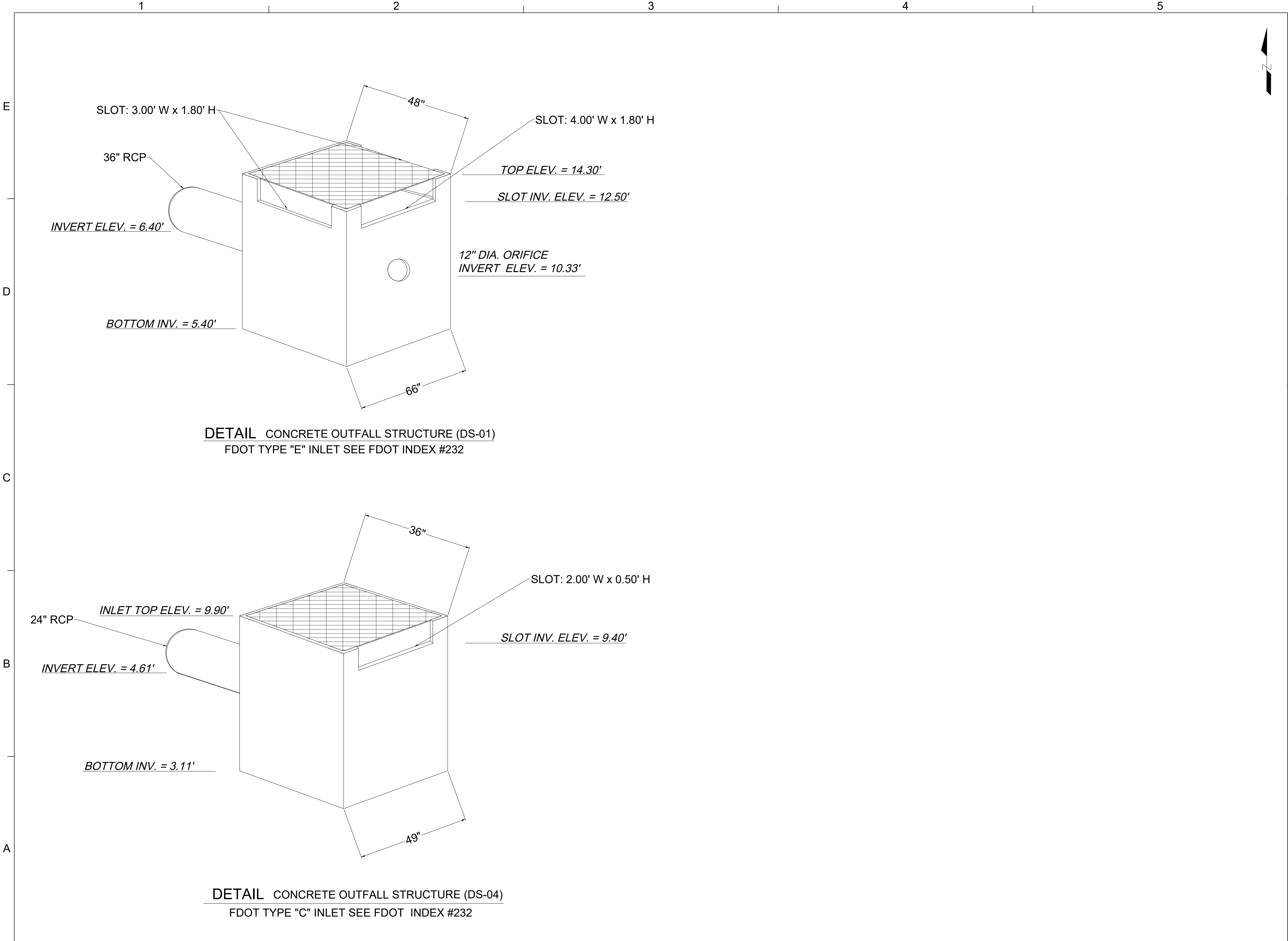
POND D TO POND
E1 CONNECTION

PROJECT NO. 50185819

C105

SHEET NO. OF

September 22, 2025 (4:54:27 EST)
J:\DEWBERRY\DEWBERRY\ROOT\LOCAL\OFFICES\LAKELAND\PROJECTS\LOTTY OF JACKSONVILLE BEACH\5018M488.LAK BEACH GOLF COURSE\POND RETROFIT\CAD\DWG\5018M488.LBGP MASTER.DWG C106 POND STRUCTURE DETAILS BY: SRAY



Dewberry Engineers Inc.
200 West Forsyth St, Suite 1100
Jacksonville, FL 32202
904.332.8601

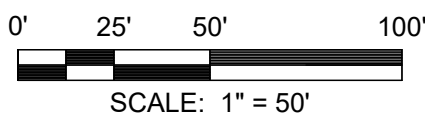
JACKSONVILLE BEACH GOLF
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EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

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EB 0008794

FINAL PLANS
ISSUE FOR BIDDING

SCALE



REVISIONS

NO.	DESCRIPTION	DATE
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DRAWN BY S. RAY
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CHECKED BY J. DUNCAN
DATE SEPTEMBER 2025

TITLE

POND
STRUCTURE
DETAILS

PROJECT NO. 50185819

C106

SHEET NO. OF

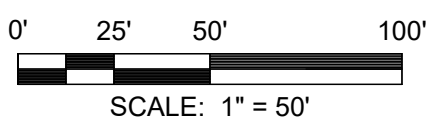
JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
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SEAL

EB 0008794

FINAL PLANS ISSUE FOR BIDDING

SCALE



REVISIONS

[illegible]

NO.	DESCRIPTION	DATE
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DRAWN BY _____ S. RAY

APPROVED BY J. PEQUEEN / J. PEREIRA

CHECKED BY _____ J. DUNCAN

DATE SEPTEMBER 2025

TITLE

SITE PLAN - ELECTRICAL CONDUIT

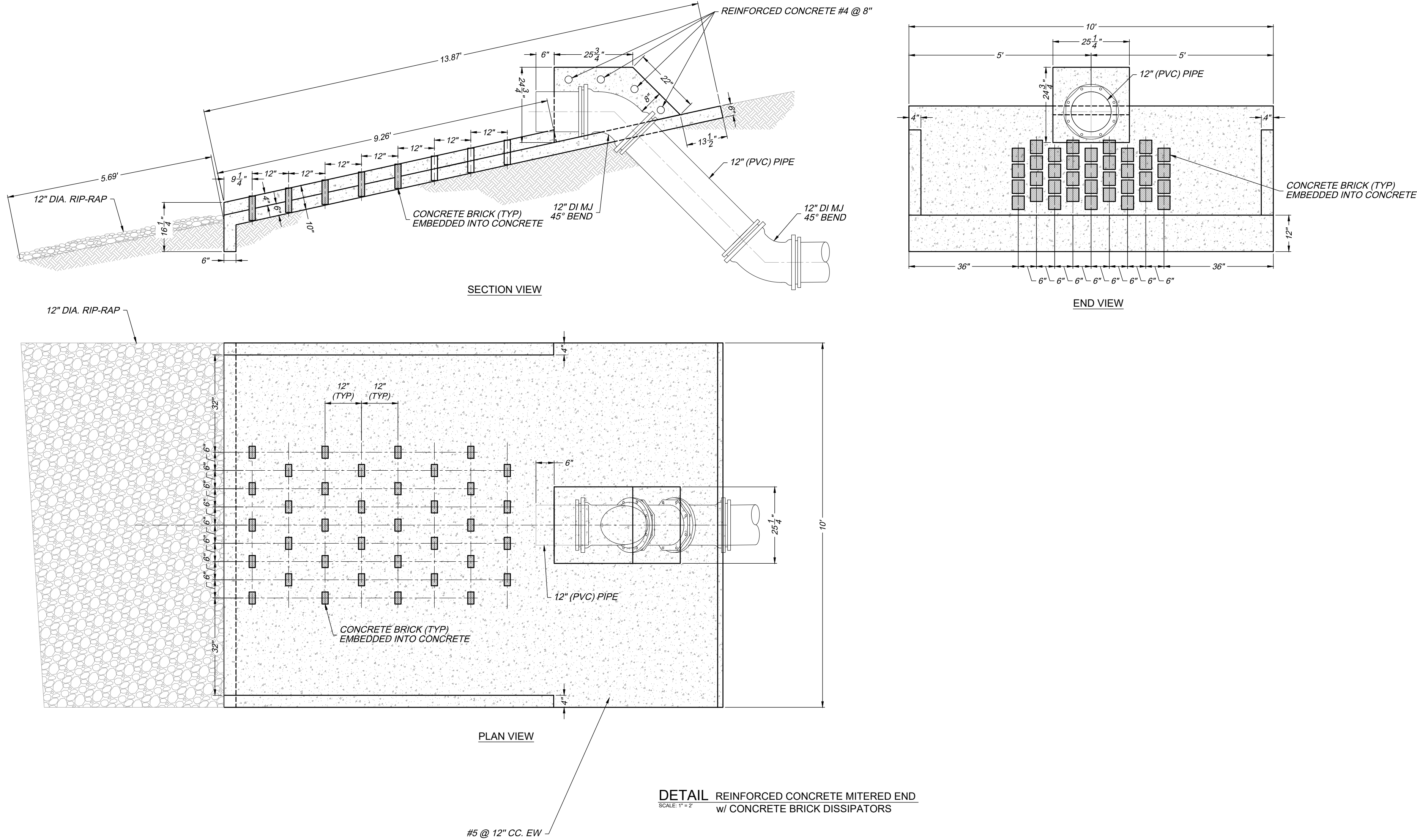
PROJECT NO.	50185819
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C107

SHEET NO. _____ OF _____



September 22, 2025 (14:46:48 EST)
DEWBERRY DEWBERRYROOTLOCALOFFICESLAKELANDPROJECTS/CITY OF JACKSONVILLE BEACH/50184819 GOLF COURSE_ IRRIGATION EXPANSION/CADDWG3_REFERENCE/50184819 DESIGN_STATION_PUMPING & PIPING DWG. C501 TRANSFER PUMP DISCHARGE DETAIL BY SRAY



Dewberry Engineers Inc.
200 West Forsyth St, Suite 1100
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904.332.8601

JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

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FINAL PLANS
ISSUE FOR BIDDING

SCALE

AS SHOWN

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY _____ S. RAY
APPROVED BY _____ J. PEQUEEN / J. PEREIRA
CHECKED BY _____ J. DUNCAN
DATE _____ SEPTEMBER 2025

TITLE

TRANSFER PUMP
DISCHARGE
DETAIL

PROJECT NO. 50185819

C501

SHEET NO.

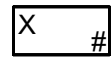
OF

FILE: \\DWBERRY\DEWBERRY\ROOT\LOCAL\OFFICES\BALE\PROJECTS\501048\SCADE\ELECTRICAL\501048-1501.DWG, SAVED BY: ABBEY, SAVE DATE: 9/22/2025, 1:43 PM,
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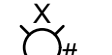
ELECTRICAL LEGEND:

LIGHTING:

X DENOTES FIXTURE TYPE (TYP.)
SEE FIXTURE SCHEDULE
DENOTES CIRCUIT NUMBER (TYP.)



RECTANGULAR FIXTURE



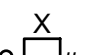
CEILING-MOUNTED FIXTURE



WALL-MOUNTED FIXTURE



WALL-MOUNTED EXIT SIGN:
SHADED PORTION DENOTES SIGN FACE



POLE-MOUNTED FIXTURE

RECEPTACLES:

X DENOTES RECEPTACLE TYPE (TYP.):
GFCI: GROUND FAULT CIRCUIT INTERRUPT
UPS: UNINTERRUPTIBLE POWER SUPPLY
WPCR: WEATHERPROOF CORROSION RESISTANT
DENOTES CIRCUIT NUMBER (TYP.)



DUPLEX RECEPTACLE

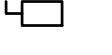
SWITCHES



WALL SWITCH:
X DENOTES TYPE:
NO SUBSCRIPT: SINGLE-POLE SWITCH
3: 3-WAY SWITCH
4: 4-WAY SWITCH
M: MANUAL MOTOR STARTER
DENOTES CIRCUIT NUMBER



COMBINATION MOTOR STARTER



DISCONNECT SWITCH

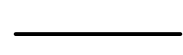


FUSED DISCONNECT SWITCH



LOCAL CONTROL STATION

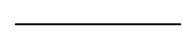
WIRING



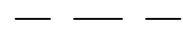
PROPOSED



EXISTING



CONDUIT EXPOSED



CONDUIT UNDERGROUND



CONDUIT HOMERUN

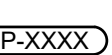
MISC PLAN VIEW SYMBOLS



EQUIPMENT CONNECTION



INSTRUMENT TAG:
X DENOTES INSTRUMENT TYPE
DENOTES INSTRUMENT NUMBER



CONDUIT TAGS:
P DENOTES POWER
C DENOTES CONTROL
I DENOTES INSTRUMENTATION
XXXX DENOTES CONDUIT ID

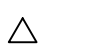


THERMOSTAT



HORN/LIGHT DEVICE

EQUIPMENT/DEVICE LOCATION SYMBOLS



LOCATED IN FIELD

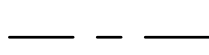
GROUNDING



GROUND RODS:
LEFT: BURIED
RIGHT: IN TESTWELL



CAD WELD TERMINATION



#4/0 BCC

SINGLE-LINE DIAGRAMS

TRANSFORMER ID
45KVA
480-120/208V



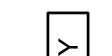
TRANSFORMER



3P/4W
DRY TRANS



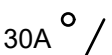
MOTOR & TYP. ADDITIONAL DEVICES:
TSH: TEMPERATURE SWITCH
MSH: MOTOR SPACE HEATER
CF: COOLING FAN
TE: TEMPERATURE ELEMENT
ME: MOISTURE DETECTOR



INSTRUMENT TAG:
X DENOTES INSTRUMENT TYPE
Y DENOTES INSTRUMENT NUMBER



100A FUSE



30A 3P
DISCONNECT SWITCH



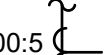
100 AF
100 AT
LOW-VOLTAGE MOLDED
CASE CIRCUIT BREAKER



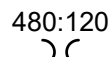
30A MCP
MOTOR CIRCUIT PROTECTOR



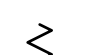
GROUND



600:5
(3)
CT:
NUMBERS DENOTE CT WINDING
RATIO AND CT QUANTITY



480:120
(2)
PT:
NUMBERS DENOTE PT WINDING
VOLTAGES AND PT QUANTITY



LEFT: RESISTOR
RIGHT: LINE REACTOR:
#% DENOTES IMPEDANCE



SPD
XXXKA
SURGE PROTECTIVE DEVICE



30 A MCP
FVNR STARTER:
X DENOTES NEMA SIZE



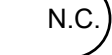
250 A MCP
VFD



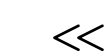
800AF
800AP
800AT
LSIG CTR
LOW-VOLTAGE POWER CIRCUIT BREAKER:
LEFT: FIXED-MOUNT
RIGHT: DRAWOUT
E.O. DENOTES ELECTRICALLY OPERATED
LSIG DENOTES INSTALLED TRIP FUNCTIONS:
L DENOTES LONG-TIME
S DENOTES SHORT-TIME
I DENOTES INSTANTANEOUS
G DENOTES GROUND FAULT
CTR DENOTES BREAKER-SPECIFIC CT AND RATIOS



N.C.

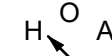


N.C.



DRAW-OUT ELEMENT

ELEMENTARY CONTROL SCHEMATICS



3-POSITION SELECTOR SWITCH:
HOA DENOTES HAND/OFF/AUTO
LOR DENOTES LOCAL/OFF/REMOTE
FOR DENOTES FORWARD/OFF/REVERSE



MUSHROOM HEAD EMERGENCY
STOP PUSHBUTTON SWITCH N.C.
MAINTAINED:
TEXT DENOTES LEGEND PLATE



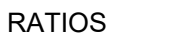
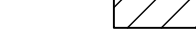
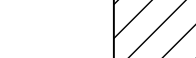
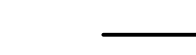
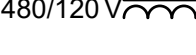
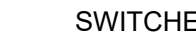
THERMAL OVERLOAD RELAY



NOTATION LEGEND:
NO/NC: NORMALLY OPEN/CLOSED
RO/RC: RISE-TO-OPEN/CLOSE
FO/FC: FALL-TO-OPEN/CLOSE
TO/TC: TIME-OPEN/CLOSE

CONTACTS:
TEXT DENOTES COIL ID

SWITCHES:
TEXT DENOTES TAG NUMBER



ABBREVIATIONS:

AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AT	AMPERE TRIP
BCC	BARE COPPER CONDUCTOR
BKR	BREAKER
BPS	BOOSTER PUMP STATION
CJB	CONTROL JUNCTION BOX
CMPR	COMPRESSOR
CMS	COMBINATION MOTOR STARTER
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
CV	CHECK VALVE
DB	DUCTBANK
DOAS	DEDICATED OUTDOOR AIR SYSTEM
DSW	DISCONNECT SWITCH
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EGH	ELECTRICAL HANDHOLE
ETU	ELECTRONIC TRIP UNIT
EX	EXISTING
FE	FLOW ELEMENT
FIT	FLOW INDICATING TRANSMITTER
FVNR	FULL VOLTAGE NON-REVERSING
G	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GST	GROUND STORAGE TANK
HOA	HAND-OFF-AUTO
HPT	HYDROPNEUMATIC TANK
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
ISO	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
JBX	JUNCTION BOX
L	LOUVER
LCS	LOCAL CONTROL STATION
LP	LIGHTING PANEL
LS	LEVEL SWITCH/LIMIT SWITCH
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH-HIGH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW-LOW
MANUF	MANUFACTURER
MCP	MOTOR CIRCUIT PROTECTOR
MSH	MOTOR SPACE HEATER
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MWTS	MOTOR WINDING TEMPERATURE SWITCH
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NTS	NOT TO SCALE
OL	OVERLOAD
PC	PHOTOCELL
PIT	PRESSURE INDICATING TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PP	POWER PANEL
PS	PRESSURE SWITCH, PUMP STATION
PSH	PRESSURE SWITCH HIGH
PSL	PRESSURE SWITCH LOW
PT	POTENTIAL TRANSFORMER/PRESSURE TRANSDUCER
RAS	RETURN ACTIVATED SLUDGE
RECP	RECEPTACLE
RTU	REMOTE TELEMETRY UNIT
RVSS	REDUCED VOLTAGE SOFT STARTER
S.E.	SERVICE ENTRANCE
SP C.	SPARE CONDUIT
SPD	SURGE PROTECTIVE DEVICE
SSIU	SPLIT SYSTEM INDOOR UNIT
SSOU	SPLIT SYSTEM OUTDOOR UNIT
SST	STAINLESS STEEL
SV	SOLENOID VALVE

TSP	TWISTED SHIELDED PAIR
TX	TRANSFORMER
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DRIVE
WAS	WASTE ACTIVATED SLUDGE
WPCR	WEATHER PROOF CORROSION RESISTANT
WTP	WATER TREATMENT PLANT
WWTP	WASTEWATER TREATMENT PLANT
XFMR	TRANSFORMER

GENERAL NOTES:

- THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS REQUIRED FOR THE COMPLETE SYSTEM. THEY SHOULD HOWEVER BE FOLLOWED AS CLOSELY AS POSSIBLE IN THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT. ALL DIMENSIONS SHALL BE CHECKED AT THE BUILDING AND ALL STRUCTURAL AND FINISH CONDITIONS INVESTIGATED. THE CONTRACTOR SHALL ARRANGE HIS WORK TO MEET THESE CONDITIONS AND PROVIDED SUCH EQUIPMENT AND ACCESSORIES AS MAY BE REQUIRED.
- PROPERLY SUPPORT ALL WORK AND EQUIPMENT INSTALLED UNDER THIS CONTRACT PLUMB AND PARALLEL. STUDY ALL GENERAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, SHOP DRAWINGS, AND CATALOG DATA TO DETERMINE HOW EQUIPMENT, ACCESSORIES, PIPING, FIXTURES, AND RELATED ITEMS ARE TO BE SUPPORTED, MOUNTED, OR SUSPENDED. PROVIDE ALL BOLTS, INSERTS, PIPE STANDS, BRACKETS, STRUCTURAL SUPPORTS, AND ACCESSORIES FOR PROPER SUPPORT OF EQUIPMENT FURNISHED UNDER THIS CONTRACT. COORDINATE THE ELECTRICAL WORK WITH ALL OTHER CONTRACTORS BEFORE BEGINNING WORK TO ENSURE THAT THE ELECTRICAL WORK DOES NOT INTERFERE WITH OTHER WORK.
- NOTIFY THE ENGINEER IN WRITING IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCY OR POINTS OF CONFLICT IN THE DRAWINGS OR THE SPECIFICATIONS.
- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL UNDERGROUND CONCRETE ENCASED ELECTRICAL CONDUITS SHALL BE PER STANDARD DETAILS.
- THE INSTALLATION OF ALL CONCRETE ENCASED ELECTRICAL CONDUITS SHALL COMPLY WITH ACI 318, SECTION 6.3. CONTRACTOR SHALL SUPPLY EXPANSION JOINT FITTINGS AS REQUIRED FOR THERMAL EXPANSION AND DEFLECTION.
- BOND ALL CONCRETE ENCASED GROUND CONDUCTORS TO EXISTING GROUND CONDUCTORS IN ALL MANHOLES, PULL BOXES, CABLE TRAYS, AND SIMILAR LOCATIONS WHERE APPLICABLE.
- UNLESS OTHERWISE SPECIFIED OR NOTED, ALL WALL

JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

AURORA M. KIRBY, P.E. 92981

FINAL PLANS
ISSUE FOR BIDDING

SCALE



REVISIONS

[illegible]

NO.	DESCRIPTION	DATE
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DRAWN BY AMK

APPROVED BY AMK

CHECKED BY _____ BRW

DATE SEPTEMBER 2025

TITLE _____

ELECTRICAL SITE PLAN

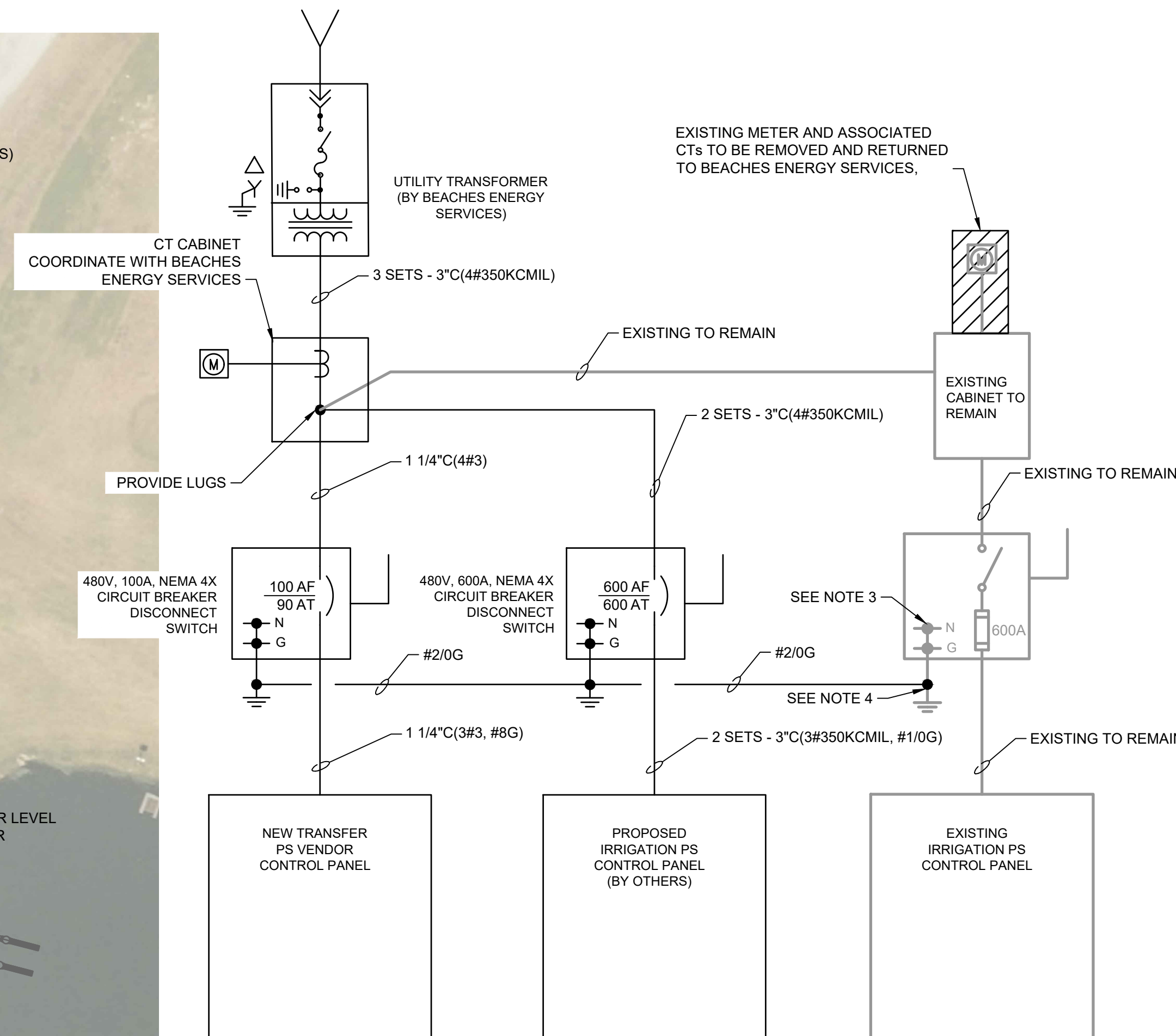
PROJECT NO.	50184819
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E-101

SHEET NO. _____ OF _____



1 SITE PLAN



2 RISER DIAGRAM

NEW TRANSFER PUMP STATION LOAD CALC		
LOAD NAME	CONNECTED LOAD	DEMAND LOAD
PUMP 1	25HP; 34A	25HP; 34A
PUMP 2	25HP; 34A	25HP; 34A
MISC. LOAD	10A	10A
+25% LARGEST MOTOR	8.5A	8.5A
TOTAL	86.5A; 71.9KVA	86.5A; 71.9KVA

EXISTING IRRIGATION PUMP STATION LOAD CALC		
LOAD NAME	CONNECTED LOAD	DEMAND LOAD
PUMP 1	75HP; 96A	75HP; 96A
PUMP 2	75HP; 96A	75HP; 96A
PUMP 3	75HP; 96A	75HP; 96A
25KVA TRANSFORMER	30.1A	30.1A
+25% LARGEST MOTOR	24A	24A
TOTAL	342.1A; 284.7KVA	342.1A; 284.7KVA

PROPOSED IRRIGATION PUMP STATION LOAD CALC		
LOAD NAME	CONNECTED LOAD	DEMAND LOAD
PUMP 1	75HP; 96A	75HP; 96A
PUMP 2	75HP; 96A	75HP; 96A
PUMP 3 (FUTURE)	75HP; 96A	75HP; 96A
PUMP 4 (FUTURE)	75HP; 96A	75HP; 96A
SUSTAIN PUMP	5HP; 7.6A	5HP; 7.6A
MISC. LOAD	6A	6A
+25% LARGEST MOTOR	24A	24A
TOTAL	421.6A; 350.5KVA	421.6A; 350.5KVA

SERVICE LOAD CALC		
LOAD NAME	CONNECTED LOAD	DEMAND LOAD
EXISTING IRRIGATION PS	342.1A	342.1A
NEW TRANSFER PS	86.5A	86.5A
PROPOSED IRRIGATION PS	421.6A	421.6A
TOTAL	850.2A; 706.8KVA	850.2A; 706.8KVA

NOTES:

1. EXISTING CONDITIONS ARE BASED ON INFORMATION OBTAINED FROM PREVIOUS CONSTRUCTION DOCUMENTS AND INFORMAL FIELD OBSERVATION AND SHALL NOT BE CONSTITUTED AS "AS-BUILT." THE CONTRACTOR SHALL FIELD-VERIFY EXISTING CONDITIONS BEFORE CONSTRUCTION.
2. CONTRACTOR SHALL COORDINATE ALL OUTAGES OF THE EXISTING IRRIGATION PUMP STATION WITH THE OWNER. CONTRACTOR SHALL PROVIDE TEMPORARY POWER TO THE EXISTING IRRIGATION PUMP STATION FOR ALL OUTAGES LASTING 12 HOURS OR MORE.
3. CONFIRM NEUTRAL TO GROUND BOND IN EXISTING SERVICE DISCONNECT SWITCH. PROVIDE IF NOT EXISTING.
4. BOND TO EXISTING GROUNDING. IF NONE EXISTS THEN PROVIDE NEW GROUND COUNTERPOISE.

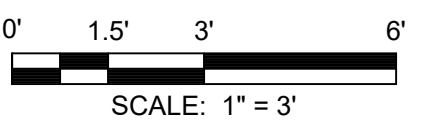
JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

AURORA M. KIRBY, P.E. 92981

FINAL PLANS
ISSUE FOR BIDDING

SCALE



REVISIONS

[illegible]

NO.	DESCRIPTION	DATE
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DRAWN BY AMK

APPROVED BY AMK

CHECKED BY _____ BRW

DATE SEPTEMBER 2025

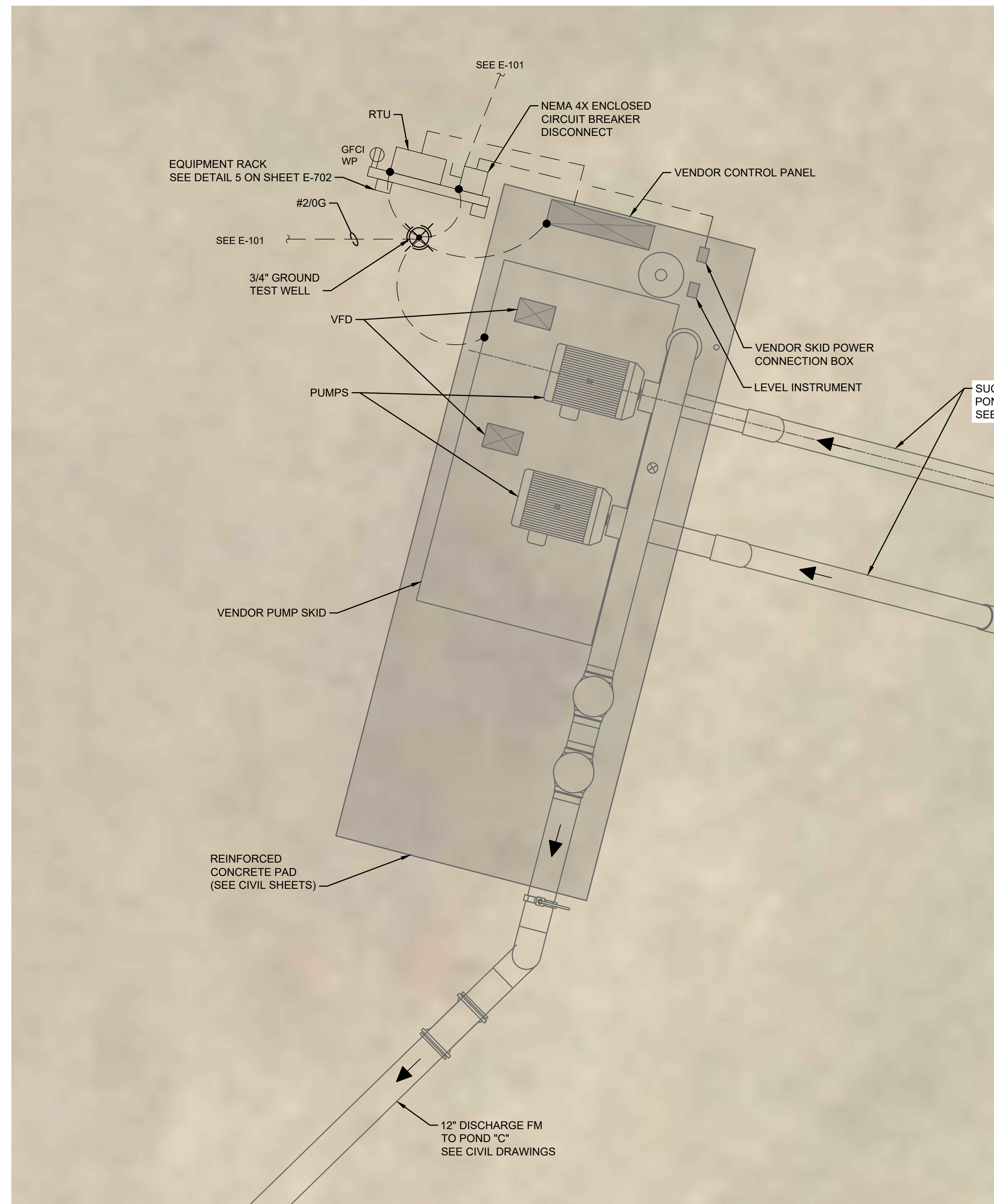
TITLE

ELECTRICAL ENLARGED SITE PLAN

PROJECT NO. 50184819

E-102

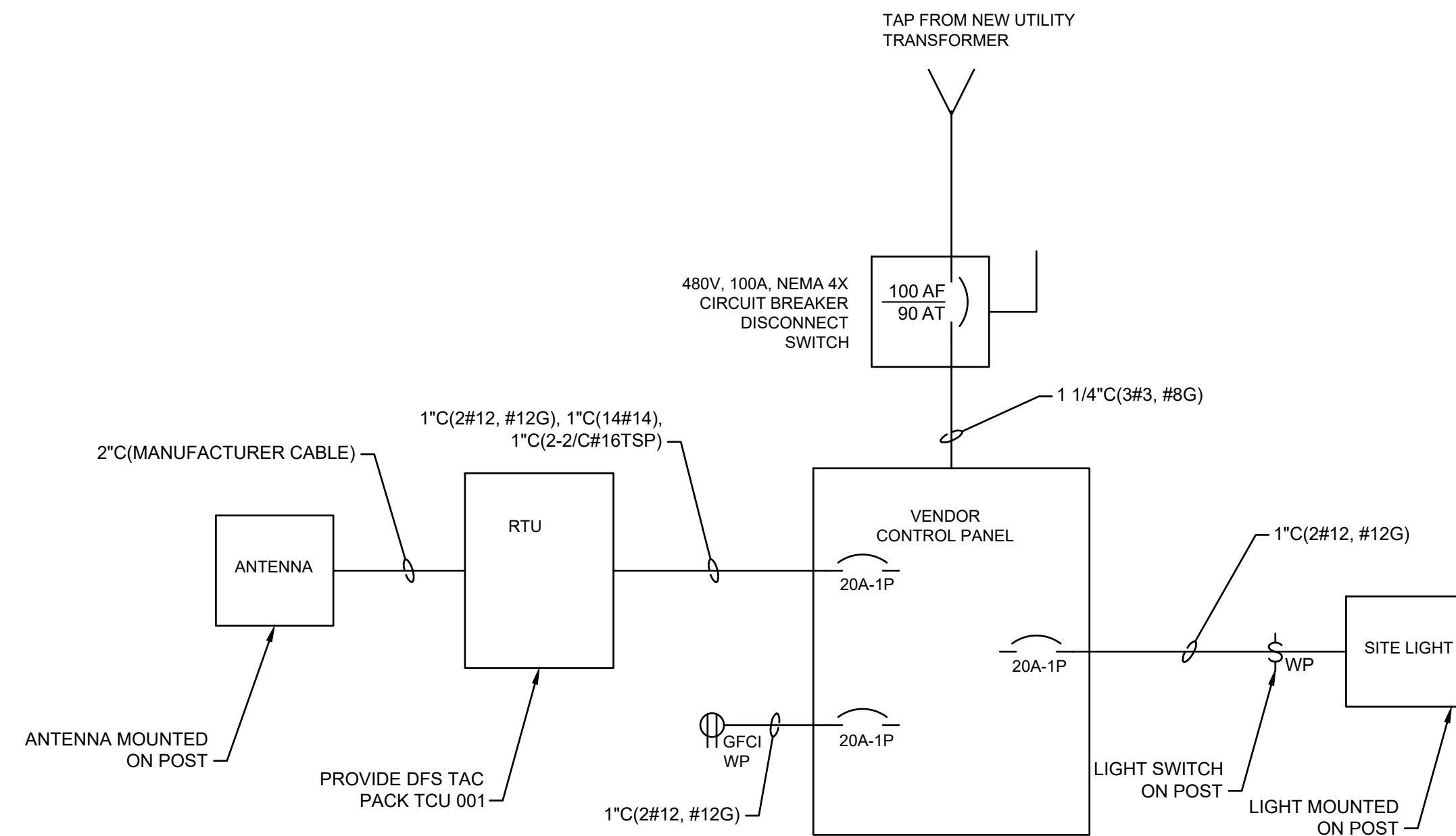
SHEET NO. _____ OF _____



1 ENLARGED PS PLAN

GENERAL NOTES:

1. WIRING ON VENDOR PROVIDED SKID SHALL BE BY VENDOR. CONTRACTOR SHALL COORDINATE WITH VENDOR FOR ANY TERMINATIONS REQUIRED AT SKID MOUNTED EQUIPMENT.



2 RISER DIAGRAM

DESCRIPTION	TAG	TYPE	SIGNAL	RANGE / OFF STATUS	UNITS / ON STATUS	FIELD WIRING DATA		NOTES
						FIELD ISA SIGNAL SOURCE / DESIGNATION	CONTROL PANEL	
PUMP NO. 1 RUNNING	Y1R-1	DI	HARDWIRE	STOPPED	RUNNING	VENDOR CP	RTU	
PUMP NO. 1 FAULT	YA-1	DI	HARDWIRE	NORMAL	ALARM	VENDOR CP	RTU	
PUMP NO.1 START/STOP COMMAND	YC-1	DO	HARDWIRE	STOP	START	VENDOR CP	RTU	
PUMP NO. 2 RUNNING	Y1R-2	DI	HARDWIRE	STOPPED	RUNNING	VENDOR CP	RTU	
PUMP NO. 2 FAULT	YA-2	DI	HARDWIRE	NORMAL	ALARM	VENDOR CP	RTU	
PUMP NO.2 START/STOP COMMAND	YC-2	DO	HARDWIRE	STOP	START	VENDOR CP	RTU	
TRANSFER PS COMMON FAULT	YA-3	DI	HARDWIRE	NORMAL	ALARM	VENDOR CP	RTU	
POND "C" LEVEL	L1R-1	AI	HARDWIRE	9-13	FEET	VENDOR CP	RTU	CONFIRM RANGE PRIOR TO PROGRAMMING, INTEGRATION, AND STARTUP.
POND "D" LEVEL	L1R-2	AI	HARDWIRE	5-9.5	FEET	VENDOR CP	RTU	CONFIRM RANGE PRIOR TO PROGRAMMING, INTEGRATION, AND STARTUP.

3 I/O LIST

September 12, 2025 (16:23:26 EST)
IDEWBERRY.DEWBERRY.FOOT\LOCAL\OFFICES\RALEIGH\PROJECTS\50184819\ACADEMICAL\ELECTRICAL\50184819\60486.JPG# MASTER DWG C107 SITE PLAN - ELECTRICAL CONDUIT BY: AKIRBY

E
D
C
B
A

1

2

3

4

5



GENERAL NOTES:

1. PROVIDE MINIMUM 100' OF COILED FIBER IN EACH PULL BOX.
2. COIL, PROTECT, AND PREPARE FIBER FOR FUTURE SPLICING AND TERMINATION PER MANUFACTURER RECOMMENDATIONS.



Dewberry Engineers Inc.
200 West Forsyth St, Suite 1100
Jacksonville, FL 32202
904.332.8601

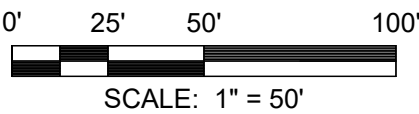
JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

AURORA M. KIRBY, P.E. 92981

FINAL PLANS
ISSUE FOR BIDDING

SCALE



REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY A. KIRBY

APPROVED BY A. KIRBY

CHECKED BY B. WASON

DATE SEPTEMBER 2025

TITLE

ELECTRICAL
FIBER CONDUIT
PLAN

PROJECT NO. 50184819

E-103

SHEET NO.

OF

JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

AURORA M. KIRBY, P.E. 9298

FINAL PLANS
ISSUE FOR BIDDING

SCALE

REVISIONS

[illegible]

DRAWN BY A. KIRBY
APPROVED BY A. KIRBY
CHECKED BY B. WASON
DATE SEPTEMBER 2025

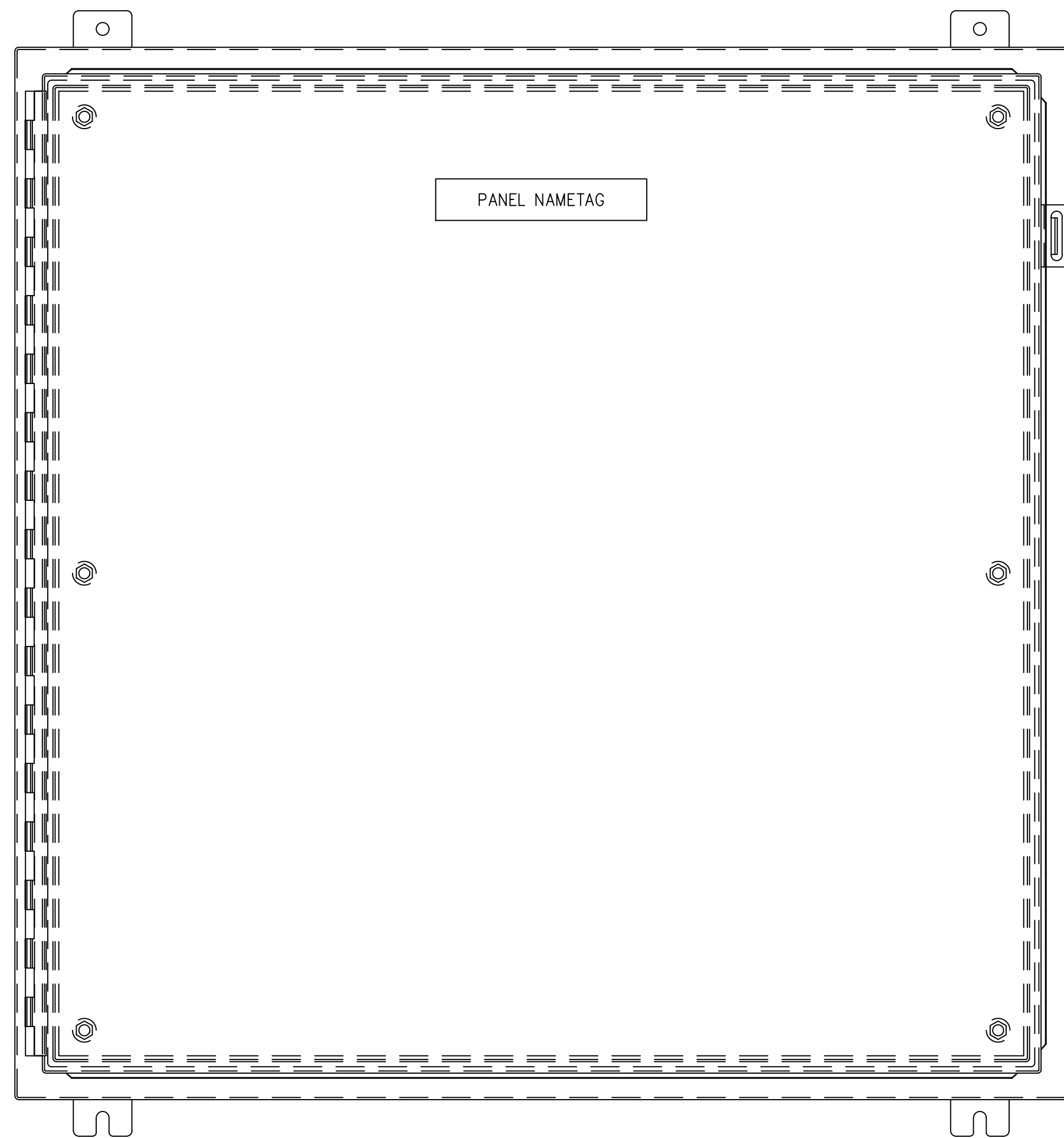
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ELECTRICAL RTU LAYOUT

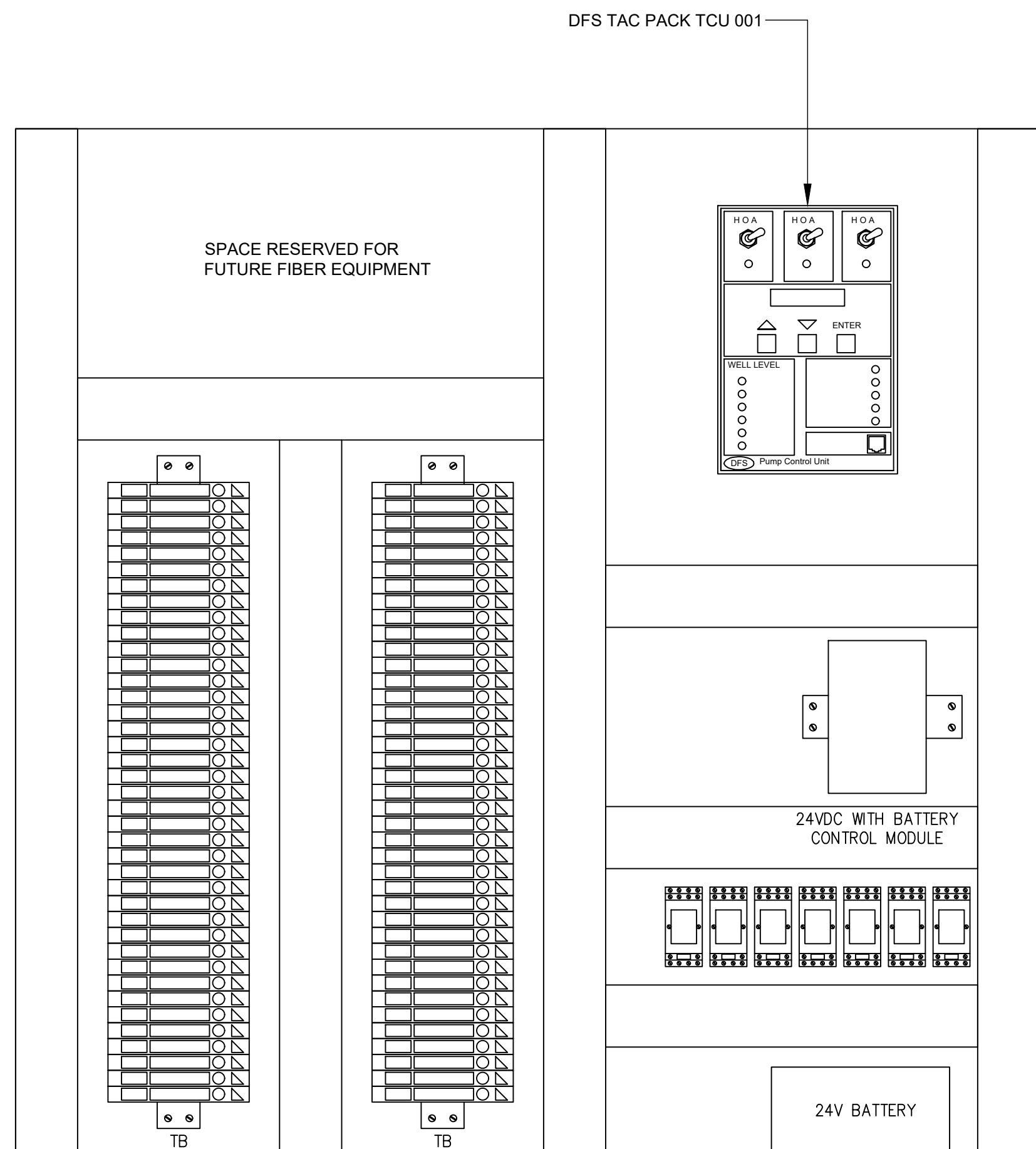
PROJECT NO.	50184819
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E-601

SHEET NO. _____ OF _____



1 RTU PANEL



NOTE:

1. OUTER DOOR REMOVED TO SHOW DEADFRONT LAYOUT
2. NEMA TYPE 4X ENCLOSURE
3. 36" H X 30" W X 12"D MINIMUM ENCLOSURE SIZE

2 SUBPLATE LAYOUT

JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

AURORA M. KIRBY, P.E. 9298

FINAL PLANS
ISSUE FOR BIDDING

SCALE

REVISIONS

[illegible]

NO.	DESCRIPTION	DATE
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DRAWN BY A. KIRBY

APPROVED BY: A. KIRBY

CHECKED BY B. WASON

DATE SEPTEMBER 2025

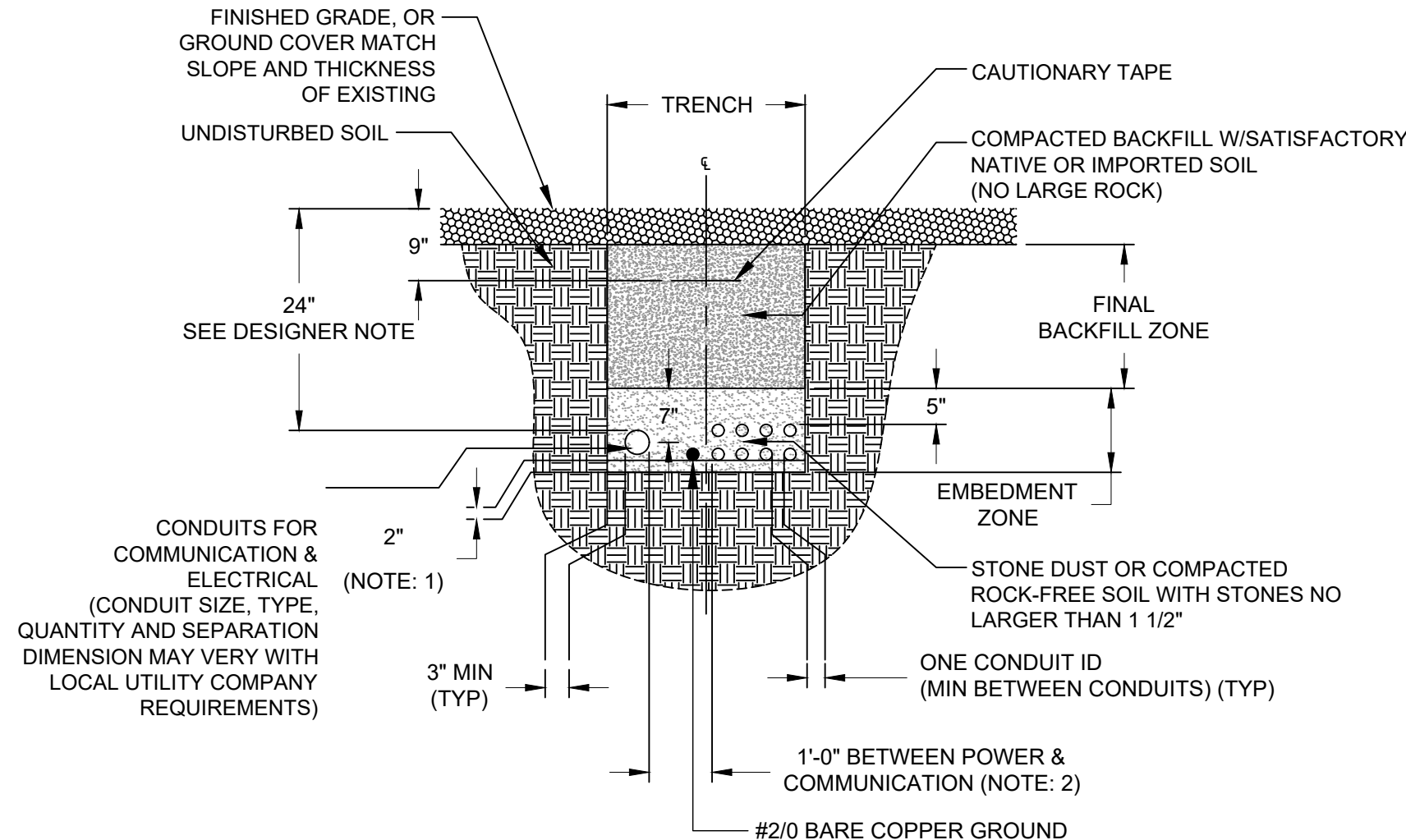
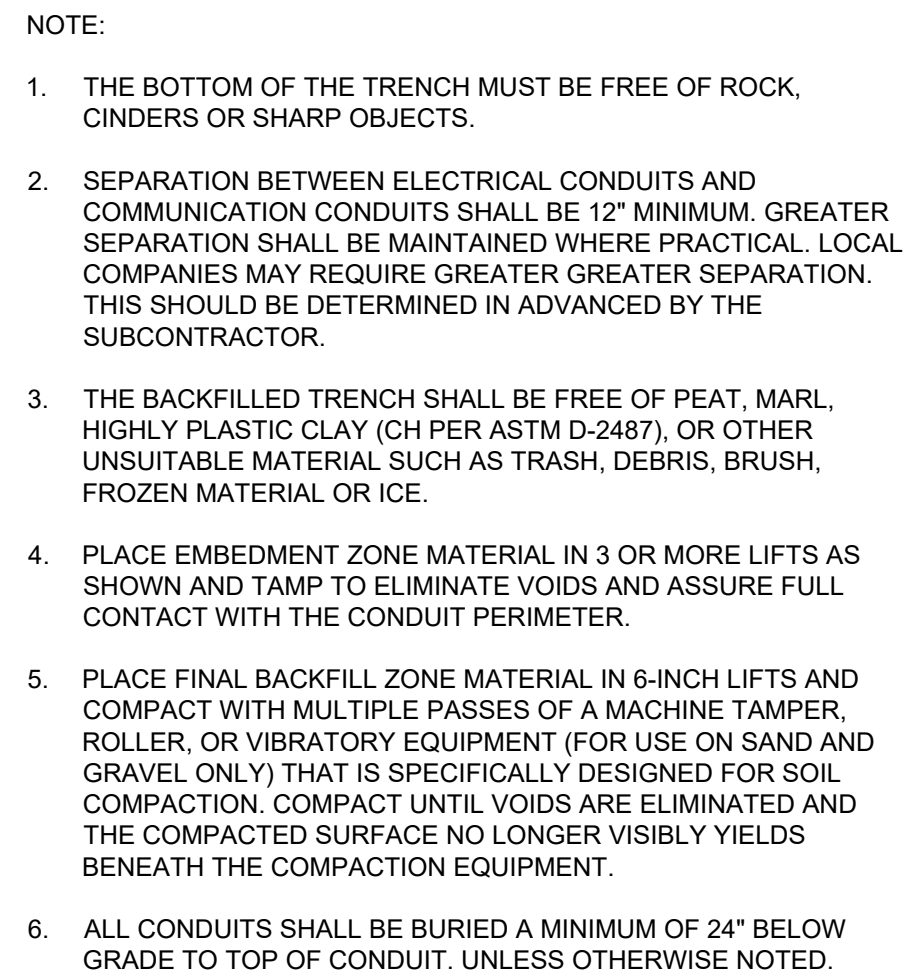
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ELECTRICAL DETAILS

PROJECT NO. 50184819

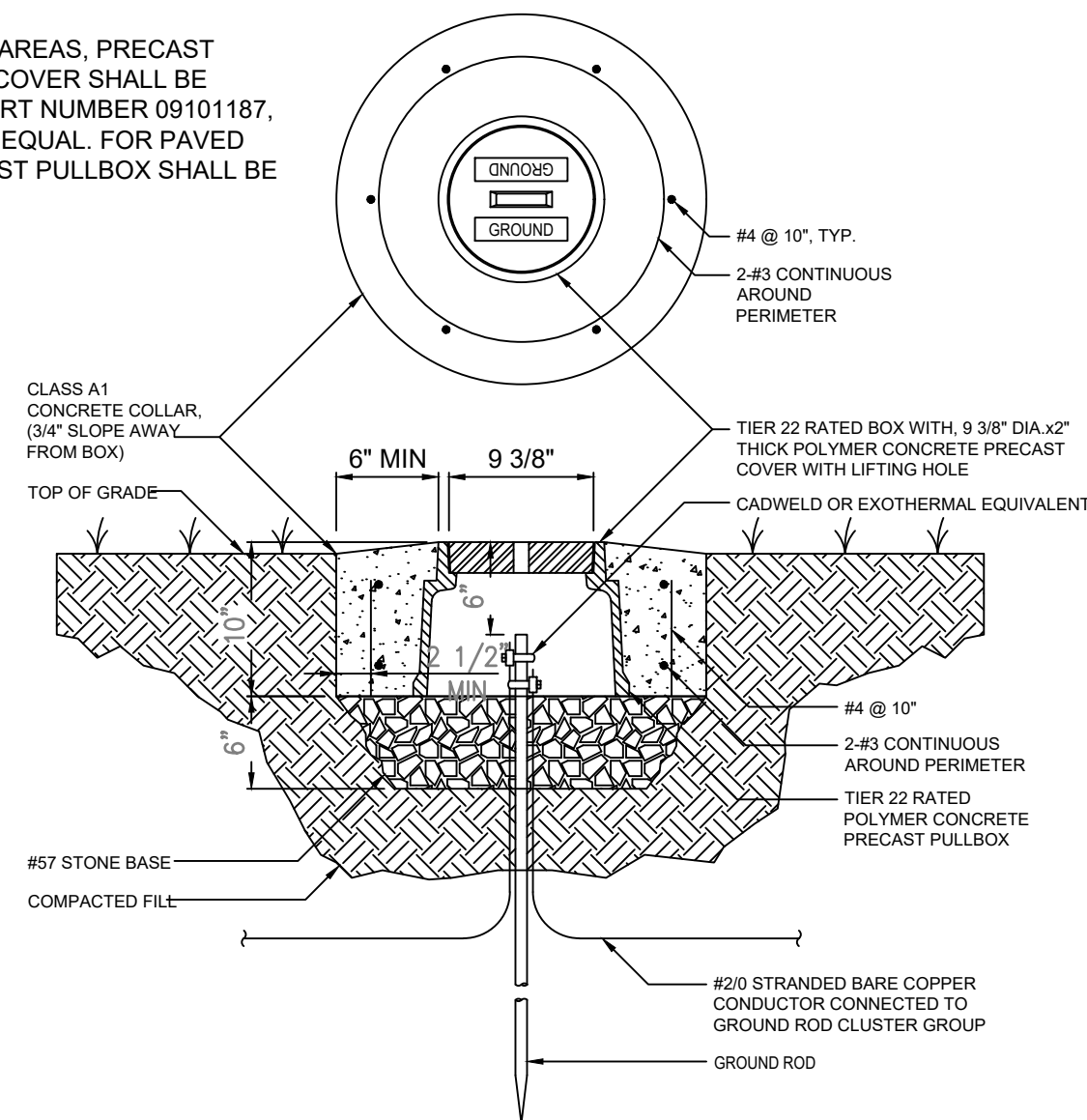
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SHEET NO. OF

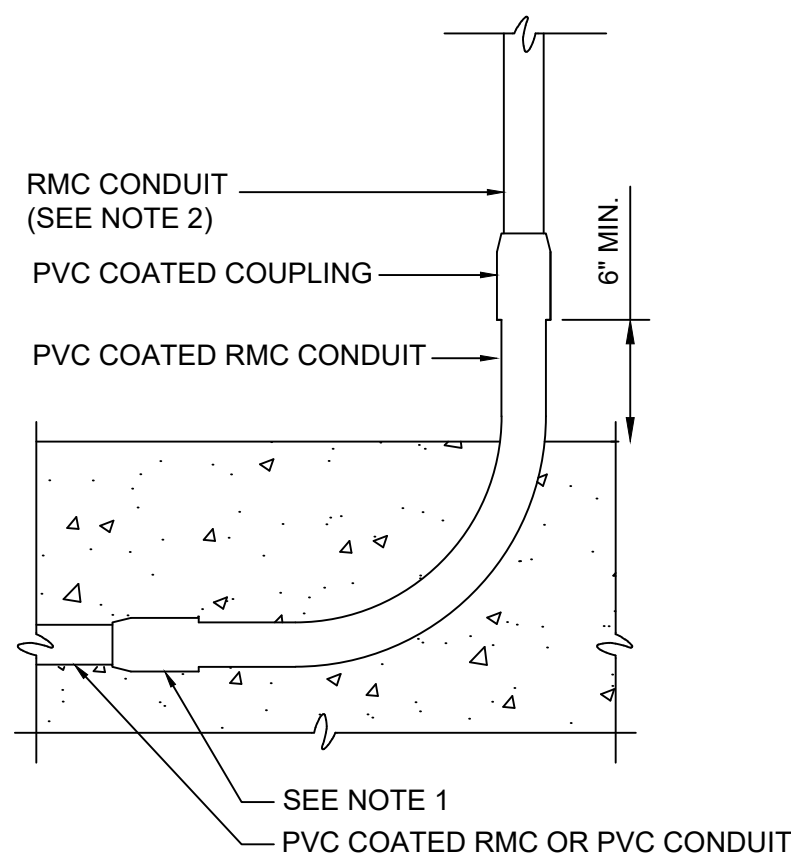
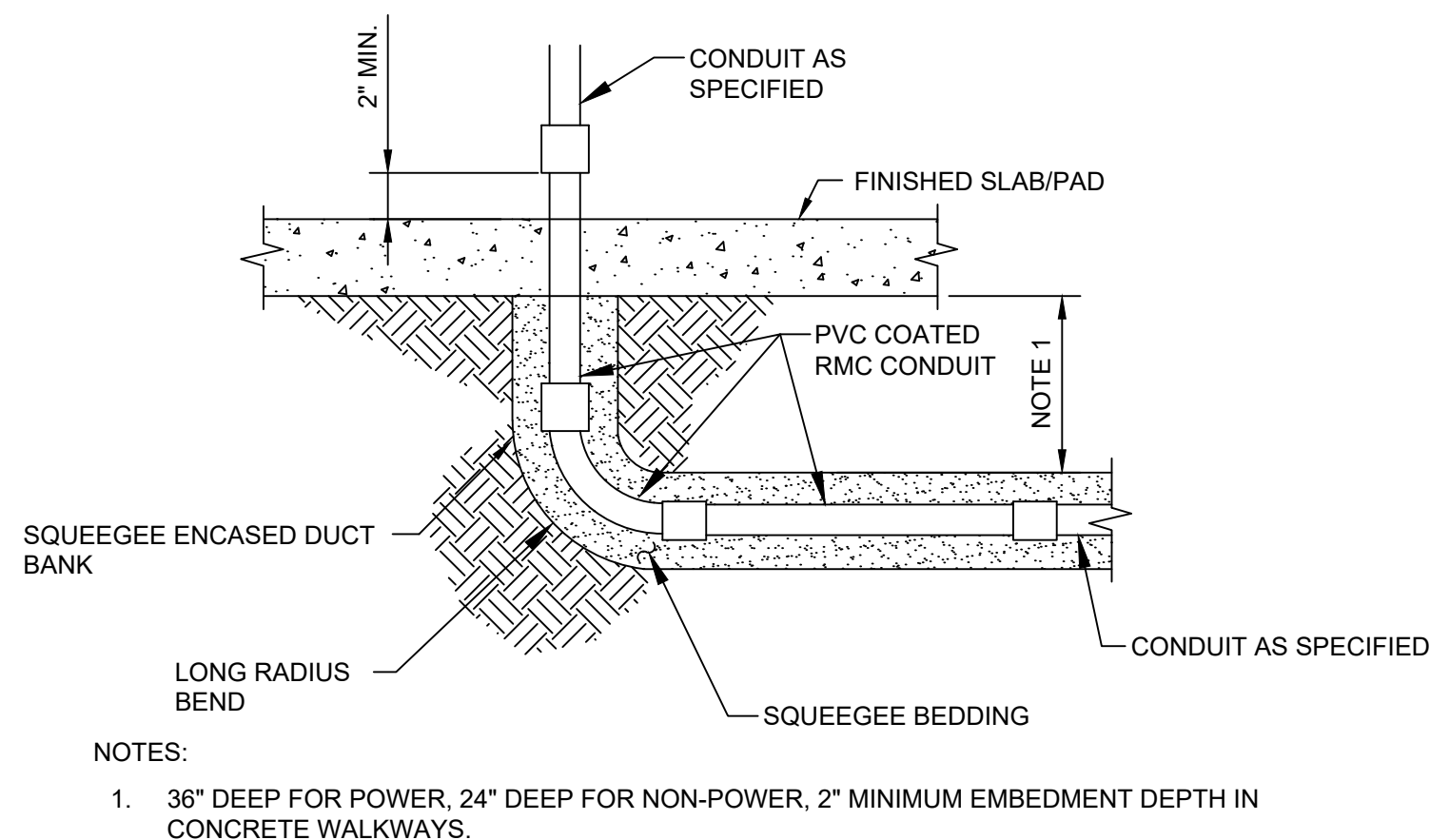


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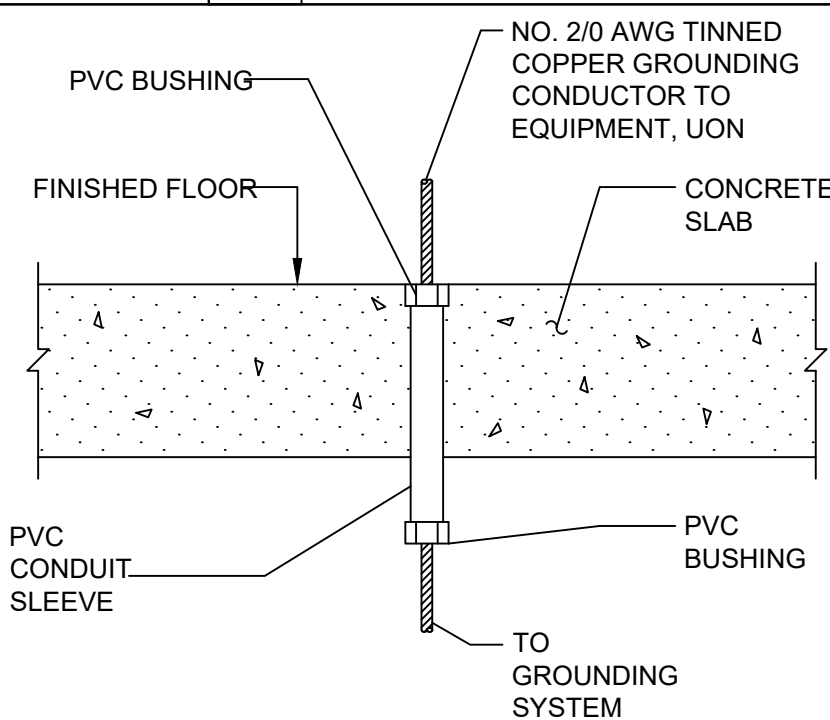
1. FOR UNPAVED AREAS, PRECAST PULLBOX AND COVER SHALL BE OLDCASTLE PART NUMBER 09101187, OR APPROVED EQUAL. FOR PAVED AREAS, PRECAST PULLBOX SHALL BE HS-20 RATED.



1 DIRECT BURIED CONDUIT



1. FOR ENCASED PVC CONDUIT USE PVC TERMINAL ADAPTER. FOR ENCASED RMC USE PVC COATED COUPLING.
2. CONDUIT IN SPACE SHALL BE AS SPECIFIED FOR SPACE, REFER TO SPECIFICATIONS. AT A MINIMUM IT SHALL BE RMC.

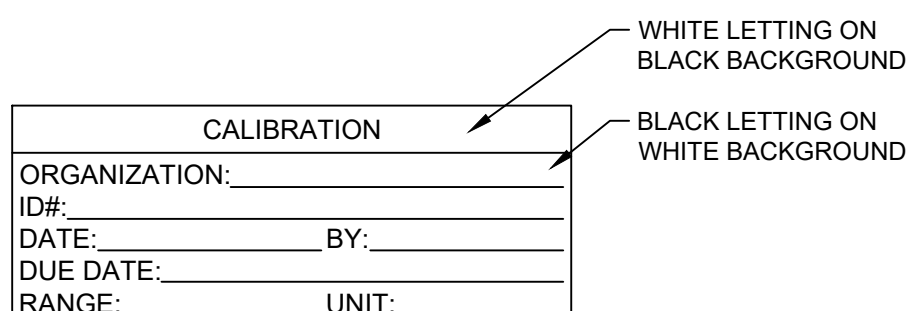
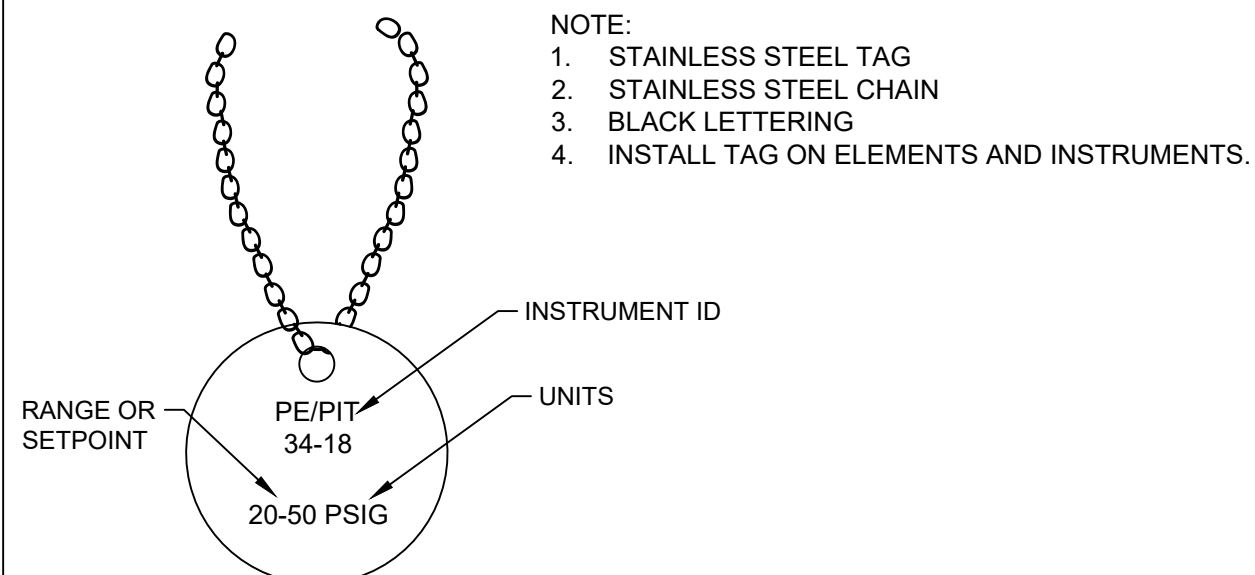


NOTES:

1. EXTEND PVC CONDUIT TO TOP OF BASE, OR PEDESTAL FOR BASE, OR PEDESTAL MOUNTED EQUIPMENT. SUPPORT AT (2) PLACES(MIN).

5 | GROUNDING CONDUIT SLEEVE

3 CONDUIT THROUGH CONCRETE PAD DETAIL



4 FLOOR STUB-UP FOR CONDUIT

6 | INSTRUMENT TAG

7 INSTRUMENT CALIBRATION

JACKSONVILLE BEACH GOLF
COURSE IRRIGATION
EXPANSION
CITY OF JACKSONVILLE BEACH
DUVAL COUNTY
FLORIDA

SEAL

AURORA M. KIRBY, P.E. 92981

FINAL PLANS
ISSUE FOR BIDDING

SCALE

REVISIONS

[illegible]

DRAWN BY A. KIRBY
APPROVED BY A. KIRBY
CHECKED BY B. WASON
DATE SEPTEMBER 2025

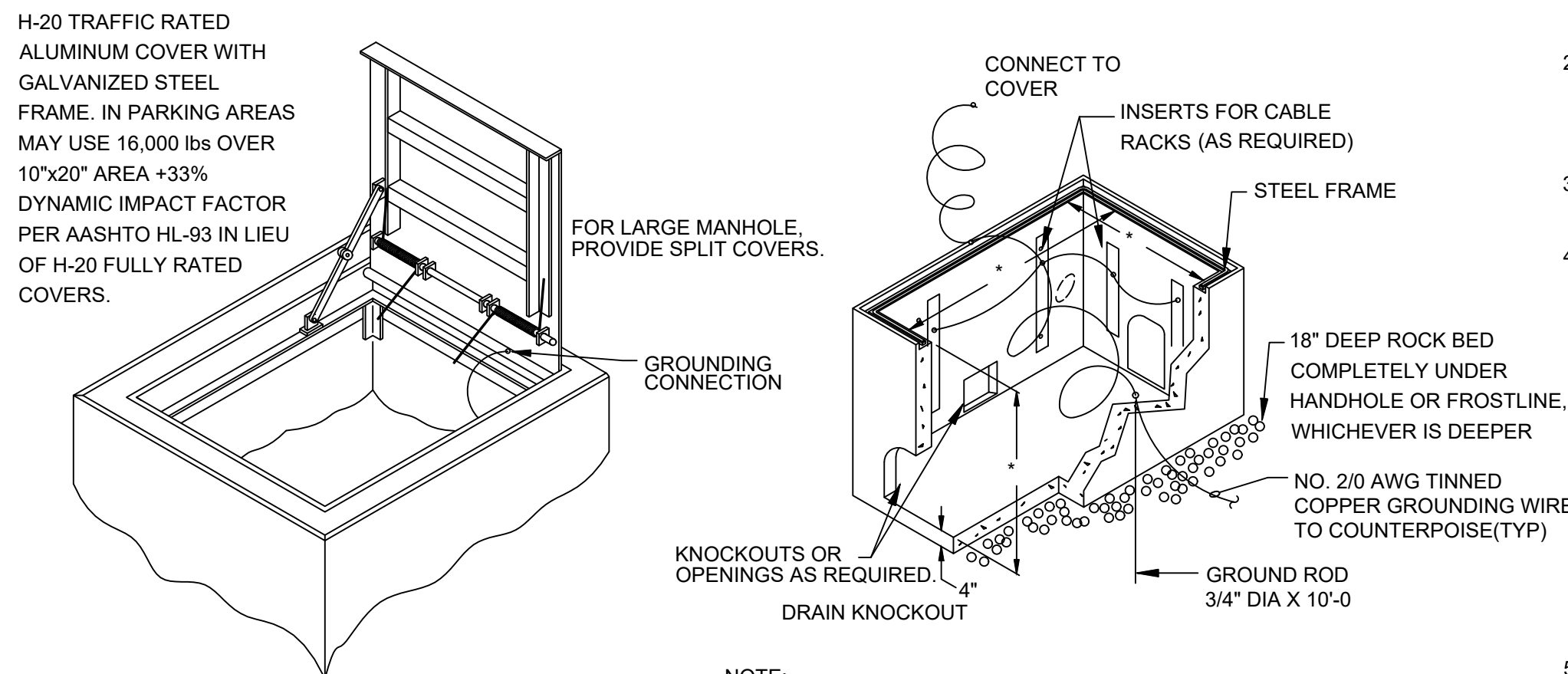
TITLE

ELECTRICAL DETAILS

PROJECT NO. 50184819

E-702

SHEET NO. _____ OF _____



NOTES FOR ALL MANHOLES:

CONTRACTOR SHALL PROVIDE REQUIRED END BELL LOCATIONS TO
MANHOLE MANUFACTURER BEFORE MANUFACTURING.

ALL MANHOLES SHALL BE H-20 TRAFFIC RATED.

CONTACT LINDSEY PRECAST AND U.S.F. FABRICATION FOR ALUMINUM ACCESS HATCH.

CONTRACTOR SHALL COORDINATE CONDUIT ENTRY REQUIREMENTS WITH SITE PLAN, PRIOR TO ORDERING MANHOLE.

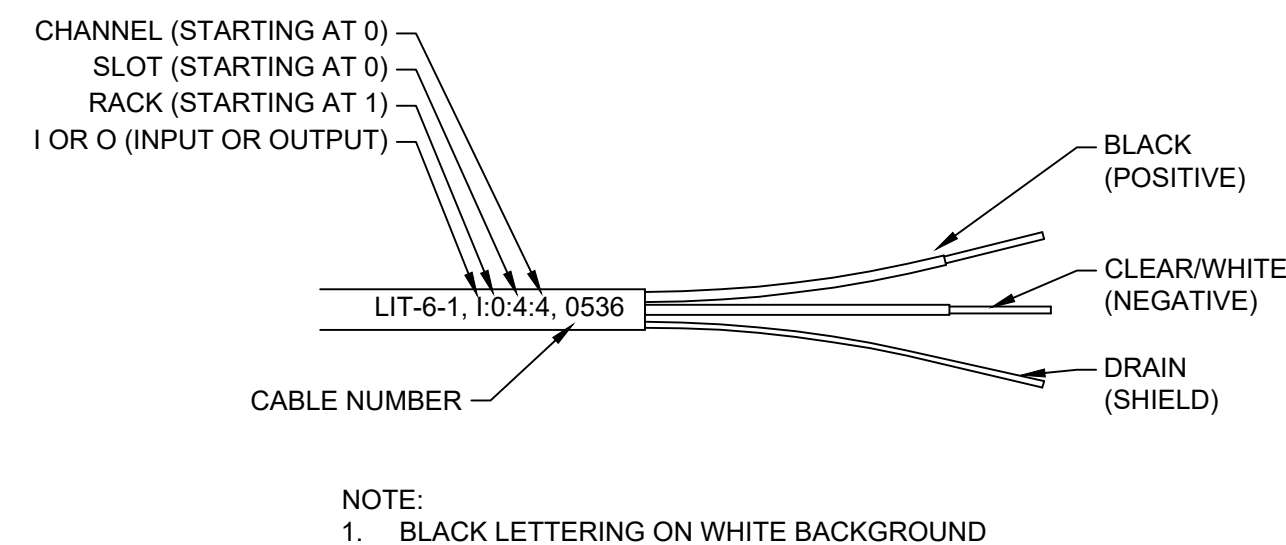
ALL COVERS SHALL BE RECESSED PADLOCK LOCKABLE.

NOTE:
COVER AND STEEL FRAME * SEE PULL BOX SCHEDULE
SHALL BE GROUNDED.

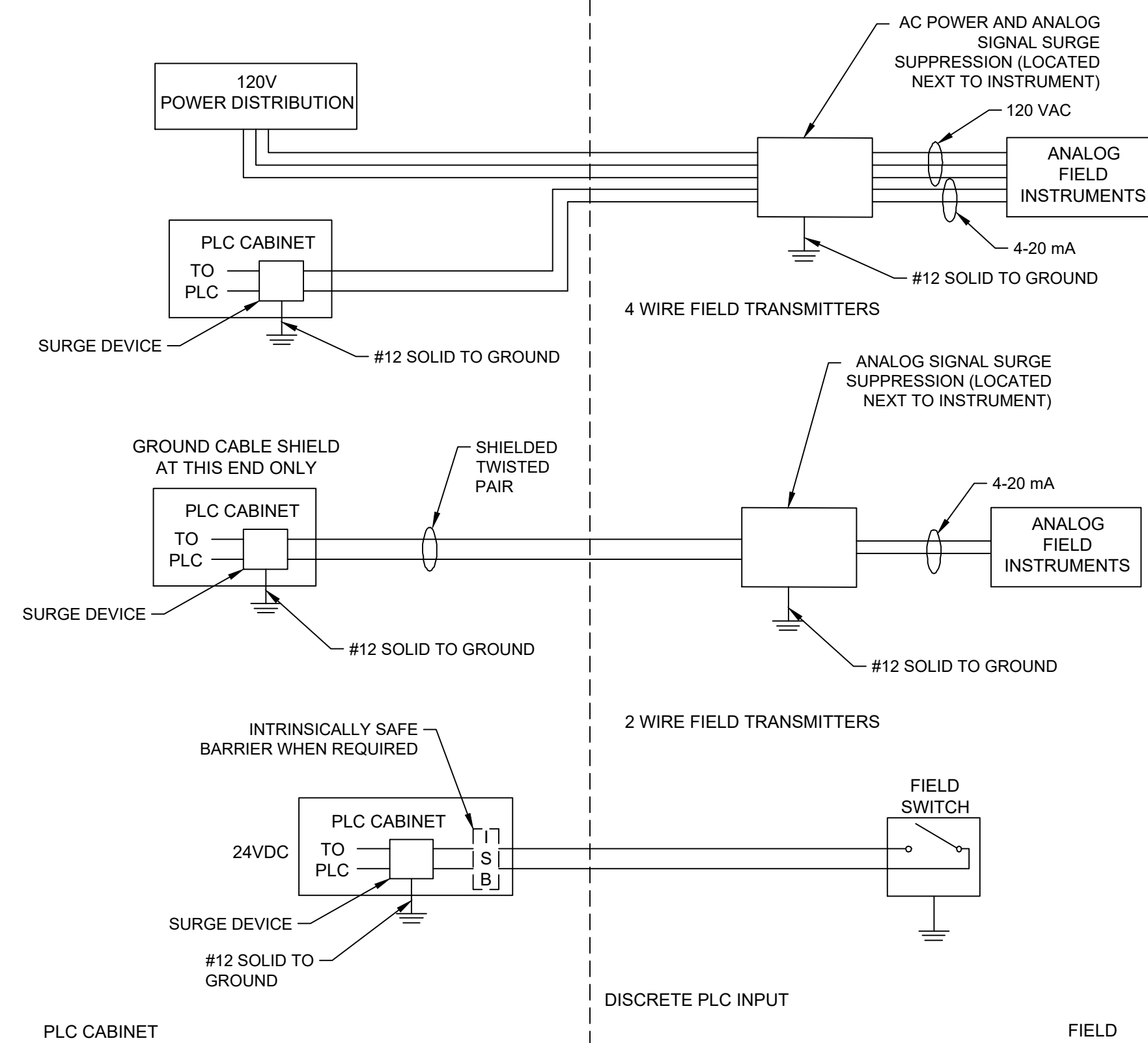
PULL BOX SCHEDULE	
A	24" X 24" X 24"
B	24" X 48" X 30"

MANHOLE DETAIL NOTES:

1. CABLE RACK, JOSLYN J-5126 OR EQUAL
CABLE HOOKS, JOSLYN J-5131A OR EQUAL
CABLE RACK INSULATORS, JOSLYN J-5120
2. PULLING-IN-IRONS INSTALL OPPOSITE
CONDUIT ENTRANCE. POSITION BELOW
LEVEL OF CONDUIT ENTRANCE. HUBBART &
CO. CATALOG 9119 OR EQUAL.
3. TERMINATE ALL DUCTS IN MANHOLE WITH
END BELLS.
4. MANHOLE COVERS SHALL BE MARKED
"ELECTRICAL" OR "FIBER" BY THE
MANUFACTURER, WITH RAISED LETTERS.
THE CONTRACTOR SHALL STAMP IN THE
MANHOLE COVERS THE IDENTIFICATION
NUMBER OF THE MANHOLE AS LISTED ON
THE DRAWINGS. LETTERS AND NUMBERS TO
BE 2" HIGH. AS AN ALTERNATE THE
CONTRACTOR MAY INSTALL SS NAMEPLATES
ATTACHED WITH FOUR SS BOLTS TO THE
MANHOLE COVERS INDICATING THE
MANHOLE COVER NUMBER. LETTERS AND
NUMBERS TO BE RAISED AND 2" HIGH.
SUBMIT ONE SAMPLE NAMEPLATE FOR
ENGINEER'S APPROVAL PRIOR TO
INSTALLATION.
5. GROUND ROD, 3/4"x10'-0. COPPER CLAD
AND #8 GREEN AWG.
6. BOUND ALL METALLIC PARTS TO
GROUNDING SYSTEM.
7. PRECAST CONCRETE MANHOLE, U.S.
PRECAST CORP. OR APPROVED EQUAL.
8. U.S.F. FABRICATION, INC. HEAVY DUTY,
ALUMINUM, H-20 LOADING, SINGLE OR
DOUBLE DOOR WITH RECESSED STAPLE FOR
PADLOCK AND SPRING LOADED HINGE OR
APPROVED EQUAL.



1 PULLBOX DETAIL



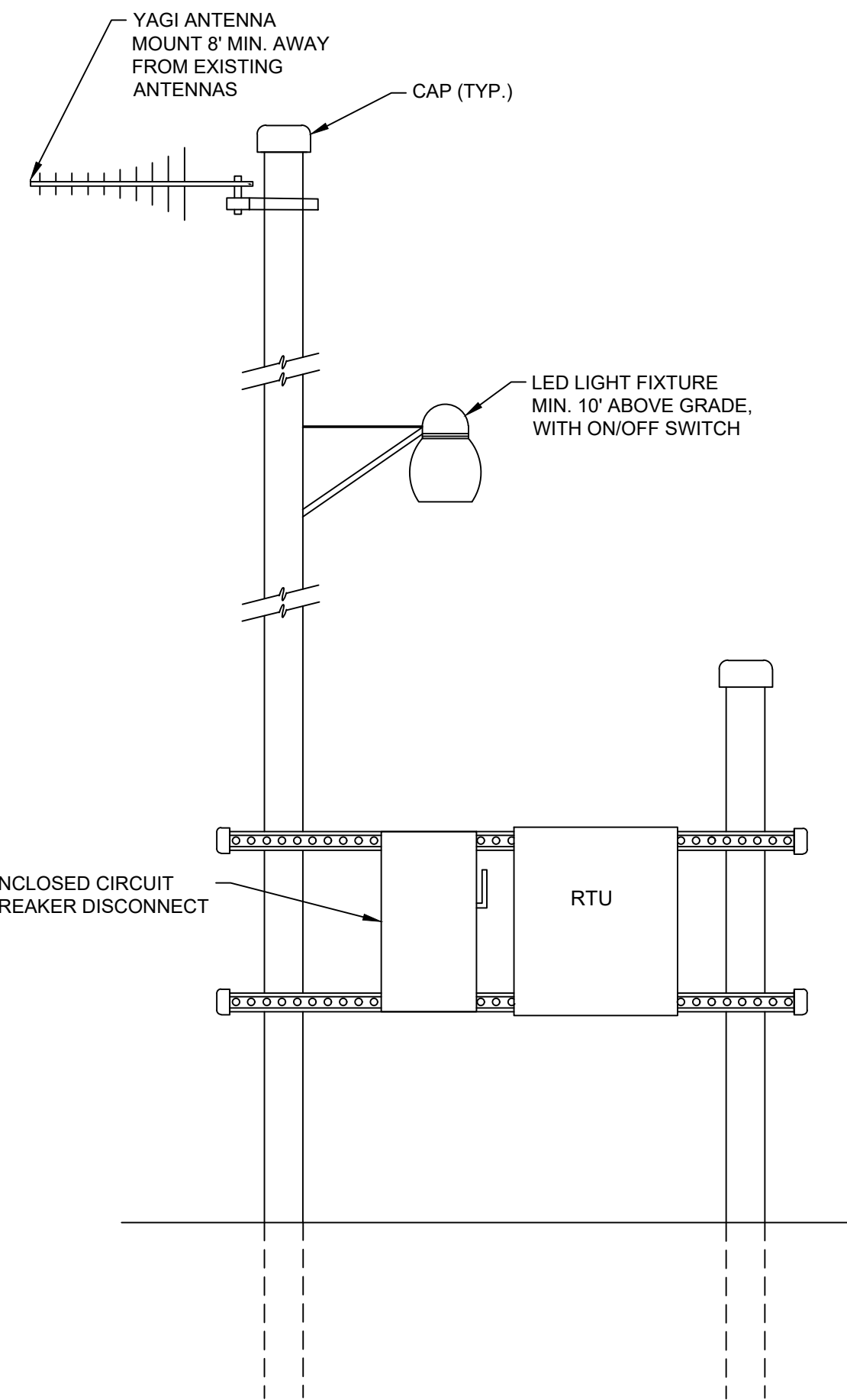
NOTES:

1. INTEGRATOR TO PROVIDE SURGE PROTECTION ON ALL I/O POINTS WITHIN PLC CABINET.
2. SURGE PROTECTION SHALL BE PHOENIX CONTACT PT SERIES OR EQUAL.

NOTES:

1. PROVIDE SURGE PROTECTION ON ALL EXTERIOR DEVICES.
2. PROVIDE SUNSHIELD ON DEVICES NOT COVERED BY CANOPIES.
3. PROVIDE DIN RAIL MOUNTED SURGE PROTECTION, PHOENIX CONTACT PT AND PLT OR EQUAL. MOUNT SURGE DEVICES IN 304SS NEMA 4X PANEL NEAR TRANSMITTER.

2	TWO CONDUCTOR CABLE
---	---------------------



NOTE: UNISTRUT RACK SHALL BE CONSTRUCTED WITH 3" ALUMINUM POSTS, SET IN 4000 psi CONCRETE. HORIZONTAL MEMBERS SHALL BE 7/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL STRAPS, HARDWARE, AND VINYL/PLASTIC ENDCAPS.

3	WIRE/CABLE BUNDLE TAG
---	-----------------------

NOTES:

1. METER BASE AND METER CABINETS SHALL BE BONDED AS REQUIRED BY THE NATIONAL ELECTRIC CODE OR AUTHORITY HAVING JURISDICTION, AND THE POWER COMPANY.
2. METER PEDESTAL SHALL BE RIGID ENOUGH TO WITHSTAND FORCES APPLIED WHEN METERS ARE INSTALLED OR REMOVED. COORDINATE ENTIRE INSTALLATION WITH POWER COMPANY.

PROVIDE UTILITY COMPANY
APPROVED METER CAN

METER SOCKET SHALL BE MOUNTED
ON POST CONSTRUCTED OF REIN-
FORCED CONCRETE 4"x4" AND 8"
IN LENGTH _____

PAD MOUNTED TRANSFORMER
PROVIDED BY POWER CO.
COORDINATE CONCRETE PAD

SCHEDULE 40 PVC
CONDUIT 3"

A horizontal line with an arrow pointing to the left, labeled 10'.

24" MIN

4	ANALOG GROUNDING AND SURGE PROTECTION
---	---------------------------------------

5	EQUIPMENT RACK DETAIL
---	-----------------------

6	TRANSFORMER PAD AND METER DETAIL
---	----------------------------------

JAX BEACH GOLF CLUB

JACKSONVILLE BEACH, FLORIDA



AQUA TURF INTERNATIONAL
19940 Mona Road, Suite 2, Tequesta, FL
Phone: (561) 222-2650 Fax: (561) 666-6696
www.aquaturfintl.com

IRRIGATION DESIGN DOCUMENTS 100%
DATE: 08.05.25

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RIS & TORO NOTE: GROUND GRID ASSEMBLIES AND MANUFACTURED SURGE DEVICES MUST BE INSTALLED ALONG EVERY WIRE PATH TO ENSURE PROPER PROTECTION. THE INSTALLATION SHOULD ADHERE TO THE FOLLOWING GUIDELINES: 1) NO MORE THAN 15 CM/LSM DECODERS SHOULD BE POSITIONED BETWEEN TWO GROUND GRID ASSEMBLIES AND SURGE DEVICES. 2) THE DISTANCE BETWEEN CONNECTED GROUND GRID ASSEMBLIES AND SURGE DEVICES ON THE SAME WIRE PATH MUST NOT EXCEED 500 FEET, WHICHEVER IS LESS. EACH SURGE DEVICE MUST BE CONNECTED TO A GROUND ROD, GROUND PLATE, AND SHIELDING WIRE (RB ONLY) TO ENSURE A PROPER EARTH GROUND. A MAXIMUM RESISTANCE OF 45 Ohms IS REQUIRED (RB ONLY), WITH A LOWER RESISTANCE READING BEING HIGHLY DESIRABLE. DO NOT LOOP WIRE!

GATEWAY #1
WIRE PATH: 1
RED WIRE
HOLES: 1-9-CG-PR

GATEWAY #1
WIRE PATH: 1
BLUE WIRE
HOLES: 2-3-4

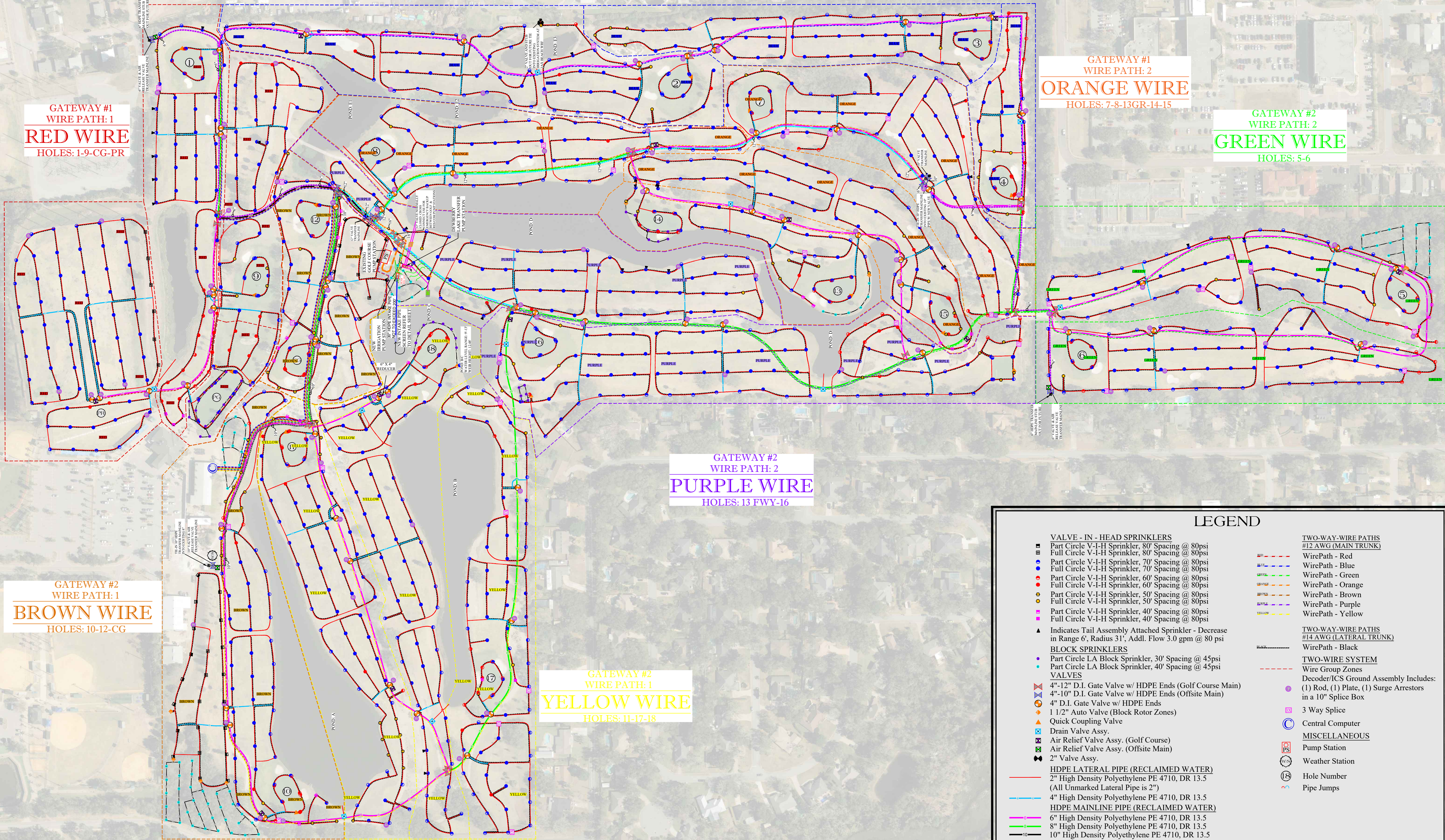
GATEWAY #1
WIRE PATH: 2
ORANGE WIRE
HOLES: 7-8-13GR-14-15

GATEWAY #2
WIRE PATH: 2
GREEN WIRE
HOLES: 5-6

GATEWAY #2
WIRE PATH: 2
PURPLE WIRE
HOLES: 13 FWY-16

GATEWAY #2
WIRE PATH: 1
YELLOW WIRE
HOLES: 11-17-18

GATEWAY #2
WIRE PATH: 1
BROWN WIRE
HOLES: 10-12-CG



LEGEND

VALVE - IN - HEAD SPRINKLERS

- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
- Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

VALVES

- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
- 4"-10" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
- 4" D.I. Gate Valve w/ HDPE Ends
- 1 1/2" Auto Valve (Block Rotor Zones)
- Quick Coupling Valve
- Drain Valve Assy.
- Air Relief Valve Assy. (Golf Course)
- Air Relief Valve Assy. (Offsite Main)
- 2" Valve Assy.

HDPE LATERAL PIPE (RECLAIMED WATER)

- 2" High Density Polyethylene PE 4710, DR 13.5 (All Unmarked Lateral Pipe is 2")
- 4" High Density Polyethylene PE 4710, DR 13.5
- 6" High Density Polyethylene PE 4710, DR 13.5
- 8" High Density Polyethylene PE 4710, DR 13.5
- 10" High Density Polyethylene PE 4710, DR 13.5
- 12" High Density Polyethylene PE 4710, DR 13.5
- 16" High Density Polyethylene PE 4710, DR 13.5

HDPE MAINLINE PIPE (RECLAIMED WATER)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

HDPE MAINLINE PIPE - OFFSITE (RECLAIMED WATER)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

PVC PIPE (RECLAIMED WATER)

- 1 1/2" Class 200 PVC IPS Solvent Weld

TWO-WAY-WIRE PATHS

#12 AWG (MAIN TRUNK)

- WirePath - Red
- WirePath - Blue
- WirePath - Green
- WirePath - Orange
- WirePath - Brown
- WirePath - Purple
- WirePath - Yellow

TWO-WAY-WIRE PATHS

#14 AWG (LATERAL TRUNK)

- WirePath - Black

TWO-WIRE SYSTEM

- Wire Group Zones

Decoder/ICS Ground Assembly Includes:

- (1) Rod, (1) Plate, (1) Surge Arrestors in a 10" Splice Box

3 Way Splice

Central Computer

MISCELLANEOUS

- Pump Station
- Weather Station
- Hole Number
- Pipe Jumps



AQUA TURF
INTERNATIONAL
19940 Mona Road
Suite 2
Tequesta, FL 33469
Phone: (561) 222-2650
Fax: (561) 666-6696
www.aquaturfintl.com

SCALE
1" = 140'
0' 70' 140' 280'
1 inch = 140ft.



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION DESIGN DOCUMENTS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT: JAX BEACH GC, IRR, DESIGN: 100-080325

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

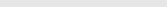
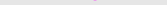
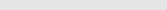
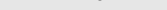
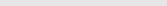
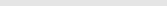
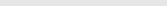
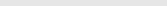
SHEET
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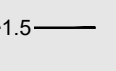
GATEWAY #1
WIRE PATH: 1
RED WIRE
HOLES: 1-9-CG-PR

RB & TORO NOTE: GROUND GRIP ASSEMBLIES AND MANUFACTURED SURGE DEVICES MUST BE INSTALLED ALONG EVERY WIRE PATH TO ENSURE PROPER PROTECTION. THE INSTALLATION SHOULD ADHERE TO THE FOLLOWING GUIDELINES: 1) NO MORE THAN 5 ICM/LSM DECODERS SHOULD BE POSITIONED BETWEEN TWO GROUND GRID ASSEMBLIES AND SURGE DEVICES. 2) THE DISTANCE BETWEEN CONNECTED GROUND GRID ASSEMBLIES AND SURGE DEVICES ON THE SAME WIRE PATH MUST NOT EXCEED 500 FEET, WHICHEVER IS LESS. EACH SURGE DEVICE MUST BE CONNECTED TO A GROUND ROD, GROUND PLATE, AND **SHIELDING WIRE (RB ONLY)** TO ENSURE A PROPER EARTH GROUND. A MAXIMUM RESISTANCE OF **45 Ohms Is Required (RB ONLY)**, WITH A LOWER RESISTANCE READING BEING HIGHLY DESIRABLE. DO NOT LOOP WIRE!

LEGEND

- ### VALVE - IN - HEAD SPRINKLERS
- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- ▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi
- ### BLOCK SPRINKLERS
- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
 - Part Circle LA Block Sprinkler, 40' Spacing @ 45psi
- ### VALVES
- ✕ 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
 - ✕ 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
 - ⊗ 4" D.I. Gate Valve w/ HDPE Ends
 - ⬇ 1 1/2" Auto Valve (Block Rotor Zones)
 - ⬇ Quick Coupling Valve
 - ▲ Drain Valve Assy.
 - ✕ Air Relief Valve Assy. (Golf Course)
 - ✕ Air Relief Valve Assy. (Offsite Main)
 - ⬇ 2" Valve Assy.

- | | |
|---|--|
|  | <u>HDPE LATERAL PIPE (RECLAIMED)</u> |
| | 2" High Density Polyethylene PE 4710, DR 13.5 |
| | 4" Unmarked Lateral Pipe is 2" |
|  | 4" High Density Polyethylene PE 4710, DR 13.5 |
| | <u>HDPE MAINLINE PIPE (RECLAIMED)</u> |
|  | 6" High Density Polyethylene PE 4710, DR 13.5 |
|  | 8" High Density Polyethylene PE 4710, DR 13.5 |
|  | 10" High Density Polyethylene PE 4710, DR 13.5 |
|  | 12" High Density Polyethylene PE 4710, DR 13.5 |
|  | 16" High Density Polyethylene PE 4710, DR 13.5 |
| | <u>HDPE TRANSFER MAINLINE PIPE (RECLAIMED)</u> |
|  | 6" High Density Polyethylene SDR 13.5 |
|  | 10" High Density Polyethylene SDR 13.5 |
|  | 12" High Density Polyethylene SDR 13.5 |
|  | 16" High Density Polyethylene SDR 13.5 |

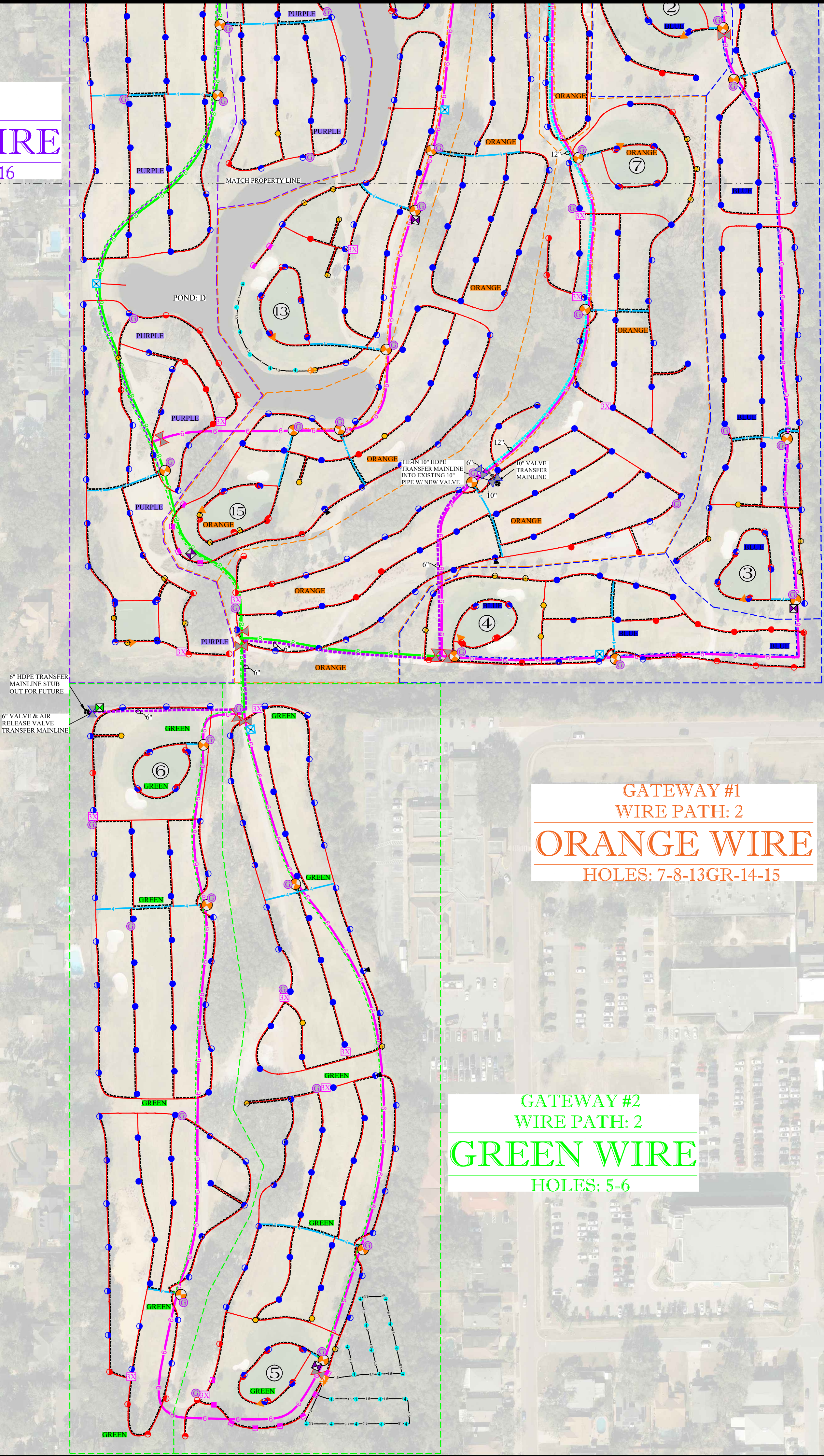
- 
- PVC PIPE (RECLAIMED)
 1 1/2" Class 200 PVC IPS Solvent Weld
TWO-WAY-WIRE PATHS
#12 AWG (MAIN TRUNK)
- WirePath - Red
 WirePath - Blue
 WirePath - Green
 WirePath - ORANGE
 WirePath - Brown
 WirePath - Purple
 WirePath - Yellow

- TWO-WAY-WIRE PATHS**
#14 AWG (LATERAL TRUNK)
WirePath - Black
- TWO-WIRE SYSTEM**
Wire Group Zones
Decoder/ICS Ground Assembly Includes
(1) Rod, (1) Plate, (1) Surge Arrestors
in a 10" Splice Box
- 3 Way Splice
- Central Computer
- MISCELLANEOUS
Pump Station
Weather Station
Hole Number
Pipe Jumps

GATEWAY #2
WIRE PATH: 2
PURPLE WIRE
HOLES: 13 FWY-16

GATEWAY #2
WIRE PATH: 2
PURPLE WIRE
HOLES: 13 FWY-16

GATEWAY #1
WIRE PATH: 1
BLUE WIRE
HOLES: 2-3-4



RB & TORO NOTE: GROUND GRIP ASSEMBLIES AND MANUFACTURED SURGE DEVICES MUST BE INSTALLED ALONG EVERY WIRE PATH TO ENSURE PROPER PROTECTION. THE INSTALLATION SHOULD ADHERE TO THE FOLLOWING GUIDELINES: 1) NO MORE THAN 15 ICM/LSM DECODERS SHOULD BE POSITIONED BETWEEN TWO GROUND GRID ASSEMBLIES AND SURGE DEVICES. 2) THE DISTANCE BETWEEN CONNECTED GROUND GRID ASSEMBLIES AND SURGE DEVICES ON THE SAME WIRE PATH MUST NOT EXCEED 500 FEET, WHICHEVER IS LESS. EACH SURGE DEVICE MUST BE CONNECTED TO A GROUND ROD, GROUND PLATE, AND SHIELDING WIRE (RB ONLY) TO ENSURE A PROPER EARTH GROUND. A MAXIMUM RESISTANCE OF 45 Ohms IS REQUIRED (RB ONLY), WITH A LOWER RESISTANCE READING BEING HIGHLY DESIRABLE. DO NOT LOOP WIRE!

GATEWAY #1
WIRE PATH: 2
ORANGE WIRE
HOLES: 7-8-13GR-14-15

GATEWAY #2
WIRE PATH: 2
GREEN WIRE
HOLES: 5-6

LEGEND

VALVE - IN - HEAD SPRINKLERS

- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

- ▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
- Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

VALVES

- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
- 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
- 4" D.I. Gate Valve w/ HDPE Ends
- 1 1/2" Auto Valve (Block Rotor Zones)
- Quick Coupling Valve
- Drain Valve Assy.
- Air Relief Valve Assy. (Golf Course)
- Air Relief Valve Assy. (Offsite Main)
- 2" Valve Assy.

- HDPE LATERAL PIPE (RECLAIMED)
- 2" High Density Polyethylene PE 4710, DR 13.5 (All Unmarked Lateral Pipe is 2")

- 4" High Density Polyethylene PE 4710, DR 13.5
- HDPE MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene PE 4710, DR 13.5
- 8" High Density Polyethylene PE 4710, DR 13.5
- 10" High Density Polyethylene PE 4710, DR 13.5
- 12" High Density Polyethylene PE 4710, DR 13.5
- 16" High Density Polyethylene PE 4710, DR 13.5

HDPE TRANSFER MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

PVC PIPE (RECLAIMED)

- 1 1/2" Class 200 PVC IPS Solvent Weld

TWO-WAY-WIRE PATHS

#12 AWG (MAIN TRUNK)

- WirePath - Red
- WirePath - Blue
- WirePath - Green
- WirePath - Orange
- WirePath - Brown
- WirePath - Purple
- WirePath - Yellow

TWO-WAY-WIRE PATHS

#14 AWG (LATERAL TRUNK)

- WirePath - Black

TWO-WIRE SYSTEM

Wire Group Zones

- Decoder/ICS Ground Assembly Includes: (1) Rod, (1) Plate, (1) Surge Arrestors in a 10" Splice Box

- 3 Way Splice

- Central Computer

MISCELLANEOUS

- Pump Station

- Weather Station

- Hole Number

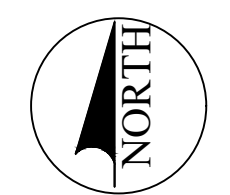
- Pipe Jumps



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SCALE
1" = 100'

0' 50' 100' 200'
1 inch = 100ft.



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION DESIGN DOCUMENTS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT_JAX BEACH GC_IRR_DESIGN-100-080325

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

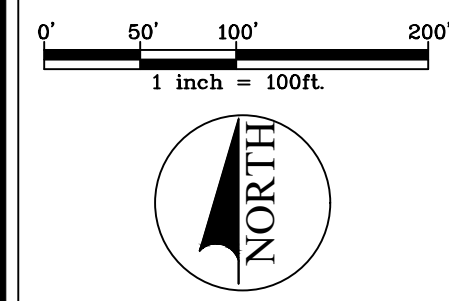
SHEET
L2

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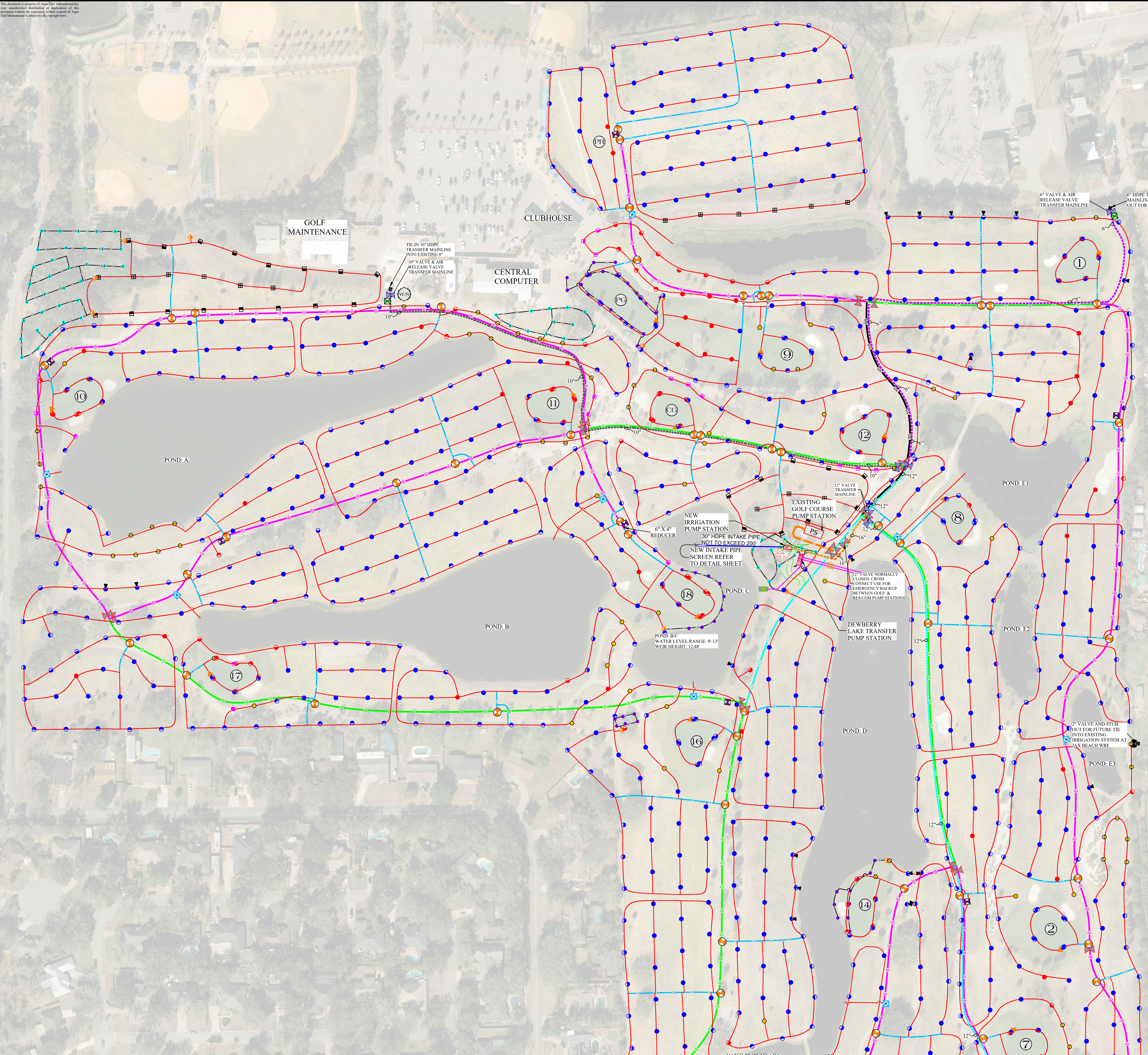
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SCALE
1" = 100'



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION MECHANICAL PLANS

DATE - 08-05-25	
DESIGN BY - SH	
DRAWN BY - SH	
FILE NAME ATL_JAX BEACH GC_IRR_DESIGN-100-080525	
PROJECT NO. 000-00	
DESCRIPTION: 90%	
REVISION	DATE
SHEET M1	



LEGEND

VALVE - IN - HEAD SPRINKLERS

- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
- Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

VALVES

- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
- 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
- 4" D.I. Gate Valve w/ HDPE Ends
- 1 1/2" Auto Valve (Block Rotor Zones)
- Quick Coupling Valve
- Drain Valve Assy.
- Air Relief Valve Assy. (Golf Course)
- Air Relief Valve Assy. (Offsite Main)
- 2" Valve Assy.

HDPE LATERAL PIPE (RECLAIMED)

- 2" High Density Polyethylene PE 4710, DR 13.5 (All Unmarked Lateral Pipe is 2")
- 4" High Density Polyethylene PE 4710, DR 13.5

HDPE MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene PE 4710, DR 13.5
- 8" High Density Polyethylene PE 4710, DR 13.5
- 10" High Density Polyethylene PE 4710, DR 13.5
- 12" High Density Polyethylene PE 4710, DR 13.5
- 16" High Density Polyethylene PE 4710, DR 13.5

HDPE TRANSFER MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

PVC PIPE (RECLAIMED)

- 1 1/2" Class 200 PVC IPS Solvent Weld

TWO-WAY-WIRE PATHS

#12 AWG (MAIN TRUNK)

- WirePath - Red
- WirePath - Blue
- WirePath - Green
- WirePath - Orange
- WirePath - Brown
- WirePath - Purple
- WirePath - Yellow

TWO-WAY-WIRE PATHS

#14 AWG (LATERAL TRUNK)

- WirePath - Black

TWO-WIRE SYSTEM

Wire Group Zones

Decoder/ICS Ground Assembly Includes:

- (1) Rod, (1) Plate, (1) Surge Arrestors in a 10" Splice Box

3 Way Splice

Central Computer

MISCELLANEOUS

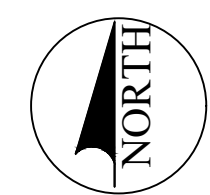
- Pump Station
- Weather Station
- Hole Number
- Pipe Jumps



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SCALE
1" = 100'

0' 50' 100' 200'
1 inch = 100ft.



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION MECHANICAL PLANS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT_JAX BEACH GC_IRR_DESIGN-100-080525

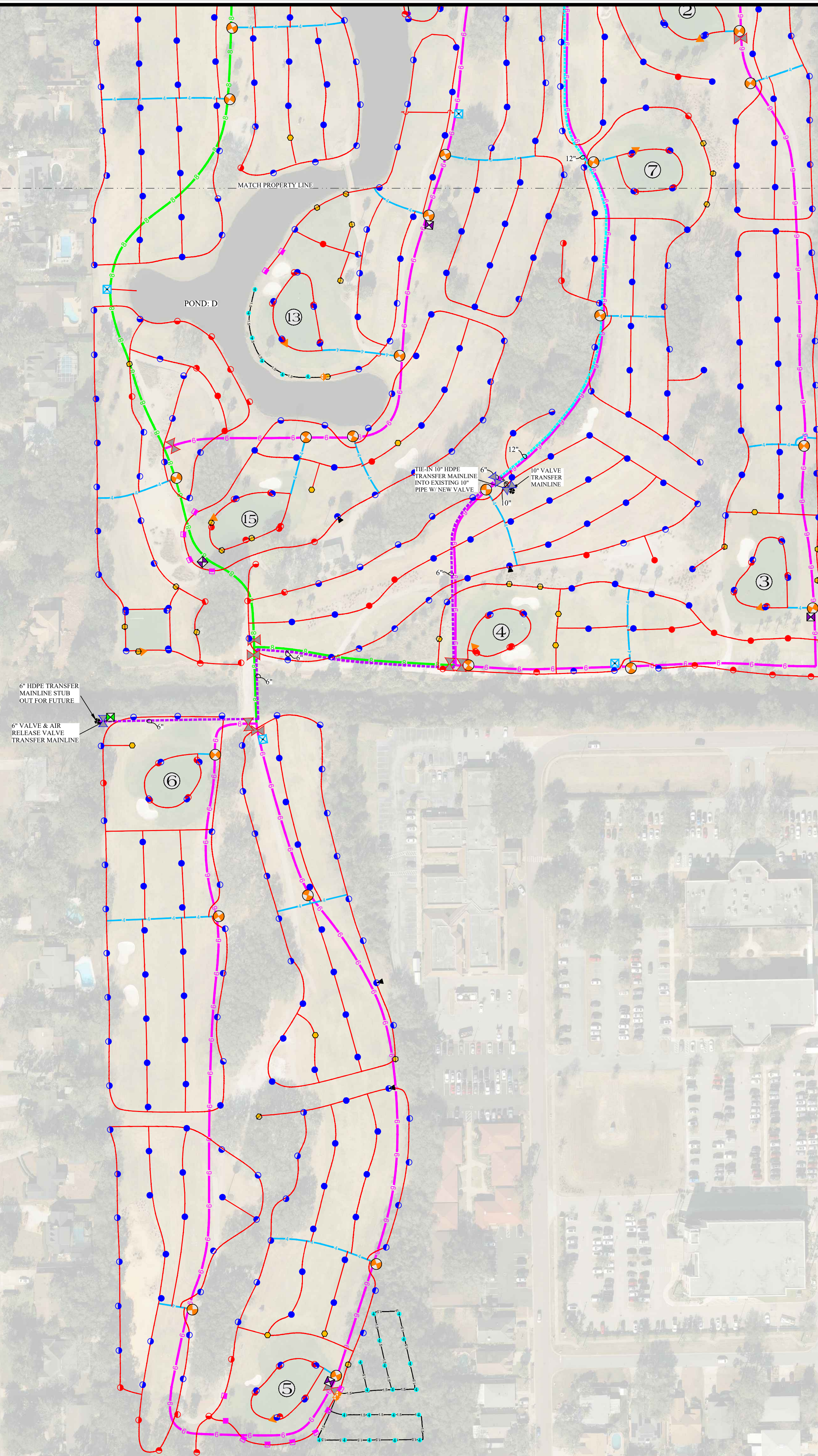
PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

SHEET
M2



LEGEND

VALVE - IN - HEAD SPRINKLERS

- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

- ▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
- Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

VALVES

- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
- 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
- 4" D.I. Gate Valve w/ HDPE Ends
- 1 1/2" Auto Valve (Block Rotor Zones)
- Quick Coupling Valve
- Drain Valve Assy.
- Air Relief Valve Assy. (Golf Course)
- Air Relief Valve Assy. (Offsite Main)
- 2" Valve Assy.

- HDPE LATERAL PIPE (RECLAIMED)
- 2" High Density Polyethylene PE 4710, DR 13.5 (All Unmarked Lateral Pipe is 2")

- 4" High Density Polyethylene PE 4710, DR 13.5

- HDPE MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene PE 4710, DR 13.5
- 8" High Density Polyethylene PE 4710, DR 13.5
- 10" High Density Polyethylene PE 4710, DR 13.5
- 12" High Density Polyethylene PE 4710, DR 13.5
- 16" High Density Polyethylene PE 4710, DR 13.5

- HDPE TRANSFER MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

- PVC PIPE (RECLAIMED)

- 1 1/2" Class 200 PVC IPS Solvent Weld

- TWO-WAY-WIRE PATHS

- #12 AWG (MAIN TRUNK)

- WirePath - Red

- WirePath - Blue

- WirePath - Green

- WirePath - Orange

- WirePath - Brown

- WirePath - Purple

- WirePath - Yellow

- TWO-WAY-WIRE PATHS

- #14 AWG (LATERAL TRUNK)

- WirePath - Black

- TWO-WIRE SYSTEM

- Wire Group Zones

- Decoder/ICS Ground Assembly Includes:
(1) Rod, (1) Plate, (1) Surge Arrestors
in a 10" Splice Box

- 3 Way Splice

- Central Computer

- MISCELLANEOUS

- Pump Station

- Weather Station

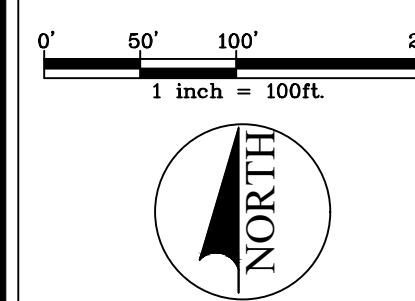
- Hole Number

- Pipe Jumps



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SCALE
1" = 100'



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION TWO-WIRE PLANS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT: JAX BEACH GC, IRR, DESIGN: 100-080525

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

SHEET
TW1

RB & TORO NOTE: GROUND GRIP ASSEMBLIES AND MANUFACTURED SURGE DEVICES MUST BE INSTALLED ALONG EVERY WIRE PATH TO ENSURE PROPER PROTECTION. THE INSTALLATION SHOULD ADHERE TO THE FOLLOWING GUIDELINES: 1) NO MORE THAN 15 ICM/LSM DECODERS SHOULD BE POSITIONED BETWEEN TWO GROUND GRID ASSEMBLIES AND SURGE DEVICES. 2) THE DISTANCE BETWEEN CONNECTED GROUND GRID ASSEMBLIES AND SURGE DEVICES ON THE SAME WIRE PATH MUST NOT EXCEED 500 FEET, WHICHEVER IS LESS. EACH SURGE DEVICE MUST BE CONNECTED TO A GROUND ROD, GROUND PLATE, AND SHIELDING WIRE (RB ONLY) TO ENSURE A PROPER EARTH GROUND. A MAXIMUM RESISTANCE OF 45 Ohms IS REQUIRED (RB ONLY), WITH A LOWER RESISTANCE READING BEING HIGHLY DESIRABLE. DO NOT LOOP WIRE!

GATEWAY #2
WIRE PATH: 1
BROWN WIRE
HOLES: 10-12-CG

GATEWAY #1
WIRE PATH: 1
RED WIRE
HOLES: 1-9-CG-PR

GATEWAY #2
WIRE PATH: 1
YELLOW WIRE
HOLES: 11-17-18

GATEWAY #2
WIRE PATH: 2
PURPLE WIRE
HOLES: 13 FWY-16

LEGEND

VALVE - IN - HEAD SPRINKLERS

- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
- Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
- Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

VALVES

- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
- 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
- 4" D.I. Gate Valve w/ HDPE Ends
- 1 1/2" Auto Valve (Block Rotor Zones)
- Quick Coupling Valve
- Drain Valve Assy.
- Air Relief Valve Assy. (Golf Course)
- Air Relief Valve Assy. (Offsite Main)
- 2" Valve Assy.

HDPE LATERAL PIPE (RECLAIMED)

- 2" High Density Polyethylene PE 4710, DR 13.5 (All Unmarked Lateral Pipe is 2")
- 4" High Density Polyethylene PE 4710, DR 13.5
- 6" High Density Polyethylene PE 4710, DR 13.5
- 8" High Density Polyethylene PE 4710, DR 13.5
- 10" High Density Polyethylene PE 4710, DR 13.5
- 12" High Density Polyethylene PE 4710, DR 13.5
- 16" High Density Polyethylene PE 4710, DR 13.5

HDPE MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

HDPE TRANSFER MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

PVC PIPE (RECLAIMED)

- 1 1/2" Class 200 PVC IPS Solvent Weld

TWO-WAY-WIRE PATHS

- #12 AWG (MAIN TRUNK)
- WirePath - Red
- WirePath - Blue
- WirePath - Green
- WirePath - Orange
- WirePath - Brown
- WirePath - Purple
- WirePath - Yellow

TWO-WAY-WIRE PATHS

- #14 AWG (LATERAL TRUNK)
- WirePath - Black

TWO-WIRE SYSTEM

- Wire Group Zones
- Decoder/ICS Ground Assembly Includes:
 - (1) Rod, (1) Plate, (1) Surge Arrestors in a 10" Splice Box
- 3 Way Splice
- Central Computer

MISCELLANEOUS

- Pump Station
- Weather Station
- Hole Number
- Pipe Jumps

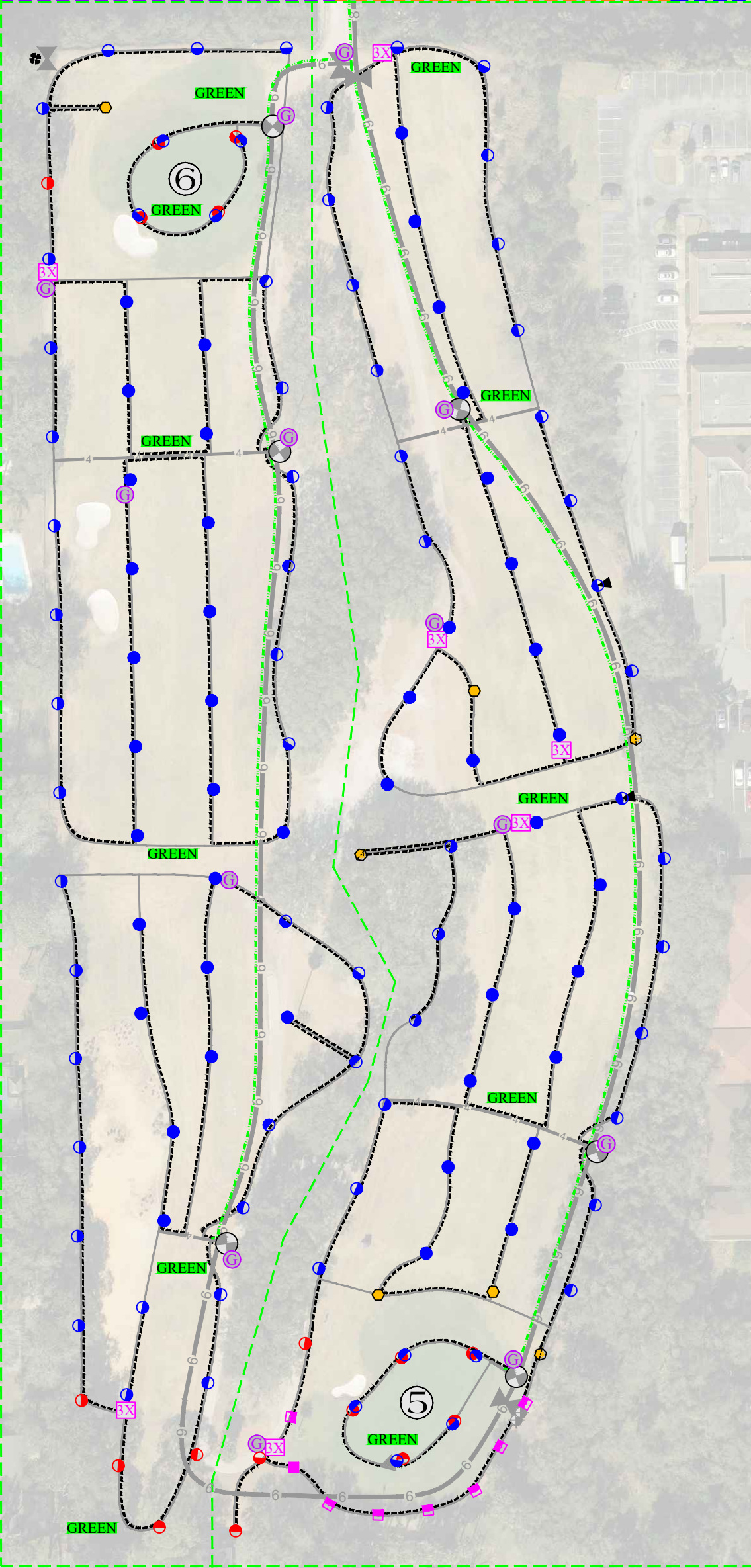
GATEWAY #2
WIRE PATH: 2
PURPLE WIRE
HOLES: 13 FWY-16

GATEWAY #1
WIRE PATH: 1
BLUE WIRE
HOLES: 2-3-4



GATEWAY #1
WIRE PATH: 2
ORANGE WIRE
HOLES: 7-8-13GR-14-15

GATEWAY #2
WIRE PATH: 2
GREEN WIRE
HOLES: 5-6



RB & **TORO** NOTE: GROUND GRIP ASSEMBLIES AND MANUFACTURED SURGE DEVICES MUST BE INSTALLED ALONG EVERY WIRE PATH TO ENSURE PROPER PROTECTION. THE INSTALLATION SHOULD ADHERE TO THE FOLLOWING GUIDELINES: 1) NO MORE THAN 15 ICM/LSM DECODERS SHOULD BE POSITIONED BETWEEN TWO GROUND GRID ASSEMBLIES AND SURGE DEVICES. 2) THE DISTANCE BETWEEN CONNECTED GROUND GRID ASSEMBLIES AND SURGE DEVICES ON THE SAME WIRE PATH MUST NOT EXCEED 500 FEET, WHICHEVER IS LESS. EACH SURGE DEVICE MUST BE CONNECTED TO A GROUND ROD, GROUND PLATE, AND SHIELDING WIRE (RB ONLY) TO ENSURE A PROPER EARTH GROUND. A MAXIMUM RESISTANCE OF 45 Ohms IS REQUIRED (RB ONLY), WITH A LOWER RESISTANCE READING BEING HIGHLY DESIRABLE. DO NOT LOOP WIRE!

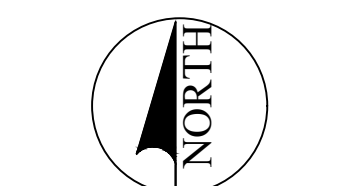
- LEGEND**
- VALVE - IN - HEAD SPRINKLERS**
- Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
 - Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
 - Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi
- ▲ Indicates Tail Assembly Attached Sprinkler - Decrease in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi
- BLOCK SPRINKLERS**
- Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
 - Part Circle LA Block Sprinkler, 40' Spacing @ 45psi
- VALVES**
- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
 - 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
 - 4" D.I. Gate Valve w/ HDPE Ends
 - 1 1/2" Auto Valve (Block Rotor Zones)
 - Quick Coupling Valve
 - Drain Valve Assy.
 - Air Relief Valve Assy. (Golf Course)
 - Air Relief Valve Assy. (Offsite Main)
 - 2" Valve Assy.
- HDPE LATERAL PIPE (RECLAIMED)**
- 2" High Density Polyethylene PE 4710, DR 13.5 (All Unmarked Lateral Pipe is 2")
 - 4" High Density Polyethylene PE 4710, DR 13.5
- HDPE MAINLINE PIPE (RECLAIMED)**
- 6" High Density Polyethylene PE 4710, DR 13.5
 - 8" High Density Polyethylene PE 4710, DR 13.5
 - 10" High Density Polyethylene PE 4710, DR 13.5
 - 12" High Density Polyethylene PE 4710, DR 13.5
 - 16" High Density Polyethylene PE 4710, DR 13.5
- HDPE TRANSFER MAINLINE PIPE (RECLAIMED)**
- 6" High Density Polyethylene SDR 13.5
 - 10" High Density Polyethylene SDR 13.5
 - 12" High Density Polyethylene SDR 13.5
 - 16" High Density Polyethylene SDR 13.5
- PVC PIPE (RECLAIMED)**
- 1 1/2" Class 200 PVC IPS Solvent Weld
- TWO-WAY-WIRE PATHS**
- #12 AWG (MAIN TRUNK)
 - WirePath - Red
 - WirePath - Blue
 - WirePath - Green
 - WirePath - Orange
 - WirePath - Brown
 - WirePath - Purple
 - WirePath - Yellow
- TWO-WAY-WIRE PATHS**
- #14 AWG (LATERAL TRUNK)
 - WirePath - Black
- TWO-WIRE SYSTEM**
- Wire Group Zones
 - Decoder/ICS Ground Assembly Includes: (1) Rod, (1) Plate, (1) Surge Arrestors in a 10" Splice Box
 - 3 Way Splice
 - Central Computer
- MISCELLANEOUS**
- Pump Station
 - Weather Station
 - Hole Number
 - Pipe Jumps



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Tequesta, FL 33469
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SCALE
1" = 100'

0' 50' 100' 200'
1 inch = 100ft.



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION TWO-WIRE PLANS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT: JAX BEACH GC, IRR, DESIGN-100-080325

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

SHEET

TW2



LEGEND

VALVE - IN - HEAD SPRINKLERS
Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

Indicates Tail Assembly Attached Sprinkler - Decrease
in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
4" D.I. Gate Valve w/ HDPE Ends
1 1/2" Auto Valve (Block Rotor Zones)
Quick Coupling Valve
Drain Valve Assy.
Air Relief Valve Assy. (Golf Course)
Air Relief Valve Assy. (Offsite Main)
2" Valve Assy.

HDPE LATERAL PIPE (RECLAIMED)
2" High Density Polyethylene PE 4710, DR 13.5
(All Unmarked Lateral Pipe is 2")
4" High Density Polyethylene PE 4710, DR 13.5
HDPE MAINLINE PIPE (RECLAIMED)
6" High Density Polyethylene PE 4710, DR 13.5
8" High Density Polyethylene PE 4710, DR 13.5
10" High Density Polyethylene PE 4710, DR 13.5
12" High Density Polyethylene PE 4710, DR 13.5
16" High Density Polyethylene PE 4710, DR 13.5

HDPE TRANSFER MAINLINE PIPE (RECLAIMED)
6" High Density Polyethylene SDR 13.5
10" High Density Polyethylene SDR 13.5
12" High Density Polyethylene SDR 13.5
16" High Density Polyethylene SDR 13.5

PVC PIPE (RECLAIMED)
1 1/2" Class 200 PVC IPS Solvent Weld
TWO-WAY-WIRE PATHS
#12 AWG (MAIN TRUNK)
WirePath - Red
WirePath - Blue
WirePath - Green
WirePath - Orange
WirePath - Brown
WirePath - Purple
WirePath - Yellow

TWO-WAY-WIRE PATHS
#14 AWG (LATERAL TRUNK)
WirePath - Black

TWO-WIRE SYSTEM
Wire Group Zones
Decoder/ICS Ground Assembly Includes:
(1) Rod, (1) Plate, (1) Surge Arrestors
in a 10" Splice Box

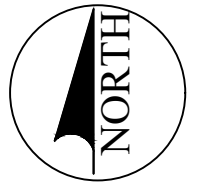
3 Way Splice
Central Computer
MISCELLANEOUS
Pump Station
Weather Station
Hole Number
Pipe Jumps



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SCALE
1" = 120'

0' 60' 120' 240'
1 inch = 120ft.



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION OFFSITE MAINLINE PLANS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT_JAX BEACH GC_IRR_DESIGN-100-080525

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

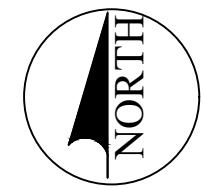
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XOV



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SCALE
1" = 100'

0' 50' 100' 200'
1 inch = 100ft.



LEGEND

VALVE - IN - HEAD SPRINKLERS

Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

Indicates Tail Assembly Attached Sprinkler - Decrease
in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

BLOCK SPRINKLERS

Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
Part Circle LA Block Sprinkler, 40' Spacing @ 45psi

VALVES

- 4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
- 4"-12" D.I. Gate Valve w/ HDPE Ends (Offsite Main)
- 4" D.I. Gate Valve w/ HDPE Ends
- 1 1/2" Auto Valve (Block Rotor Zones)
- Quick Coupling Valve
- Drain Valve Assy.
- Air Relief Valve Assy. (Golf Course)
- Air Relief Valve Assy. (Offsite Main)
- 2" Valve Assy.

HDPE LATERAL PIPE (RECLAIMED)

2" High Density Polyethylene PE 4710, DR 13.5
(All Unmarked Lateral Pipe is 2")

4" High Density Polyethylene PE 4710, DR 13.5

HDPE MAINLINE PIPE (RECLAIMED)

6" High Density Polyethylene PE 4710, DR 13.5
8" High Density Polyethylene PE 4710, DR 13.5
10" High Density Polyethylene PE 4710, DR 13.5
12" High Density Polyethylene PE 4710, DR 13.5
16" High Density Polyethylene PE 4710, DR 13.5

HDPE TRANSFER MAINLINE PIPE (RECLAIMED)

- 6" High Density Polyethylene SDR 13.5
- 10" High Density Polyethylene SDR 13.5
- 12" High Density Polyethylene SDR 13.5
- 16" High Density Polyethylene SDR 13.5

PVC PIPE (RECLAIMED)

1 1/2" Class 200 PVC IPS Solvent Weld

TWO-WAY-WIRE PATHS

#12 AWG (MAIN TRUNK)

WirePath - Red
WirePath - Blue
WirePath - Green
WirePath - Orange
WirePath - Brown
WirePath - Purple
WirePath - Yellow

TWO-WAY-WIRE PATHS

#14 AWG (LATERAL TRUNK)

WirePath - Black

TWO-WIRE SYSTEM

Wire Group Zones

Decoder/ICS Ground Assembly Includes:
(1) Rod, (1) Plate, (1) Surge Arrestors
in a 10" Splice Box

3 Way Splice

Central Computer

MISCELLANEOUS

-  Pump Station
-  Weather Station
-  Hole Number
-  Pipe Jumps

JAX BEACH GOLF CLUB

JACKSONVILLE BEACH, FLORIDA

IRRIGATION OFFSITE MAINLINE PLANS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATL_JAX BEACH GC_IRR_DESIGN:100-080525

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

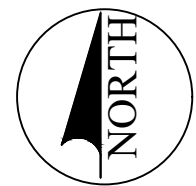
SHEET
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0' 50' 100' 200'
1 inch = 100ft.



JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION OFFSITE MAINLINE PLANS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT_JAX BEACH GC_IRR_DESIGN-100-080525

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION DATE

SHEET
X2

LEGEND

VALVE - IN - HEAD SPRINKLERS

Part Circle V-I-H Sprinkler, 80' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 80' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 70' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 70' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 60' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 60' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 50' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 50' Spacing @ 80psi
Part Circle V-I-H Sprinkler, 40' Spacing @ 80psi
Full Circle V-I-H Sprinkler, 40' Spacing @ 80psi

Indicates Tail Assembly Attached Sprinkler - Decrease
in Range 6', Radius 31', Addl. Flow 3.0 gpm @ 80 psi

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Part Circle LA Block Sprinkler, 30' Spacing @ 45psi
Part Circle LA Block Sprinkler, 40' Spacing @ 45psi
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4"-12" D.I. Gate Valve w/ HDPE Ends (Golf Course Main)
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4" D.I. Gate Valve w/ HDPE Ends
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Quick Coupling Valve
Drain Valve Assy.
Air Relief Valve Assy. (Golf Course)
Air Relief Valve Assy. (Offsite Main)
2" Valve Assy.

HDPE LATERAL PIPE (RECLAIMED)

2" High Density Polyethylene PE 4710, DR 13.5
(All Unmarked Lateral Pipe is 2")

4" High Density Polyethylene PE 4710, DR 13.5

HDPE MAINLINE PIPE (RECLAIMED)

6" High Density Polyethylene PE 4710, DR 13.5

8" High Density Polyethylene PE 4710, DR 13.5

10" High Density Polyethylene PE 4710, DR 13.5

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6" High Density Polyethylene SDR 13.5

10" High Density Polyethylene SDR 13.5

12" High Density Polyethylene SDR 13.5

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PVC PIPE (RECLAIMED)

1 1/2" Class 200 PVC IPS Solvent Weld

TWO-WAY-WIRE PATHS

#12 AWG (MAIN TRUNK)

WirePath - Red

WirePath - Blue

WirePath - Green

WirePath - Orange

WirePath - Brown

WirePath - Purple

WirePath - Yellow

TWO-WAY-WIRE PATHS

#14 AWG (LATERAL TRUNK)

WirePath - Black

TWO-WIRE SYSTEM

Wire Group Zones

Decoder/ICS Ground Assembly Includes:
(1) Rod, (1) Plate, (1) Surge Arrestors
in a 10" Splice Box

3 Way Splice

Central Computer

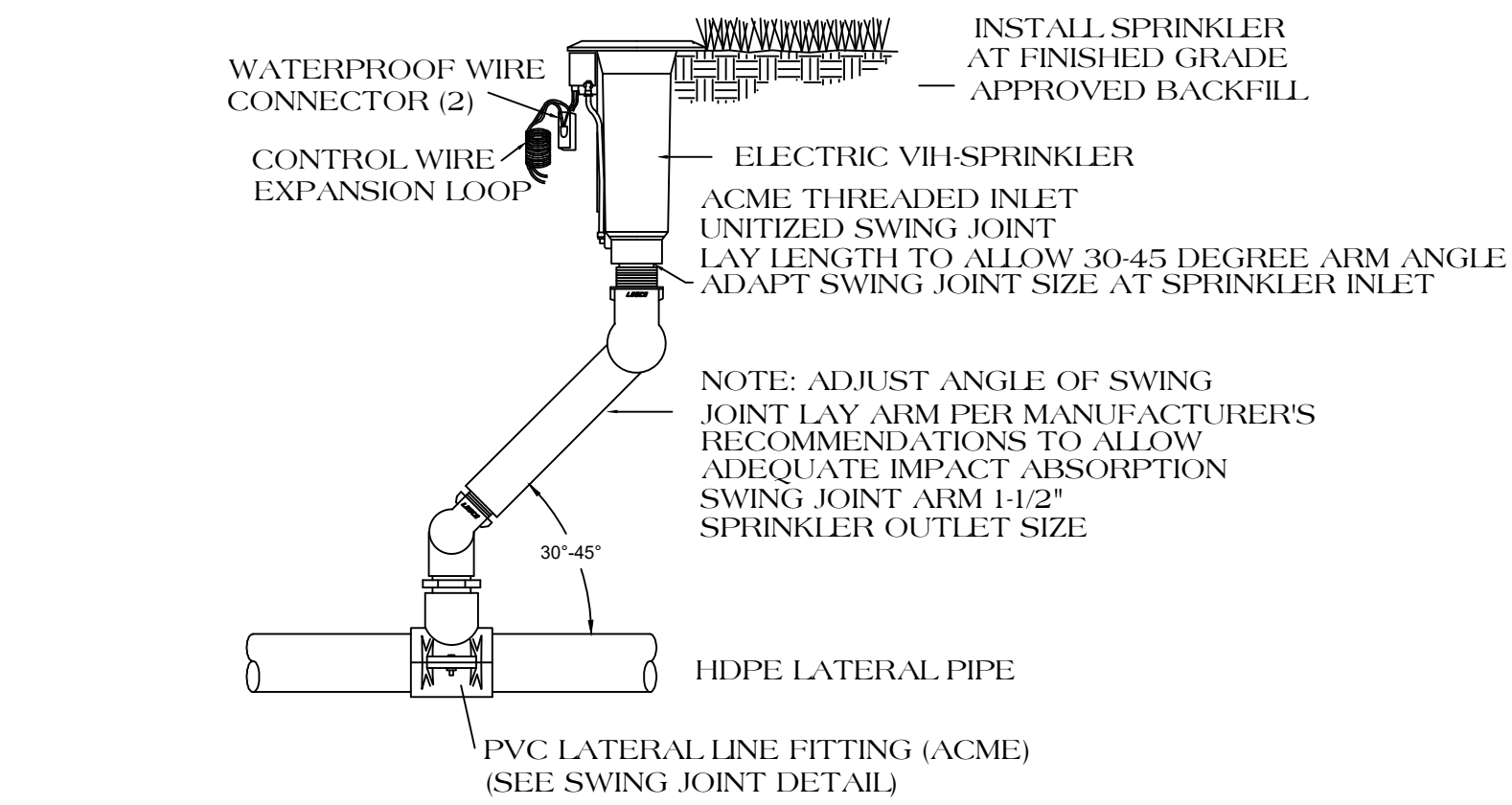
MISCELLANEOUS

Pump Station

Weather Station

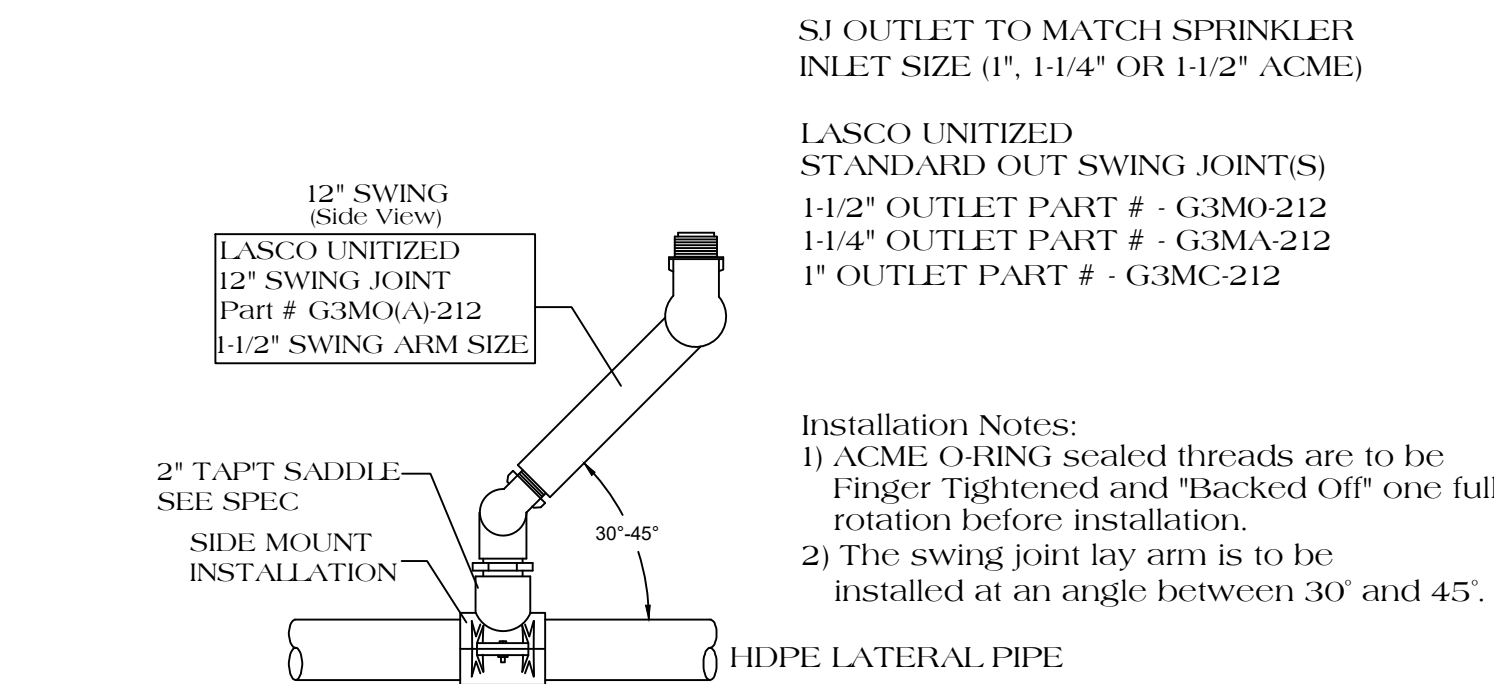
Hole Number

Pipe Jumps



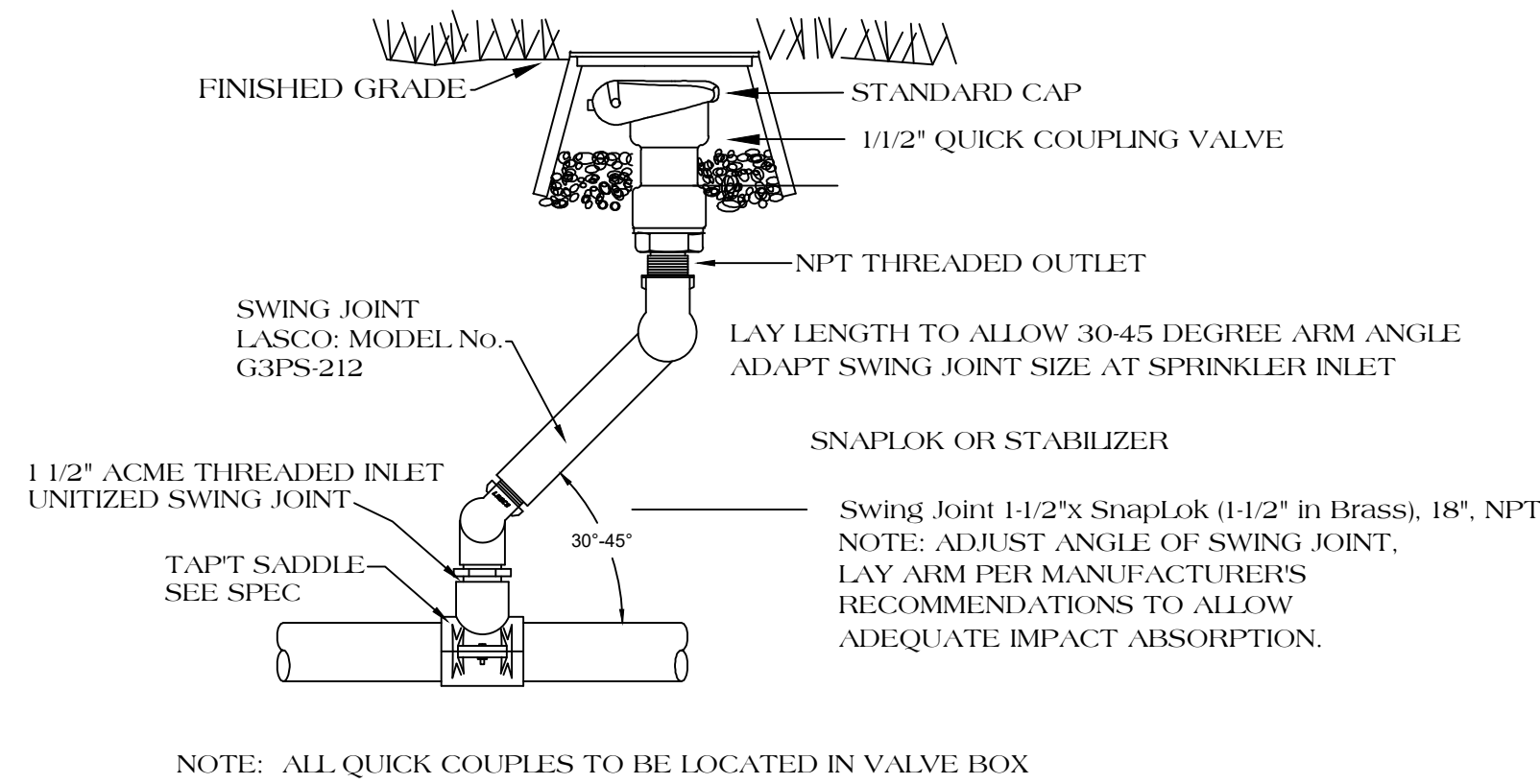
Golf Sprinkler Detail

N.T.S



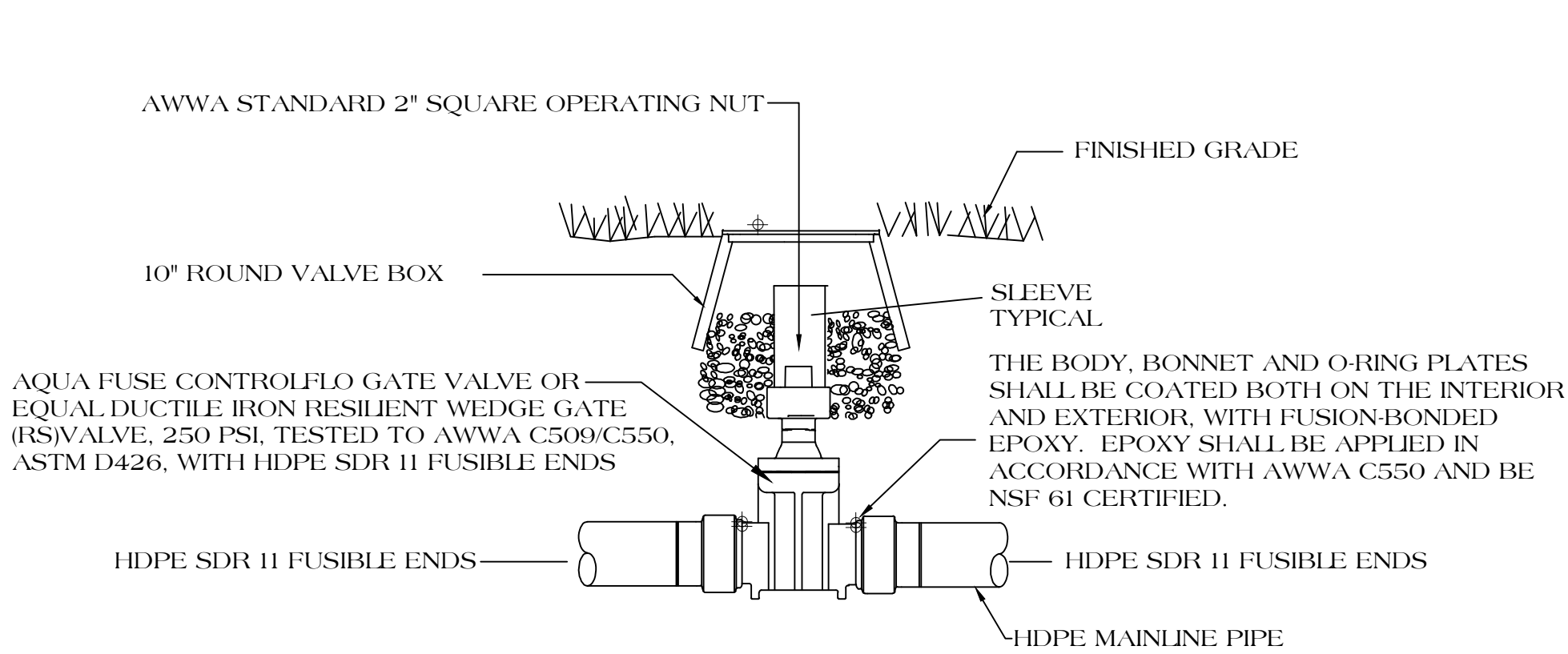
Swing Joint Detail

N.T.S



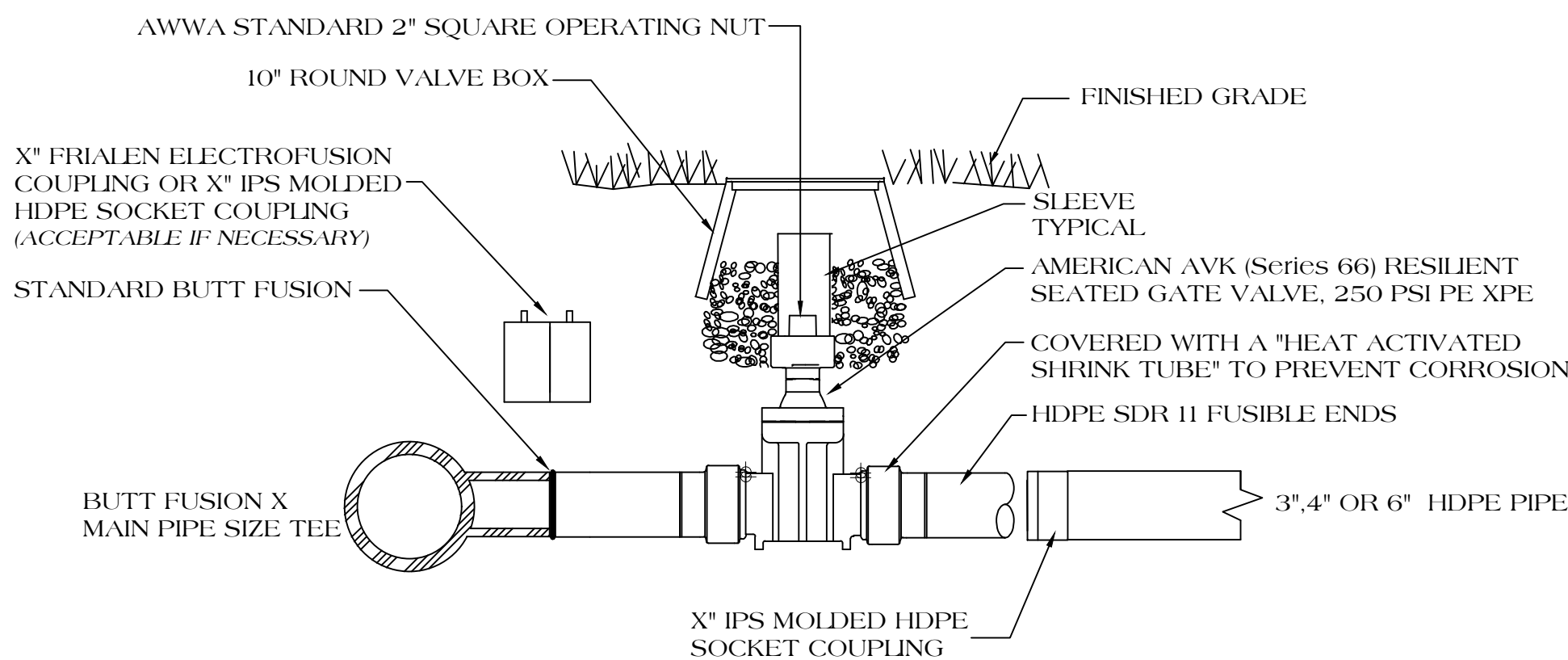
Quick Coupler Valve Detail

N.T.S



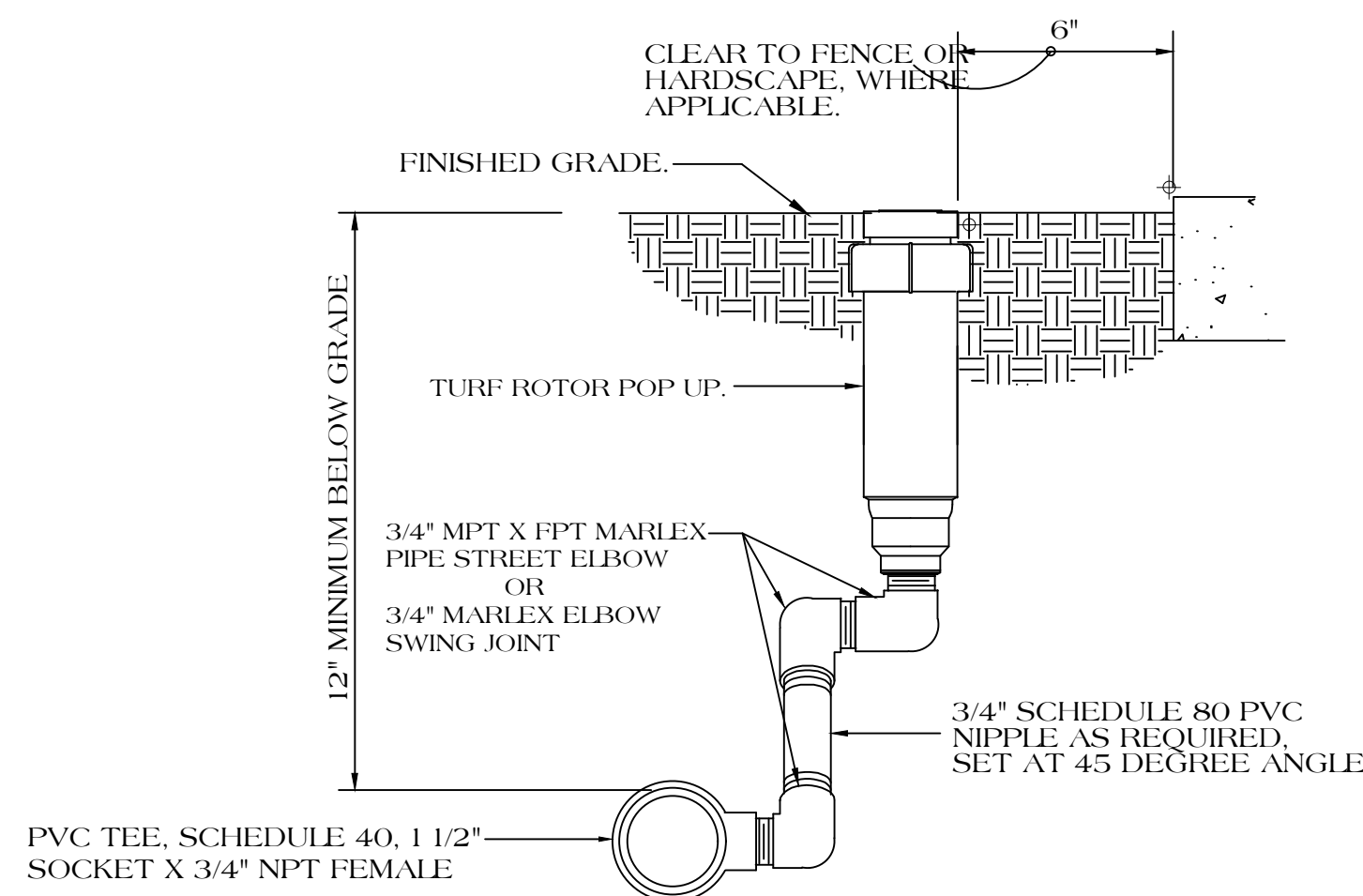
Mainline Isolation Valve

N.T.S



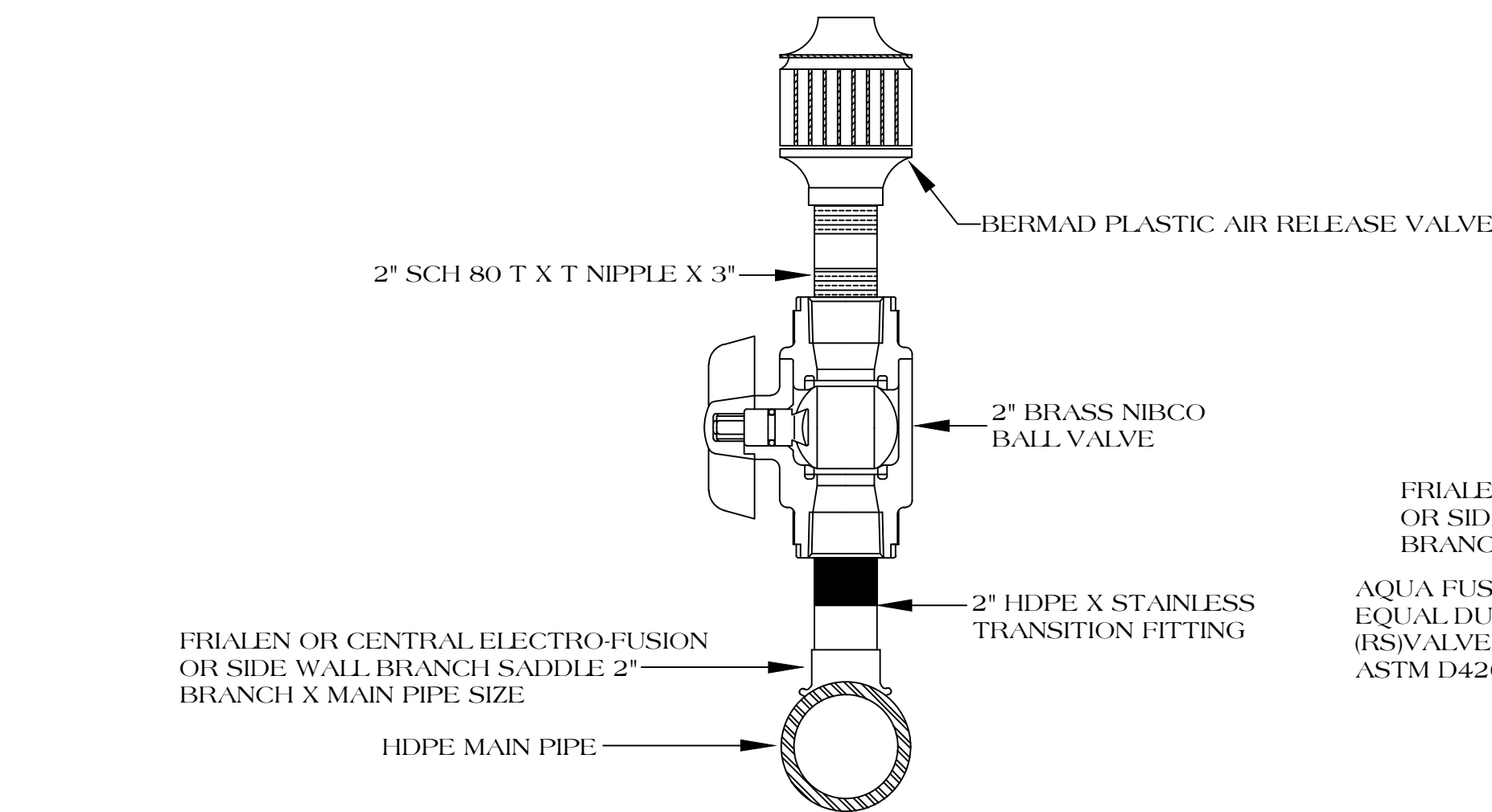
Lateral Valve Assembly (HDPE)

N.T.S



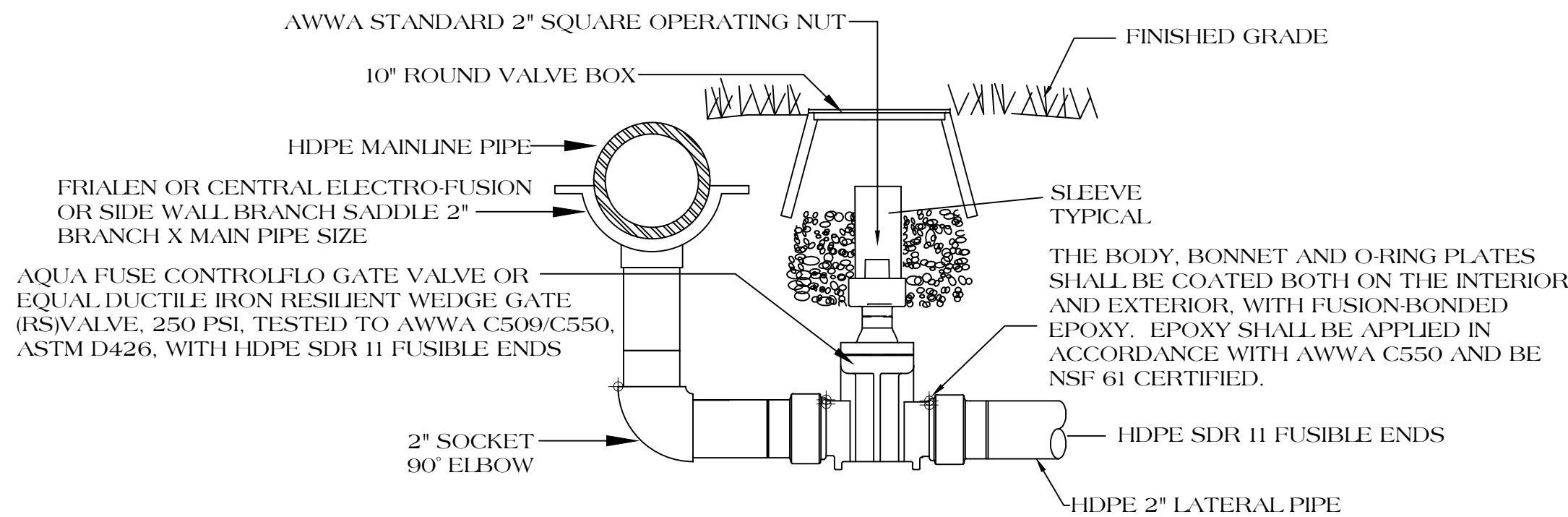
Turf Rotor Assembly
Landscape Areas

N.T.S



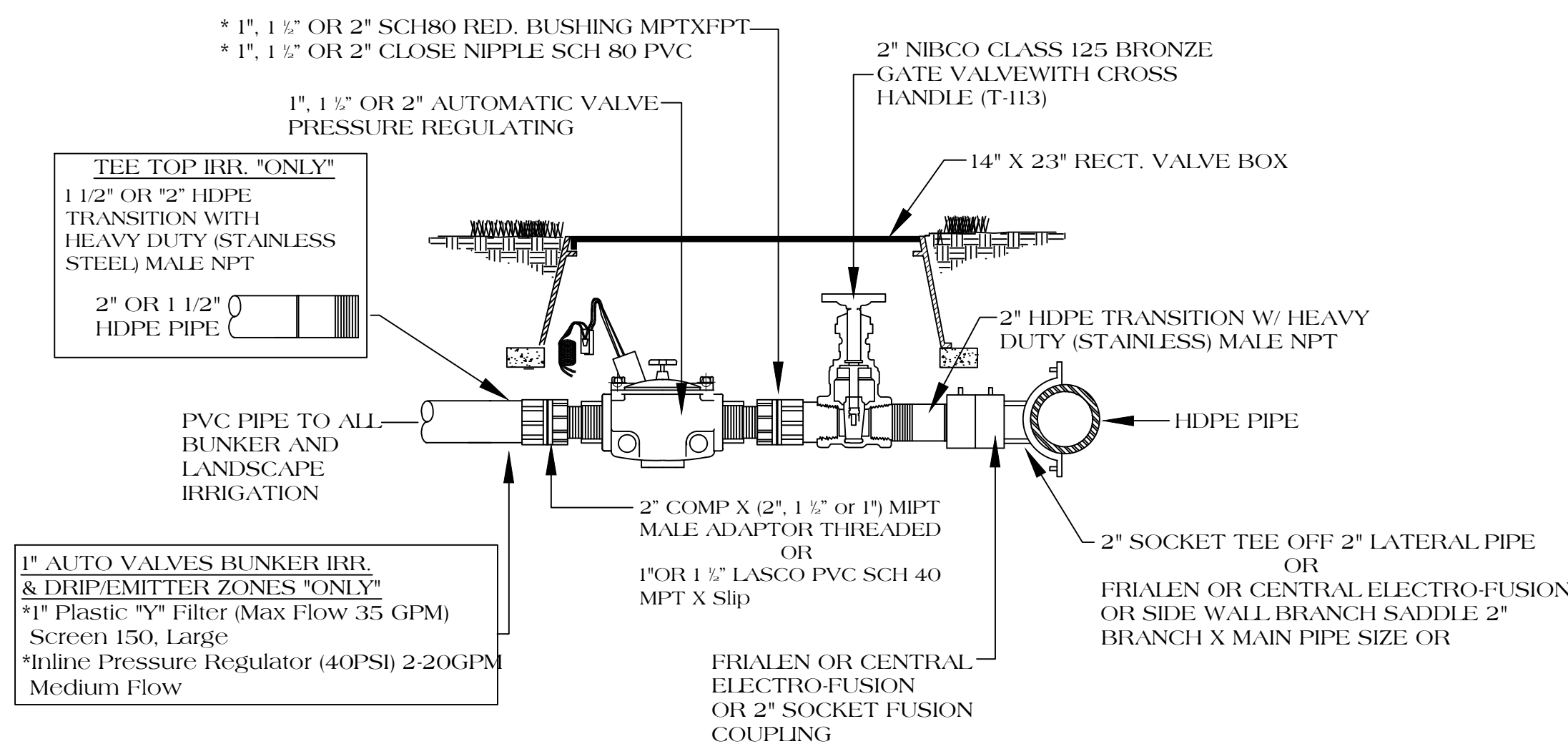
Air Release Valve Detail (HDPE)

N.T.S



2" Drain Valve Detail (HDPE)

N.T.S



Automatic Control Valve Assembly (TYP.)

N.T.S



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SCALE
N.T.S.

JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION DETAILS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT_JAX BEACH GC_IRR_DESIGN-100-080525

PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

DATE

SHEET
D1



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SCALE
N.T.S.

JAX BEACH GOLF CLUB
JACKSONVILLE BEACH, FLORIDA
IRRIGATION TWO-WIRE DETAILS

DATE - 08-05-25

DESIGN BY - SH

DRAWN BY - SH

FILE NAME

ATT: JAX BEACH GC, IRR_DESIGN-100-080525

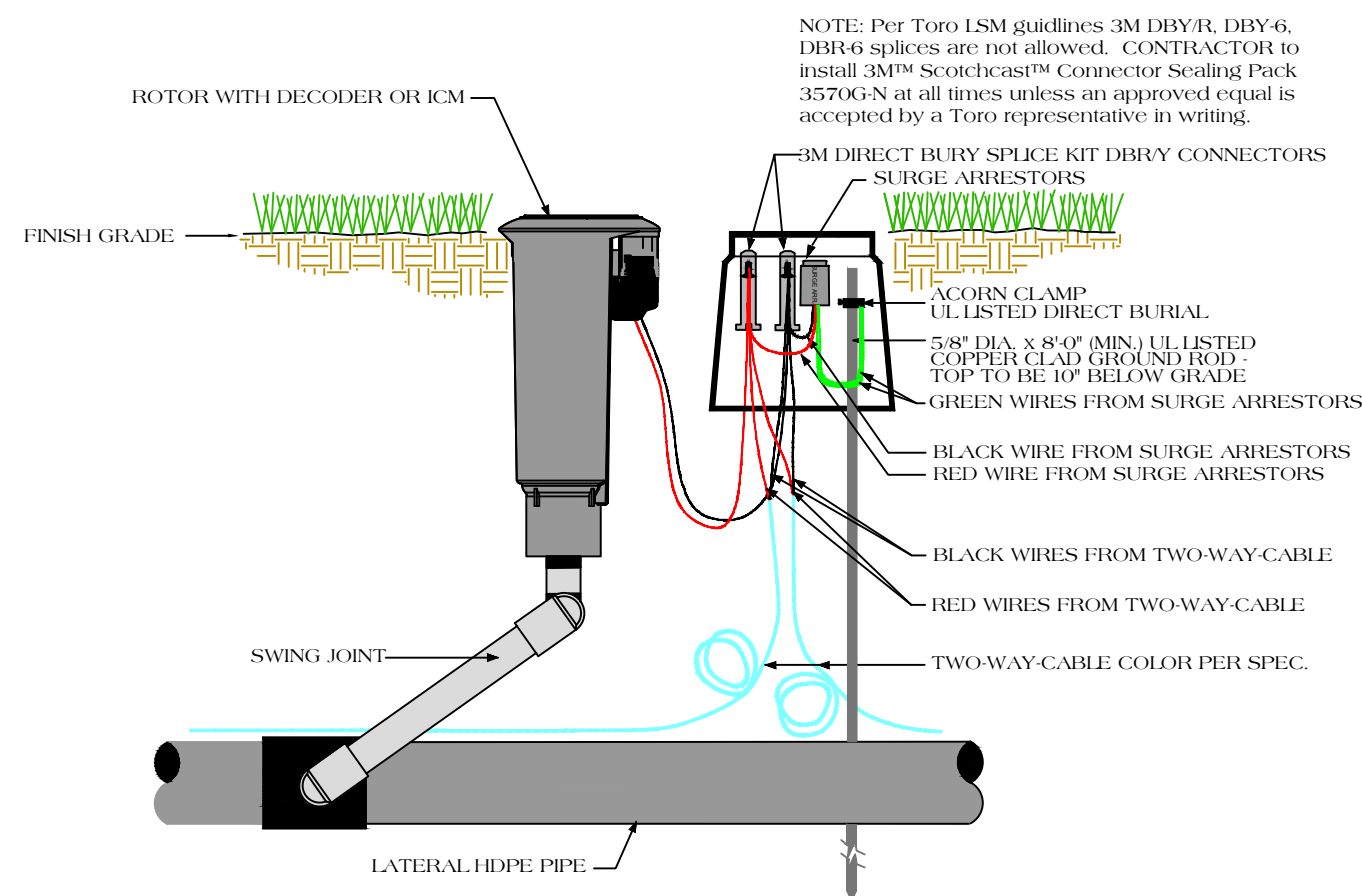
PROJECT NO.
000-00

DESCRIPTION: 90%

REVISION

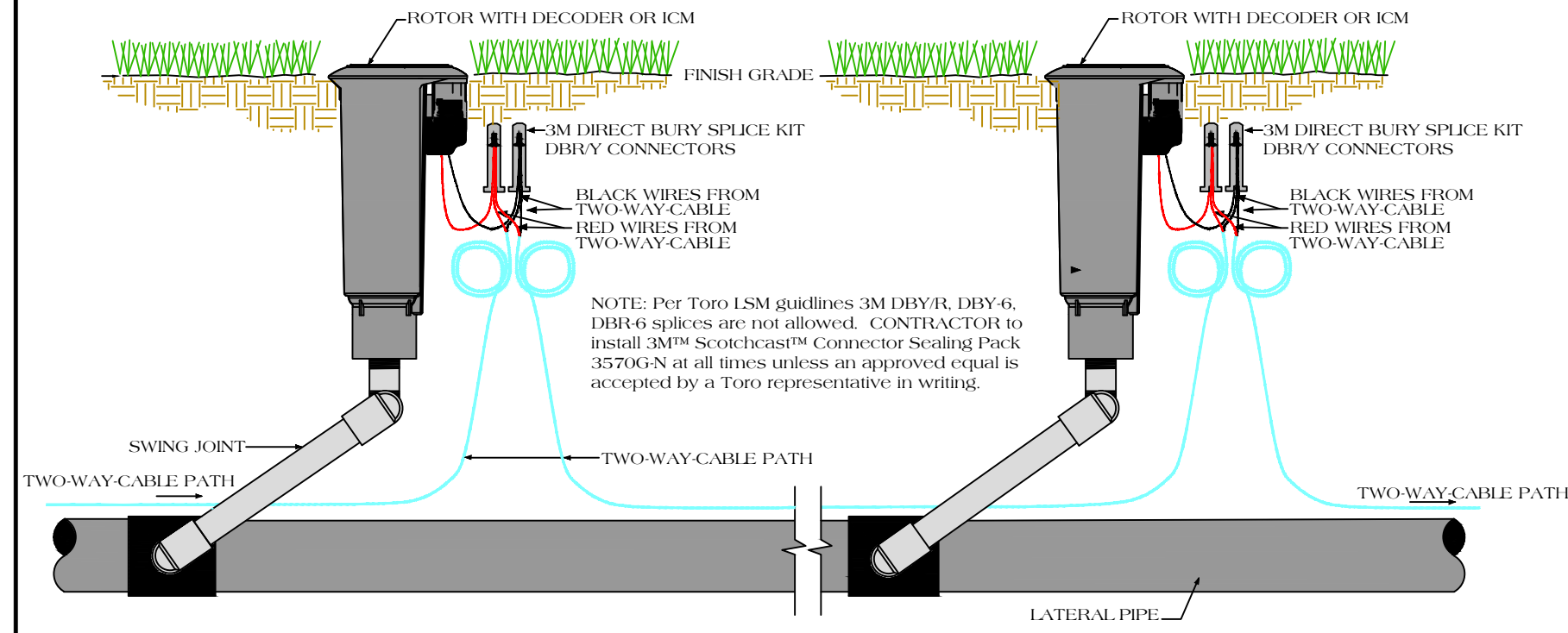
DATE

SHEET
D1



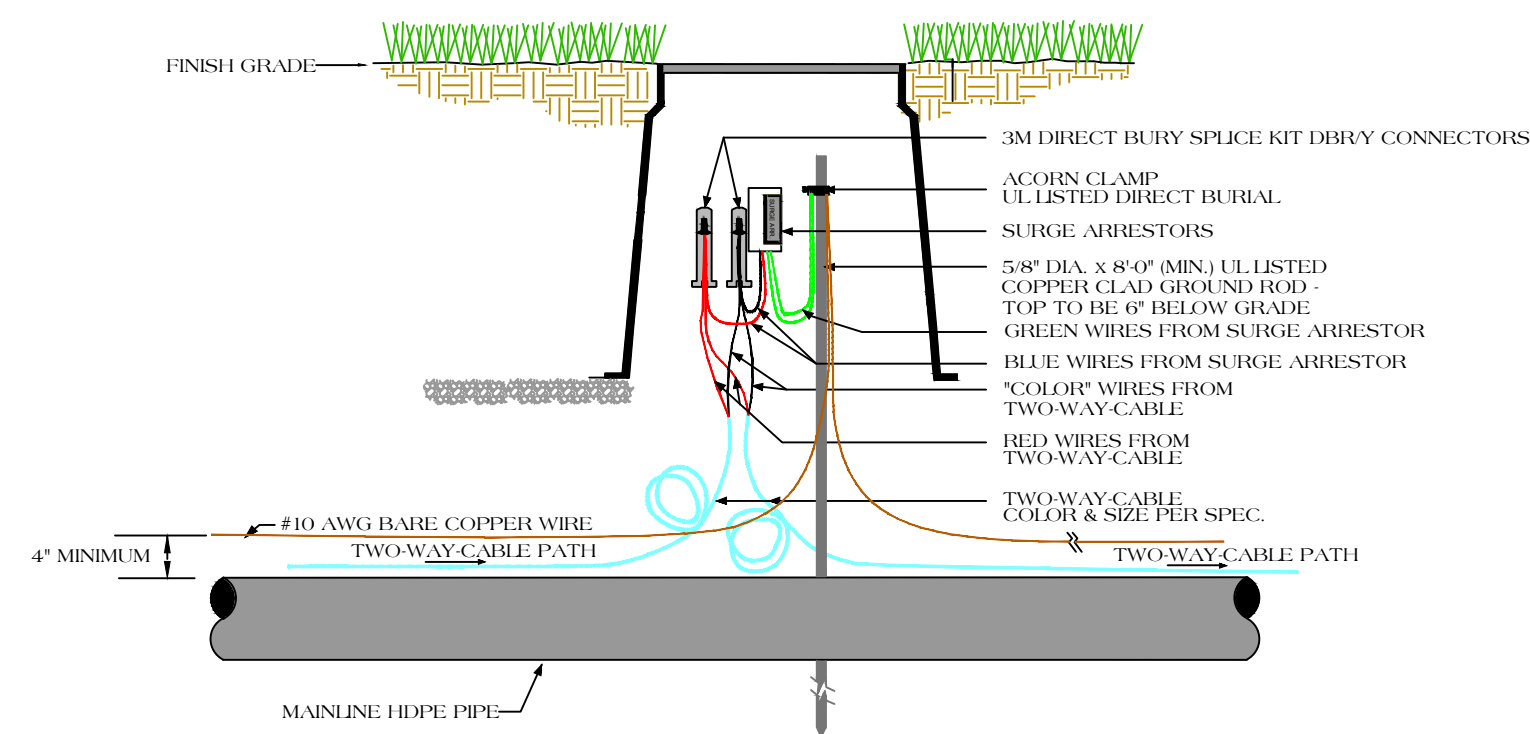
NOTE:
1. AT ALL SPICE LOCATIONS, PROVIDE SUFFICIENT SLACK TO ALLOW THE SPICE TO BE RAISED A MINIMUM OF 24" ABOVE GRADE FOR INSPECTION.

LATERAL SPRINKLER GROUND ASSEMBLY
NOT TO SCALE



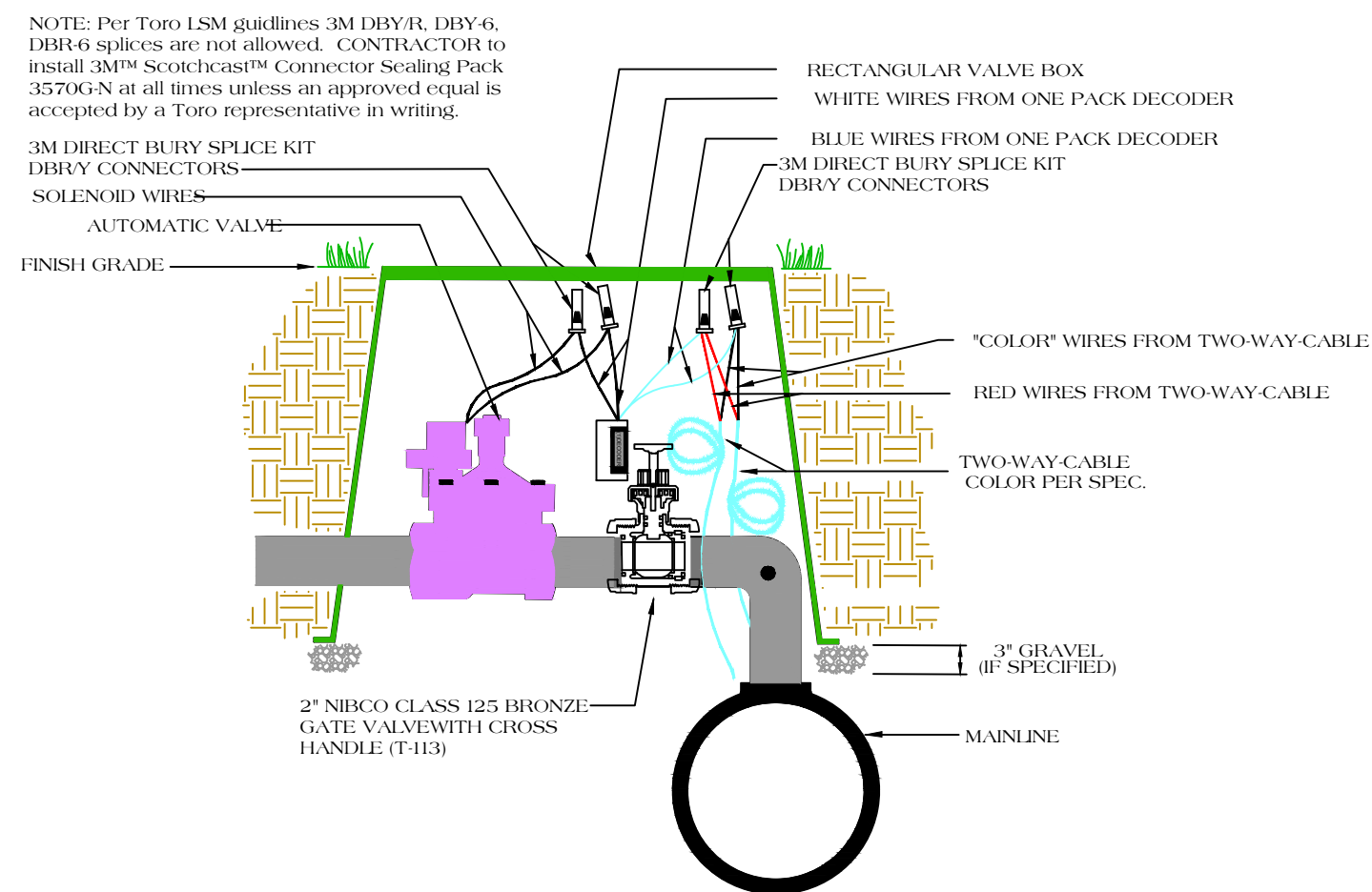
NOTE:
1. AT ALL SPICE LOCATIONS, PROVIDE SUFFICIENT SLACK TO ALLOW THE SPICE TO BE RAISED A MINIMUM OF 18" ABOVE GRADE FOR INSPECTION.

VALVE-IN-HEAD ROTORS DECODER/ICS INSTALLATION
NOT TO SCALE



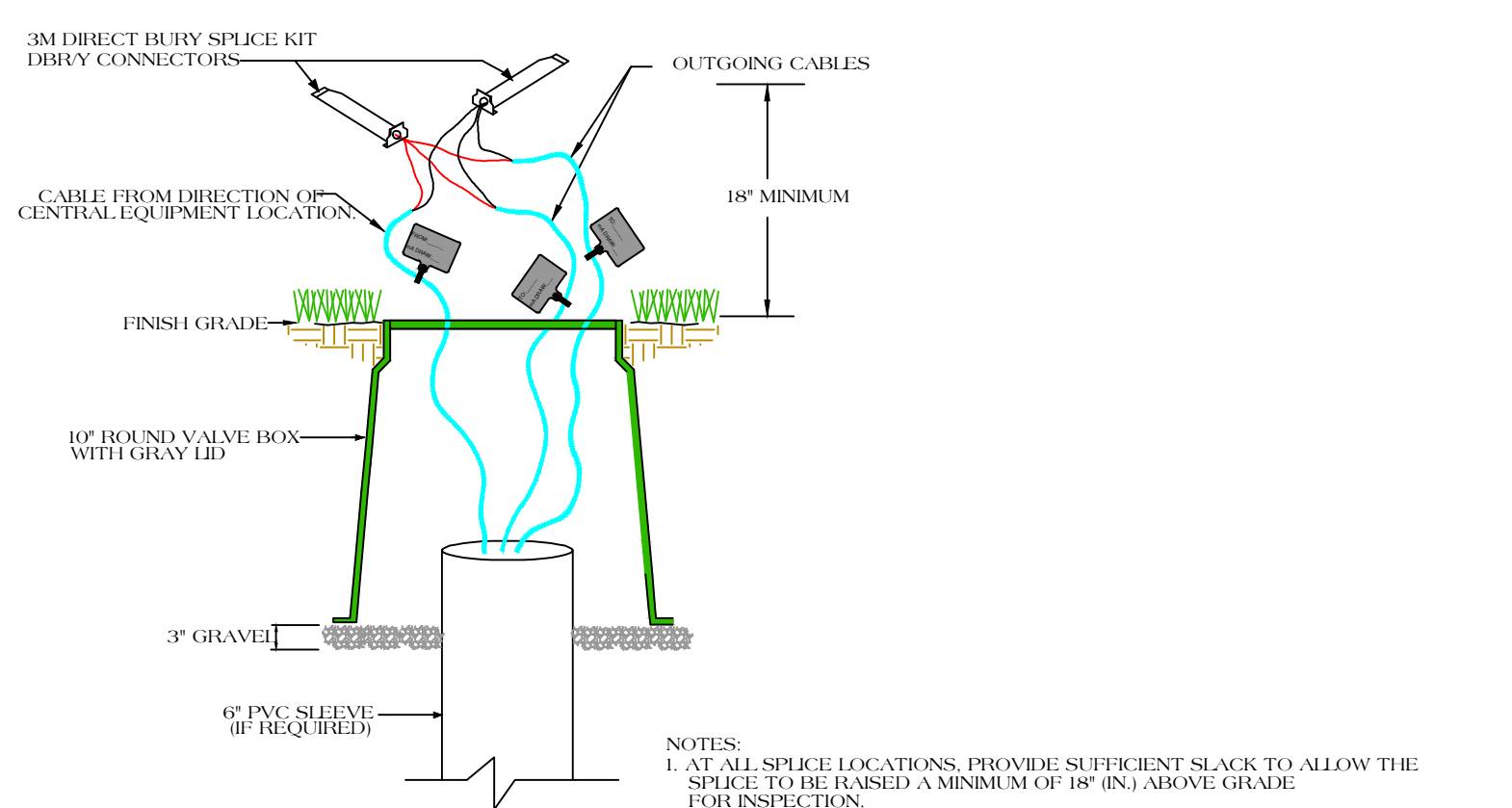
NOTE:
1. AT ALL SPICE LOCATIONS, INCLUDING DECODERS AND SOLENOIDS, PROVIDE SUFFICIENT SLACK TO ALLOW THE SPICE TO BE RAISED A MINIMUM OF 18" ABOVE GRADE FOR INSPECTION.
2. AN EXTRA TWELVE (12) PIECES OF #10AWG BARE COPPER WIRE TWISTED TOGETHER WITH INCOMING BOND WIRE IS NEEDED WHEN USING A CAPWELD PLUS ONE SHOT CONTROL UNIT WELDING KIT.

MAINLINE GROUND ASSEMBLY
NOT TO SCALE



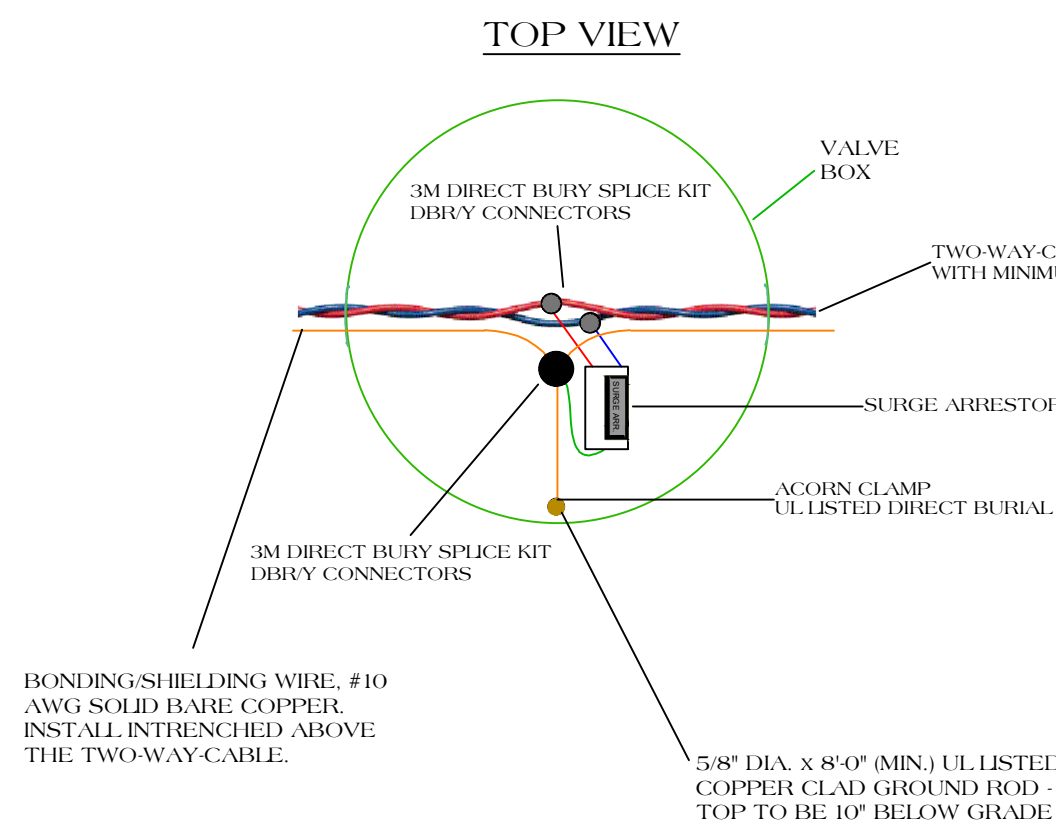
NOTE:
1. AT ALL SPICE LOCATIONS, INCLUDING DECODERS AND SOLENOIDS, PROVIDE SUFFICIENT SLACK TO ALLOW THE SPICE TO BE RAISED A MINIMUM OF 18" ABOVE GRADE FOR INSPECTION.

ONE DECODER WITH ELECTRIC VALVE
NOT TO SCALE



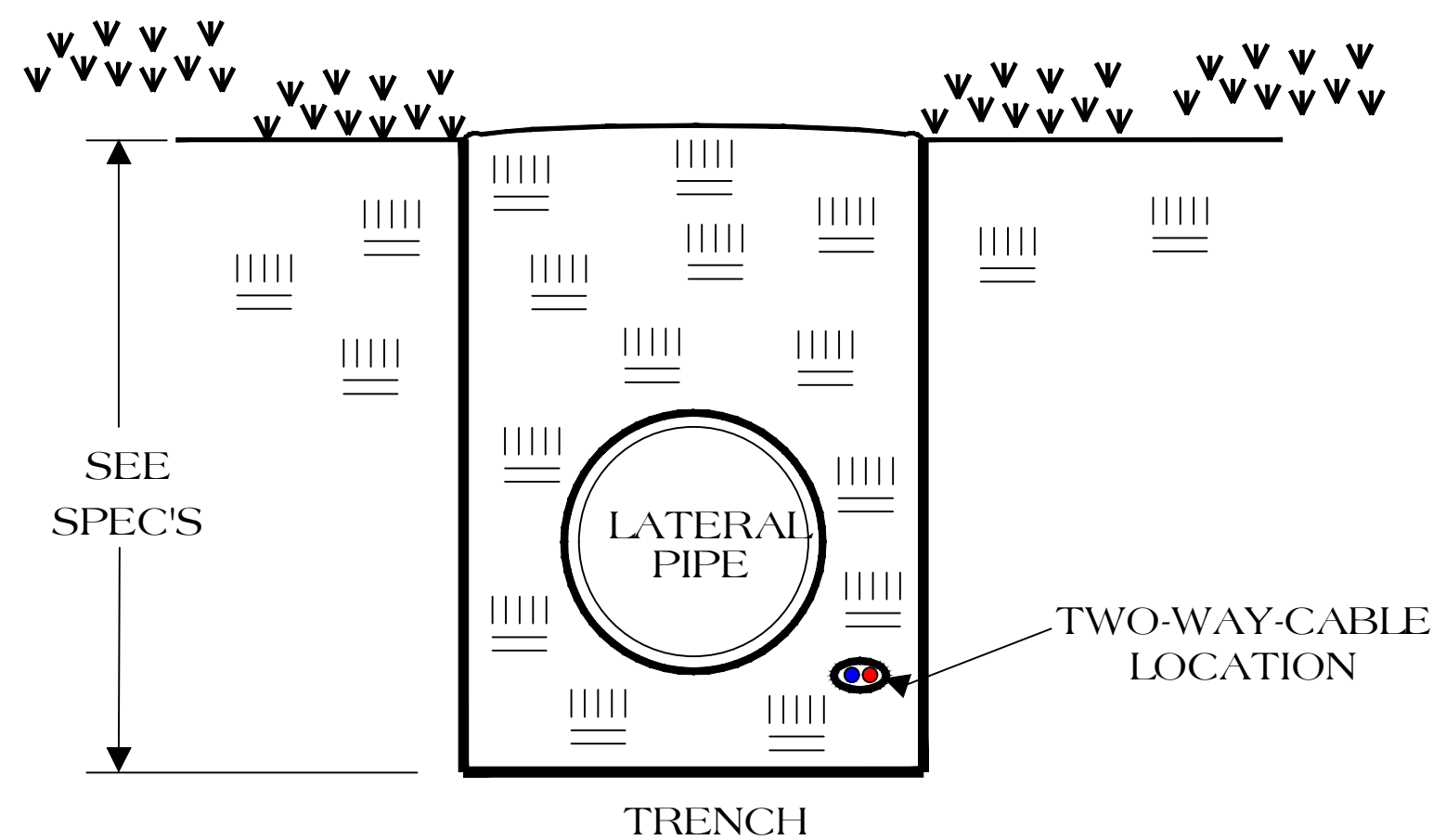
NOTES:
1. AT ALL SPICE LOCATIONS, PROVIDE SUFFICIENT SLACK TO ALLOW THE SPICE TO BE RAISED A MINIMUM OF 18" (IN.) ABOVE GRADE FOR INSPECTION.
2. TWO-WAY CABLE SHALL HAVE A MINIMUM OF 18" (IN.) OF COVER.
3. CLEARLY MARK ON TAG WHERE SUPPLY CABLE ORIGINATES FROM (EX: FROM 881 HOLE) AND EACH OUTGOING CABLE GOES TO (EX: TO 1001 GREEN) IN AN OUTWARD BOUND DIRECTION FROM THE CENTRAL EQUIPMENT LOCATION.
4. CLEARLY MARK THE MILLAMP DRAW FOR EACH LEG OF CABLE BASED ON THE NUMBER OF DECODERS "DOWNSTREAM" FROM THAT POINT.
5. CALCULATE THE MILLAMP DRAW BASED ON THE FORMULA:
0.5 MA PER SINGLE DECODER MULTIPLIED BY QUANTITY OF DECODERS
1.0 MA PER DECODER MULTIPLIED BY QUANTITY OF DECODERS

TWO-WAY-CABLE THREE WAY SPICE -W/ TAGS
NOT TO SCALE

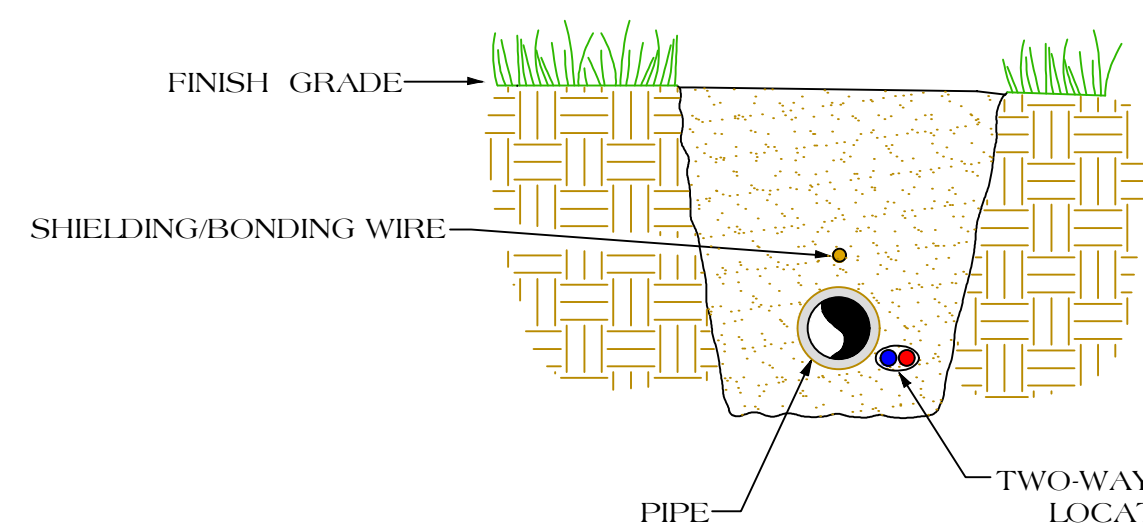


BONDING/SHEILDING WIRE, #10 AWG SOLID BARE COPPER, INSTALL IN TRENCH ABOVE THE TWO-WAY-CABLE.

TWO-WAY-WIRE WITH INTEGRAL LIGHTNING PROTECTION
NOT TO SCALE



TWO-WAY-CABLE LATERAL TRENCH DETAIL
NOT TO SCALE



1. THE SHIELD/BOND WIRE SHALL BE A #10 AWG SOLID CORE BARE COPPER WIRE.
2. THE SHIELD/BOND WIRE SHALL BE LAID IN THE TRENCH AS STRAIGHT AS POSSIBLE AND POSITIONED APPROXIMATELY FOUR INCHES (4") ABOVE THE PIPE AND TWELVE TO EIGHTEEN INCHES (12" TO 18") BELOW GRADE.
3. ALL BENDS SHALL BE MADE AS A GENTLE SWEEP THEREBY REDUCING IMPEDANCE. THE SHIELD/BOND WIRE SHALL BE CONNECTED TO ALL ISP+ SURGE PROTECTORS USING A 3M DBRY SERIES SPICE KIT. CONNECTIONS TO A GROUND ROD SHALL BE MADE WITH A UL LISTED ACORN CLAMP.
4. GROUND RODS OR GROUND PLATES SHALL BE INSTALLED PER RAIN BRD RECOMMENDATIONS OF ONE (1) ROD OR PLATE EVERY 200 FEET OR PER PLAN WITH 50 OHMS OR LESS OF GROUND RESISTANCE.

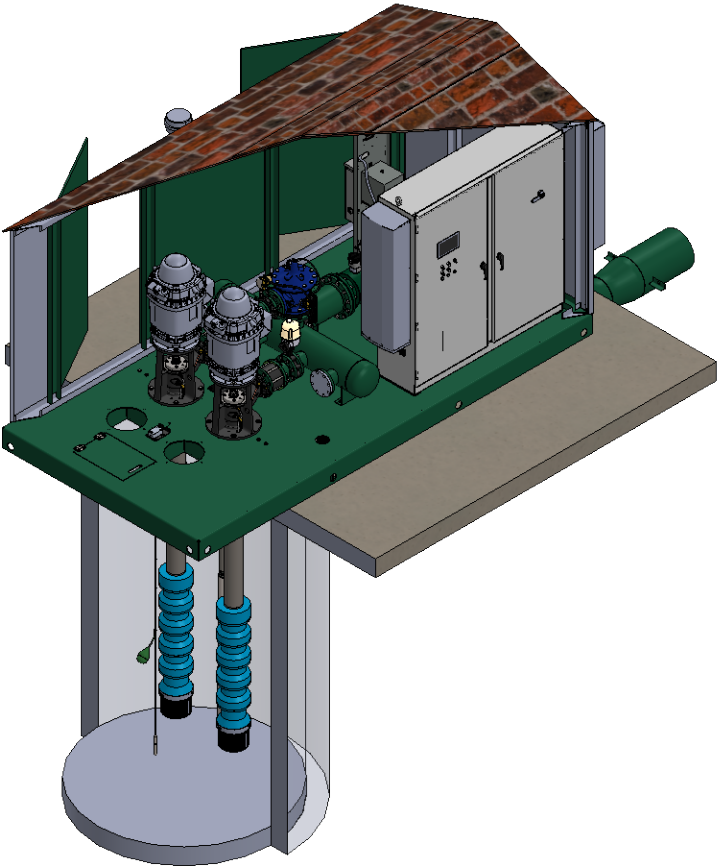
SHIELDING/BONDING WIRE DETAIL (OPTIONAL)
NOT TO SCALE

DESIGN SPECIFICATIONS				
MODEL #: VTVE-7C-75X2/(75X2)/5ST-480-3-1600(3200)-110			JOB #: NA	
STATION PERFORMANCE: 1600 GPM / FUTURE 3200 GPM @ 110 PSI				
MAIN PUMP: 75 HP (QTY. 4)		SUSTAIN PUMP: 5 HP		JOCKEY PUMP: NA
POWER REQUIREMENTS: 480V, 3 PH, 60 HZ, 368 FLA, 5 KVA			DISCONNECT SIZE: 600A	
EXHAUST FAN REQUIREMENTS: 5100 CFM		SURGE/LIGHTNING PROTECTION: PREMIUM		
PRV SIZE: 6 IN	EBVS: YES	PIPE COATING: PAINTED	COLOR: GREEN	
WATERVISION 2.0: YES		MECHANICAL SEALS: YES	LIFTING WEIGHT: NA LBS	SLAB LOAD: NA LBS
STATION COMPONENTS				
A	MAIN PUMP AND MOTOR			
B	SUSTAIN PUMP			
C	6" CHECK VALVE			
D	5" PUMP DISCHARGE ISO VALVE			
E	DRAIN			
F	PRESSURE RELIEF VALVE			
G	DISCHARGE PRESSURE TRANSDUCER W/ GAUGE			
H	PAINTED STEEL BASE			
J	10" ELECTROMAGNETIC FLOW METER			
K	WET WELL ACCESS HATCH			
L	NA			
M	10" STATION DISCHARGE ISOLATION VALVE			
N	CONTROL CABINET			
P	HEAT EXCHANGER			
R	LEVEL SENSOR			
S	10" FL X 16" PE DISCHARGE DROP PIPE			
T	COMPOSITE STATION ENCLOSURE WITH 160 MPH WIND LOAD RATING			
U	EXTERNAL STATION DISCONNECT			
V	70 WATT DUSK TO DAWN LIGHT			

PLEASE USE THE SPACE BELOW FOR ANY ADDITIONAL COMMENTS			

PLEASE VERIFY ALL INFORMATION WITH YOUR INITIAL AND DATE			
DESCRIPTION	SIZE	INITIAL	DATE
WET WELL SIZE	84 IN		
WET WELL DEPTH	138 IN		
MAINLINE CONNECTION	16" PE		
DROP PIPE COVER	36 IN		
INTAKE FLUME SIZE	30 IN		

☐ APPROVED AS SUBMITTED	DIMENSIONS AND SIZES OF EXISTING STRUCTURES, AND/OR COMPONENTS MUST BE VERIFIED TO WATERTRONICS BEFORE STATION CONSTRUCTION BEGINS. UNLESS SPECIFIED BY THE CUSTOMER, PUMP HOUSE/CONCRETE SLAB DIMENSIONS ARE RECOMMENDED MINIMUMS FOR NEC AND SERVICE CLEARANCE, AND ARE FOR ILLUSTRATION PURPOSES ONLY. PROJECT MANAGER SHALL BE CONSULTED ON FINAL DESIGN. THE PUMP STATION PROPOSED HEREIN IS DESIGNED TO BE PLACED IN A PUMP HOUSE FOR PROTECTION FROM THE ENVIRONMENT. IF A PUMP HOUSE IS NOT USED, WATERTRONICS MUST BE NOTIFIED AT TIME OF QUOTATION SO SPECIAL PROVISIONS CAN BE MADE.
☐ APPROVED AS NOTED	
☐ REVISE AND RESUBMIT	
REVIEWD BY: _____	
NAME: _____	
DATE: _____	



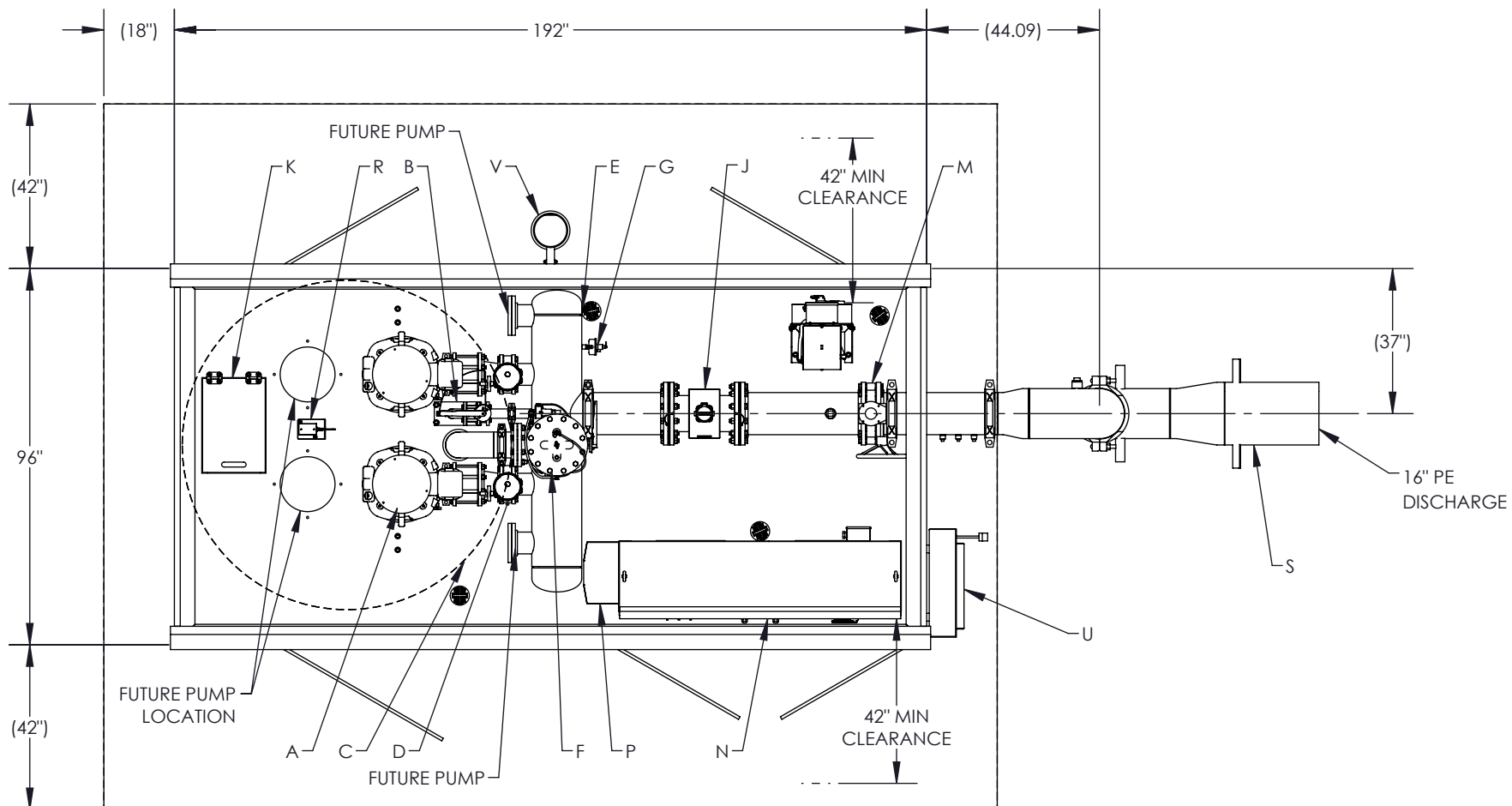
ISOMETRIC VIEW

Revision Table				
1	MTM	5/6/2025	ADD FUTURE PUMP CALL OUTS	
2	MTM	6/27/2025	UPDATED WET WELL DEPTH, ADDED INTAKE SCREEN	
3	MTM	7/9/2025	ADDED SIZE AND INTAKE FLUME INFORMATION	
REV	DRAWN BY	DATE	DESCRIPTION	
			JACKSONVILLE BEACH EFFLUENT RES COM	
			VTVE-7C-75X2/(75X2)/5ST-480-3-1600(3200)-110	
			DRAWN BY: MTM	DATE: 05/05/2025
			CHECK BY: _____	DATE: _____
SIZE: A	SCALE: 1:66	DWG NO. PRVT13630	REV: 3	PAGE: 1 OF 4


WATERTRONICSTM

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PLAN VIEW



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JACKSONVILLE BEACH EFFLUENT RES
COM
VTVE-7C-75X2/(75X2)/5ST-480-3-1600(3200)-110

DRAWN BY: MTM DATE: 05/05/2025

CHECK BY: DATE:

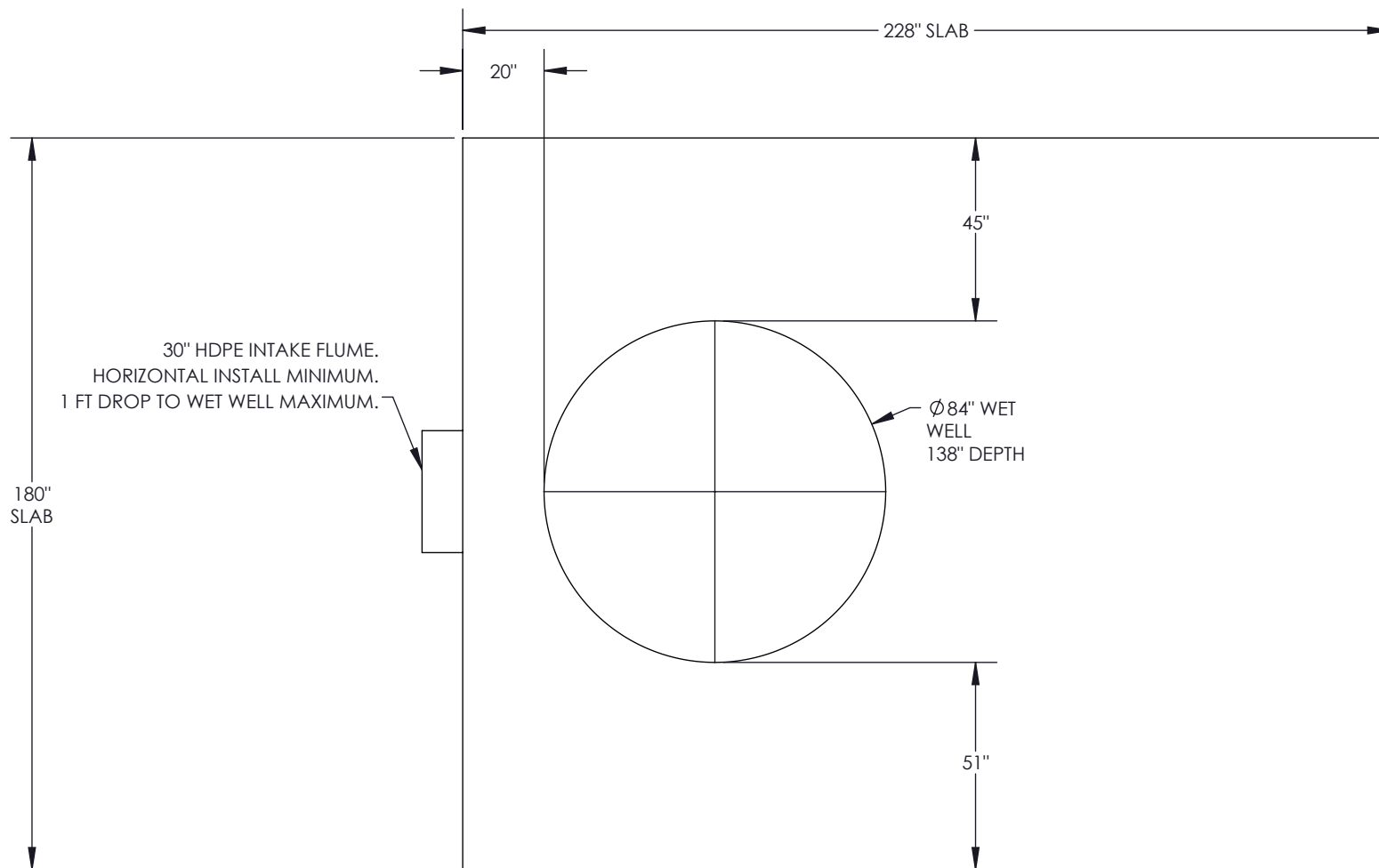
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A	1:42	PRVT13630	3	2 OF 4



SIZE: A	SCALE: 1:12	DWG NO. DDVT10400	REV: 0	PAGE: 0054
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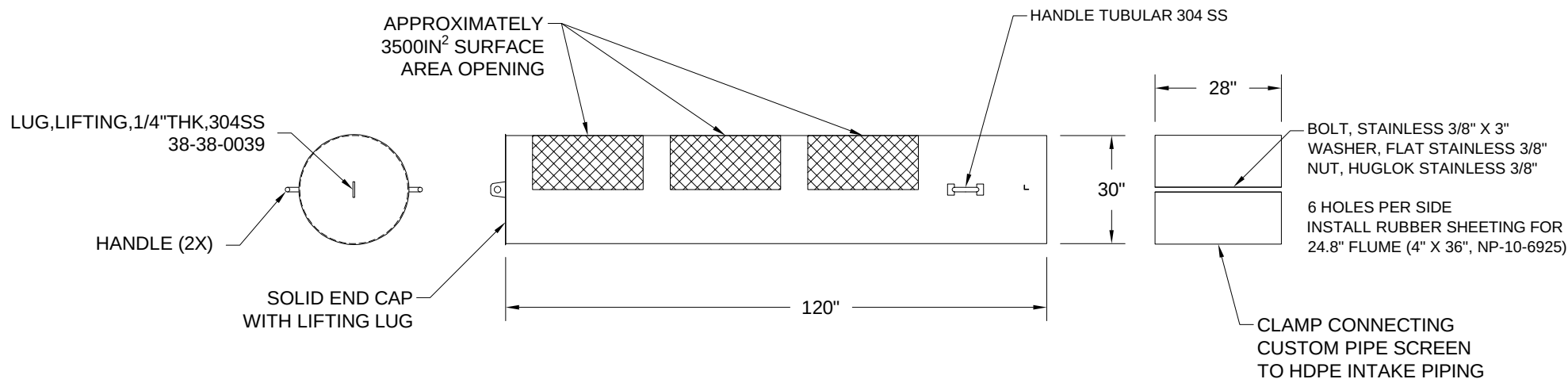
SLAB VIEW



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JACKSONVILLE BEACH EFFLUENT RES
COM
VTVE-7C-75X2/(75X2)/5ST-480-3-1600(3200)-110

DRAWN BY: MTM		DATE: 05/05/2025	
CHECK BY:		DATE:	
SIZE: A	SCALE: 1:42	DWG NO. PRVT13630	REV: 3
		PAGE: 4 OF 4	



CUSTOM INTAKE PIPE

7						DRAWN BY: MTM	DATE: 6/27/2025	TITLE:
6						CHECKED BY: ---	DATE: 00/00/00	JACKSONVILLE BEACH EFFLUENT RES COM
5						THIS DRAWING AND DESIGN, IS THE PROPERTY OF WATERTRONICS AND IS NOT TO BE REPRODUCED IN WHOLE OR PART, NOR EMPLOYED FOR ANY PURPOSE OTHER THAN SPECIFICALLY PERMITTED IN WRITING BY WATERTRONICS. THIS DRAWING LOANED AND SUBJECT TO RETURN ON DEMAND		
4								
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2	7/11/2025	MTM	UPDATED SCREEN DETAIL TO INLINE PIPE SCREEN					
1	--/--/----	---	---	---	---			
NO.	DATE	BY	DESCRIPTION	CHK DATE	CHK BY			
							SCALE: NTS	SHEET 1 OF 1 SHEETS
							JOB NO.: ---	DRAWING NO. PRVT13630



STRUCTURAL DESIGN INFORMATION

TYPICAL DRAWING

APPLICABLE CODES:
FLORIDA BUILDING CODE 2023
AISC 7-2022 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

DESIGN CRITERIA:

PROJECT LOCATION:

RISK CATEGORY: I

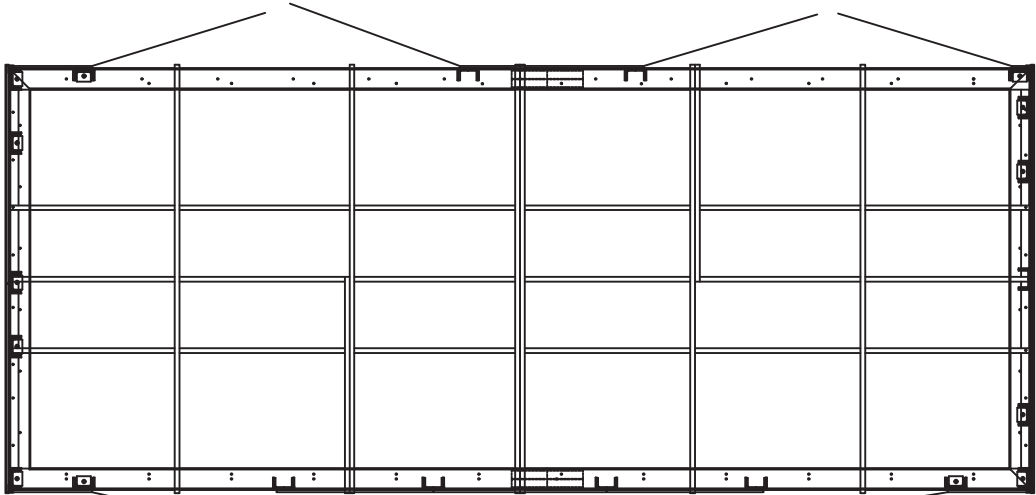
LOADS:
LIVE LOAD
ROOF: 20 PSF

SNOW LOAD: NONE

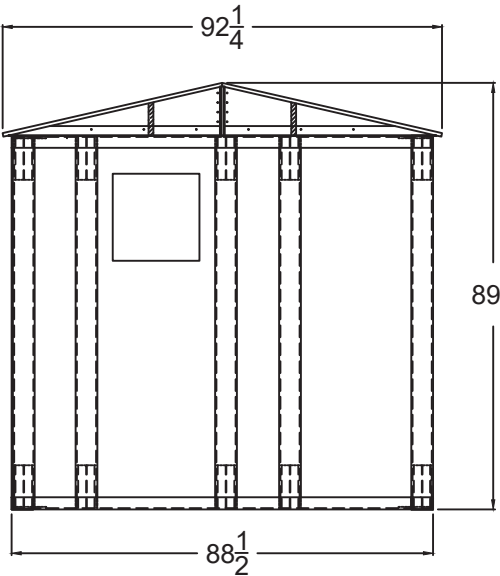
WIND LOAD
ULTIMATE WIND SPEED =160 MILES PER HOUR
EXPOSURE CATEGORY: D

SEISMIC LOAD:
SITE CLASS: D
S1: 0.034
Ss: 0.080
SD1: 0.048
SDs: 0.071
SEISMIC DESIGN CATEGORY: A

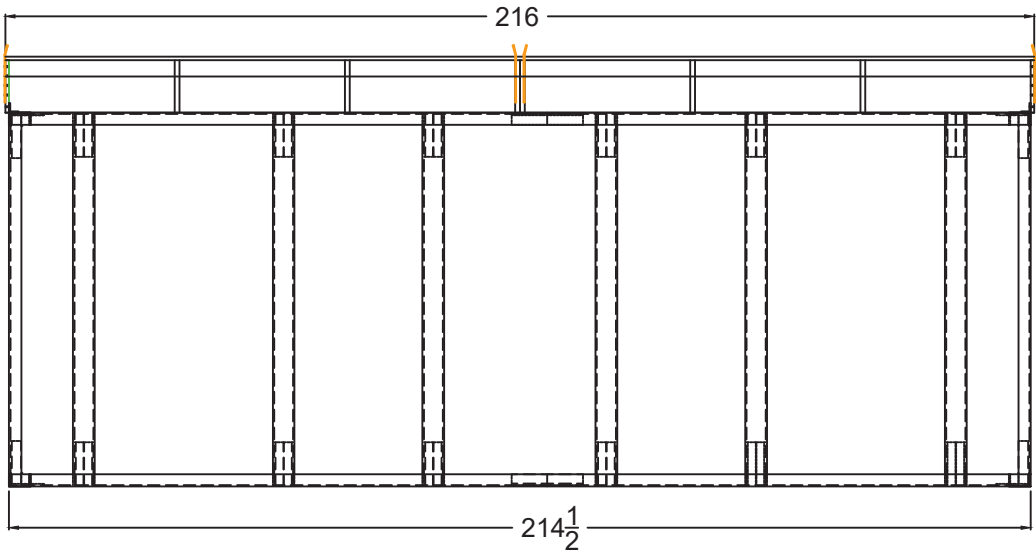
ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE



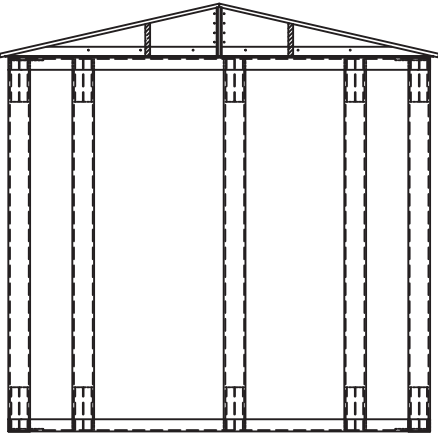
TOP VIEW



LEFT END VIEW



FRONT VIEW



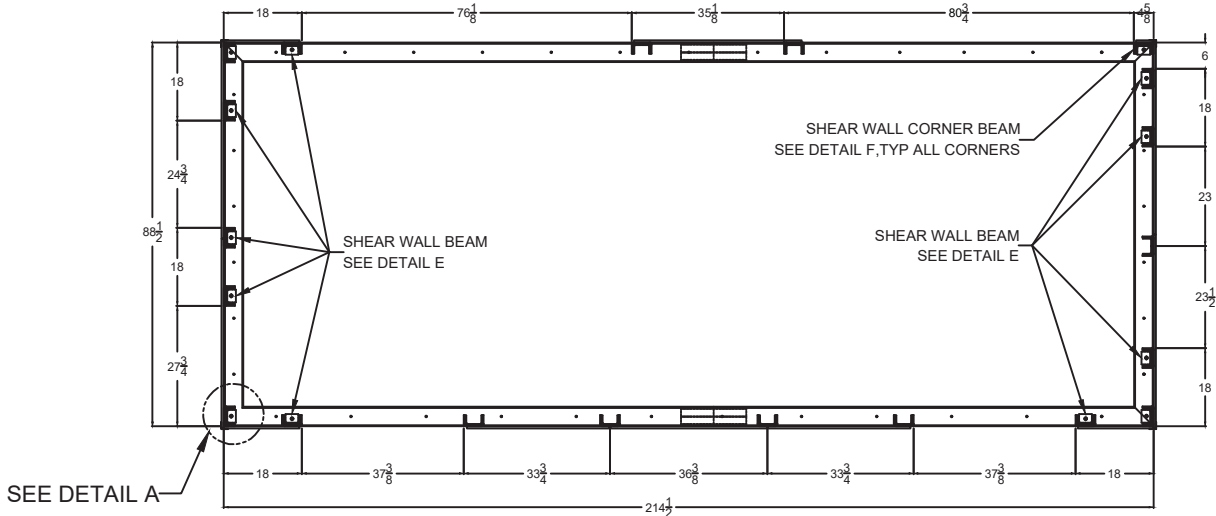
RIGHT END VIEW

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NO.	DATE	BY	DESCRIPTION

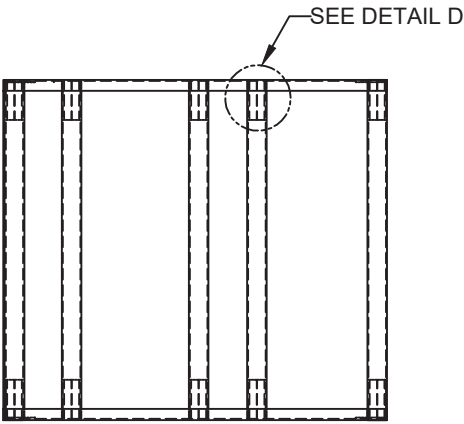
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TOLERANCES EXCEPT AS NOTED	SCALE: N/S	TITLE:	
	PAPER SIZE B		
	DATE:		
	DRWN BY: WSHULL		
DECIMAL ± N/A	CHCK'D: ---	SHEET 1 OF 11 SHEETS	
	APP'D: ---		
FRACTION ± N/A	REF:	DRAWING NO. HC10472-ENC	REV
ANGULAR ± N/A	JOB NUMBER:		

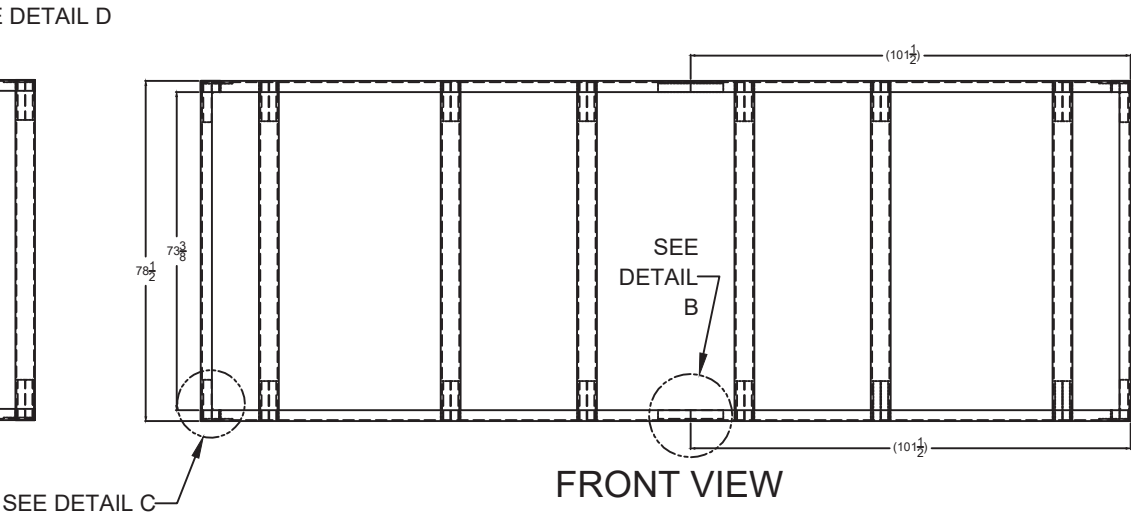
ENCLOSURE FRAME
ALL CHANNELS: TGC 1940
ALL MEMBERS ARE BONDED WITH AO420
ALL JOINTS ARE FASTENED WITH 1/4"-20 COUNTERSUNK SCREW



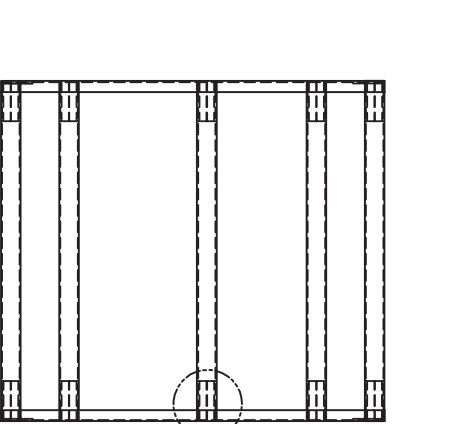
TOP VIEW



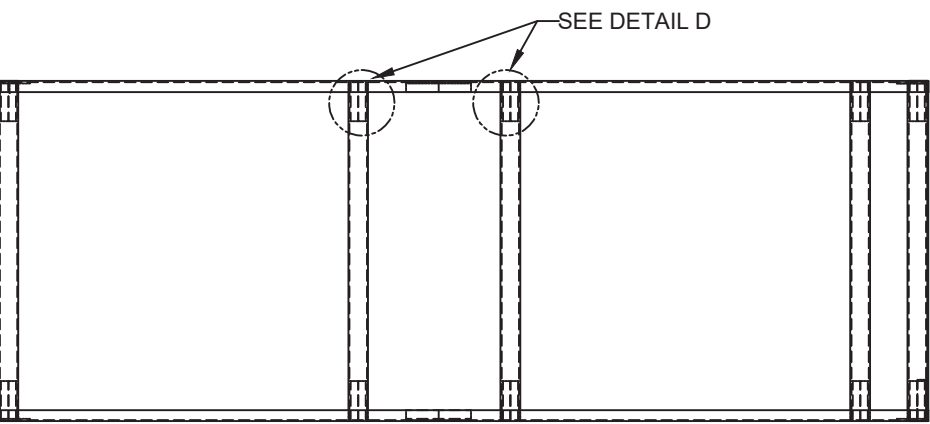
END VIEW



FRONT VIEW

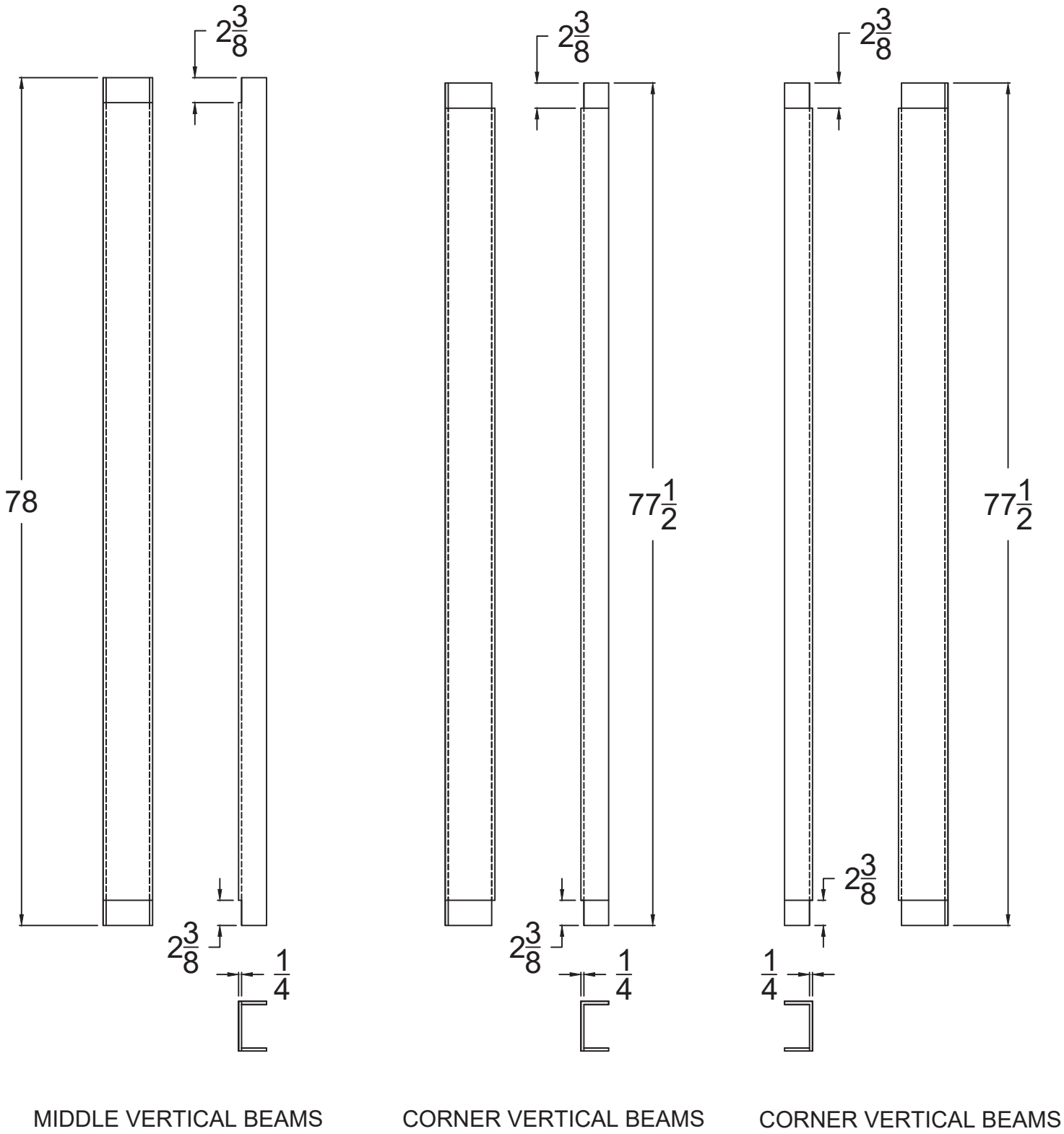
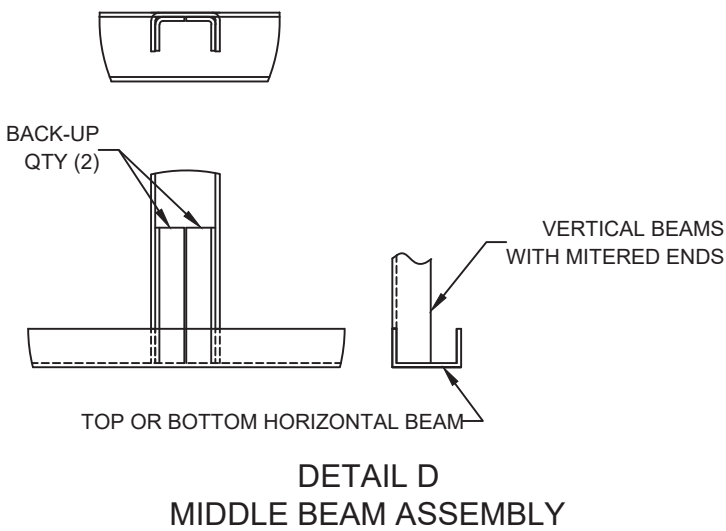
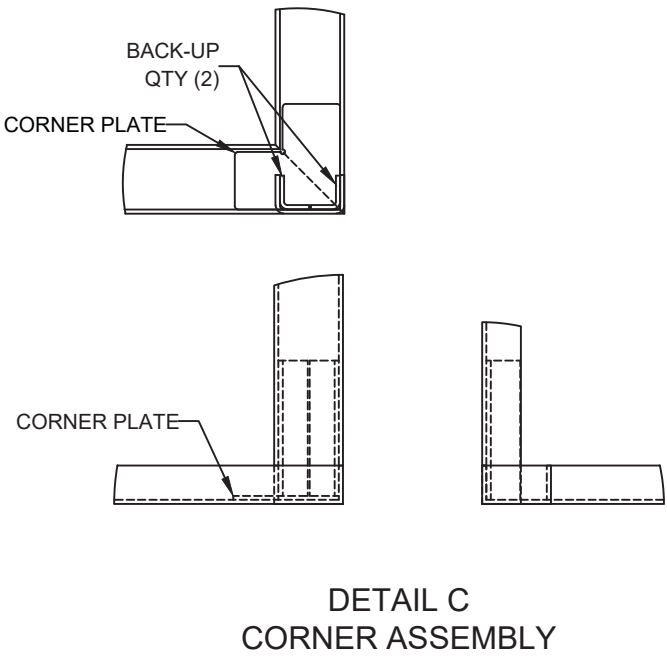
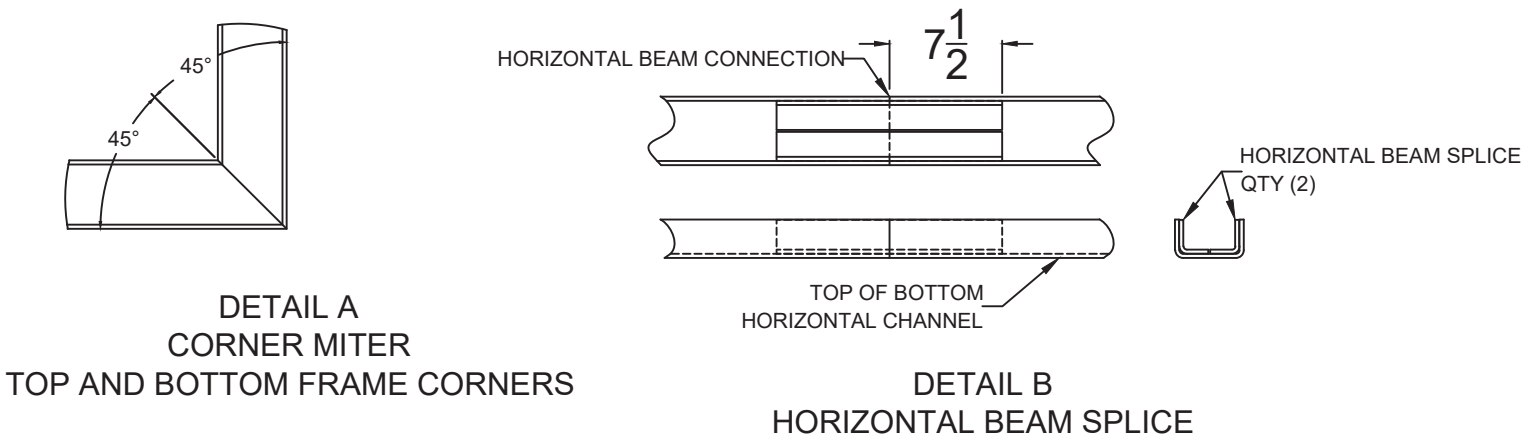


END VIEW



BACK VIEW

	7			THIS DRAWING AND DESIGN, IS THE PROPERTY OF WATERTRONICS AND IS NOT TO BE REPRODUCED IN WHOLE OR PART, NOR EMPLOYED FOR ANY PURPOSE OTHER THAN SPECIFICALLY PERMITTED IN WRITING BY WATERTRONICS. THIS DRAWING LOANED AND SUBJECT TO RETURN ON DEMAND	TOLERANCES EXCEPT AS NOTED	SCALE: N/S	TITLE:	
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	5				DECIMAL	DATE:		
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NO.	DATE	BY	DESCRIPTION	± N/A	JOB NUMBER:	DRAWING NO. HC10472-ENC	0	

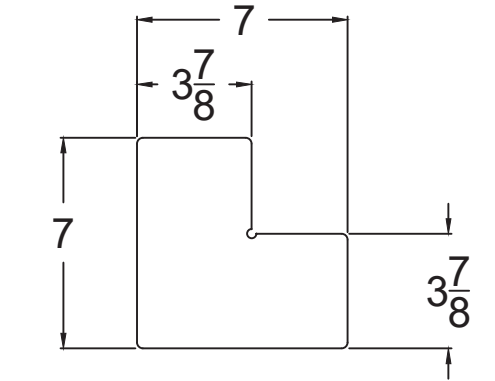


ENCLOSURE FRAME DETAILS

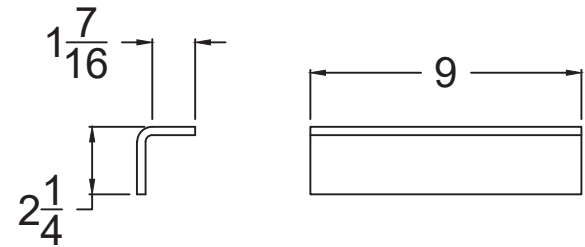
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1	05/27/2020	WTS	REMOVE QTYS, STD DRAWING
NO.	DATE	BY	DESCRIPTION

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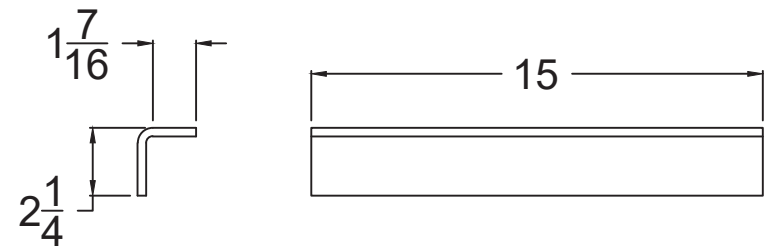
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± N/A	CHCK'D: ---		
ANGULAR	APP'D: ---		
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	JOB NUMBER:	DRAWING NO. HC10472-ENC	1



CORNER PLATE DETAIL
1/4" THICK



BACK-UP DETAIL
CUT FROM 1940 CHANNEL



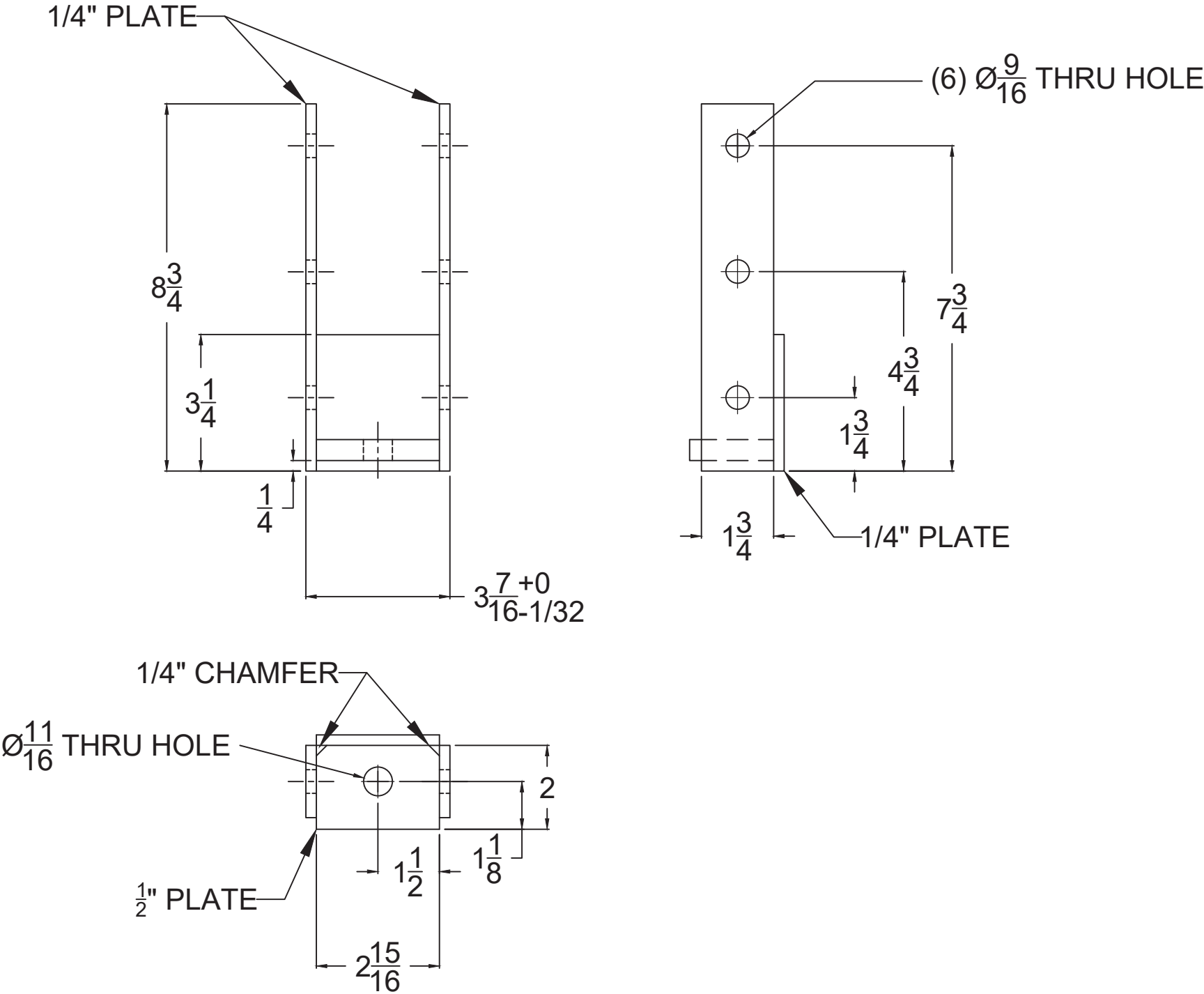
HORIZONTAL BEAM SPLICE DETAIL
CUT FROM 1940 CHANNEL

ENCLOSURE FRAME DETAILS

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NO.	DATE	BY	DESCRIPTION

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TOLERANCES EXCEPT AS NOTED	SCALE: 1:20	TITLE:	
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DECIMAL ± N/A	DATE:		
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	JOB NUMBER:	DRAWING NO. HC10472-ENC 1	

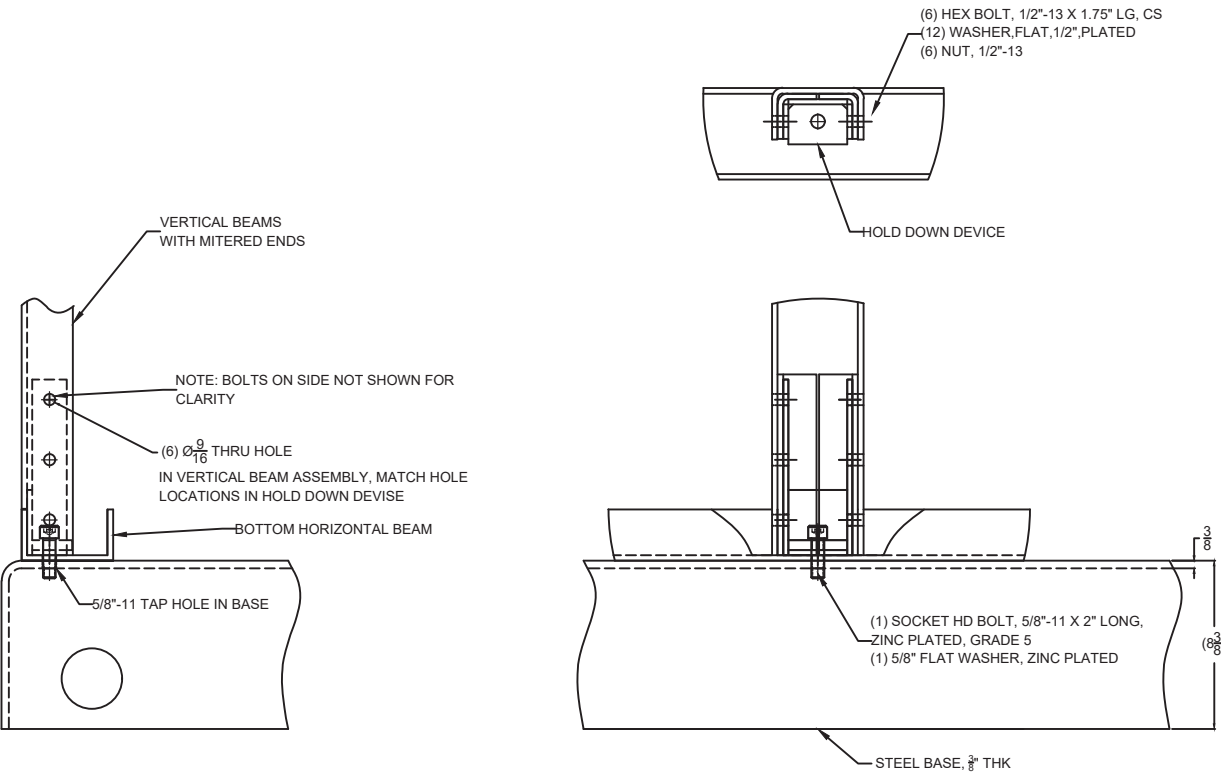


HOLD DOWN DEVICE FOR SHEAR WALL

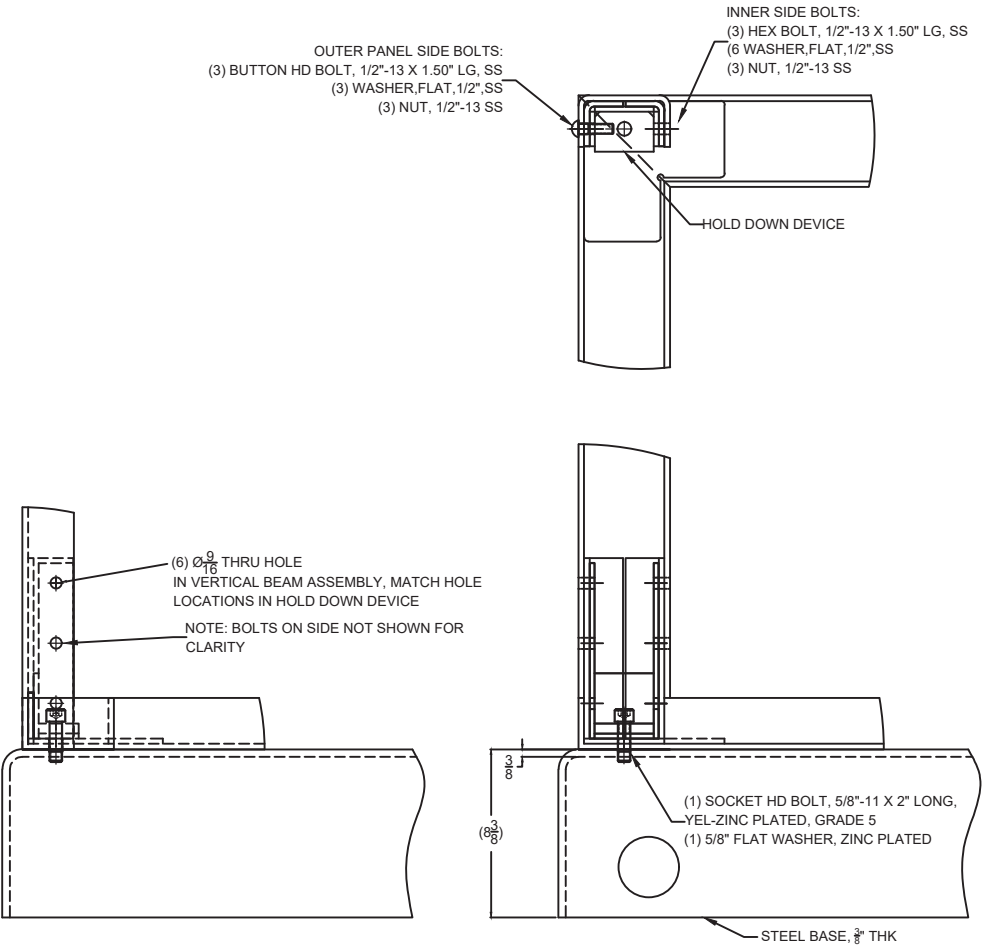
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TOLERANCES EXCEPT AS NOTED	SCALE: 1:20	TITLE: HOLD DOWN DEVICE COMPOSITE ENCLOSURE	
	PAPER SIZE B		
	DATE:		
	DRWN BY: WSHULL		
DECIMAL	CHCK'D: ---	SHEET 5 OF 11 SHEETS	
	APP'D: ---		
FRACTION	REF: ---	DRAWING NO. HC10472-ENC	
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ANGULAR			REV 1



DETAIL E
SHEAR WALL MID BEAM ASSEMBLY
NOTE: THIS IS IN ADDITION TO MIDDLE BEAM ASSEMBLY,
SEE DETAIL D



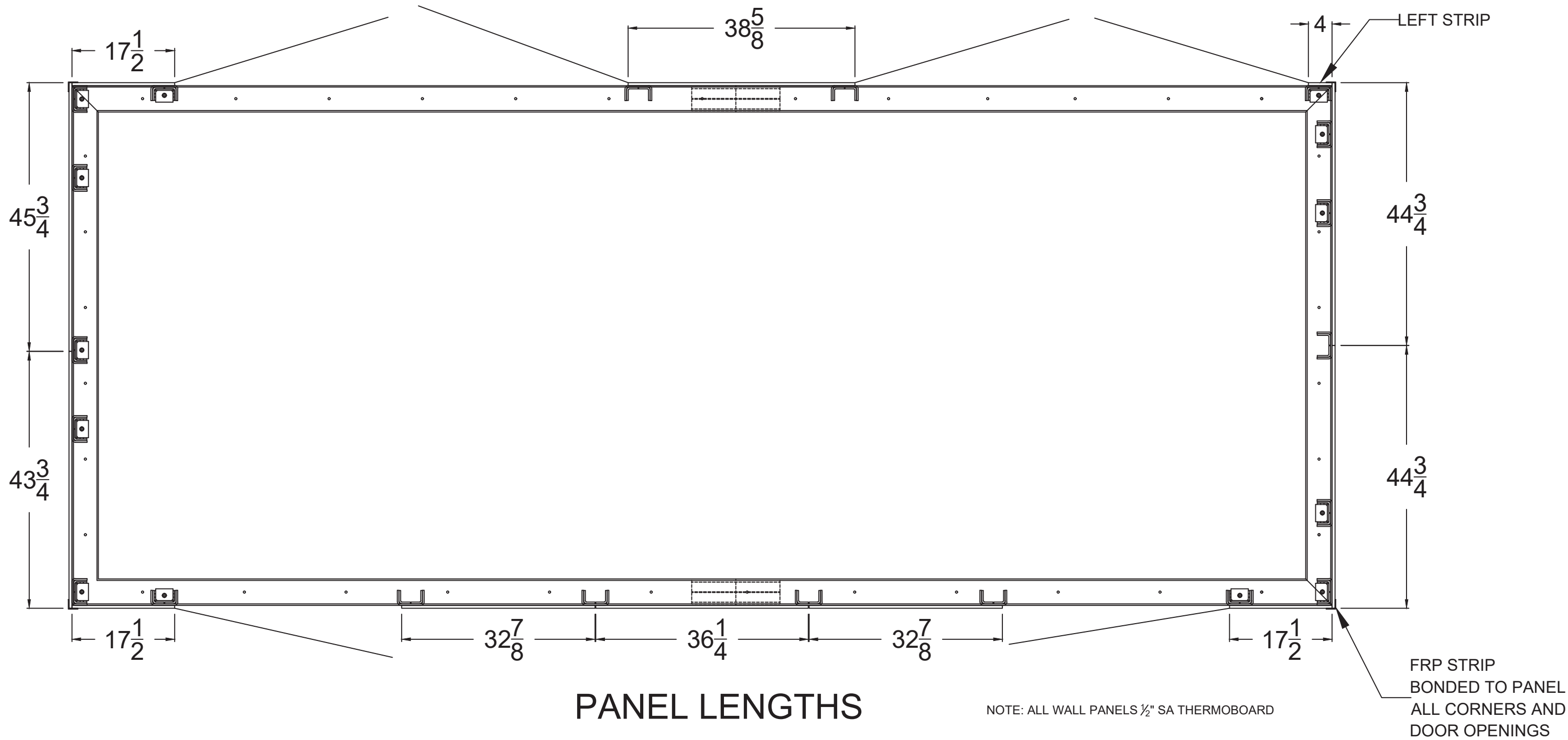
DETAIL F
NOTE: THIS IS IN ADDITION TO CORNER BEAM
ASSEMBLY, SEE DETAIL C

SHEAR WALL POST ASSEMBLY

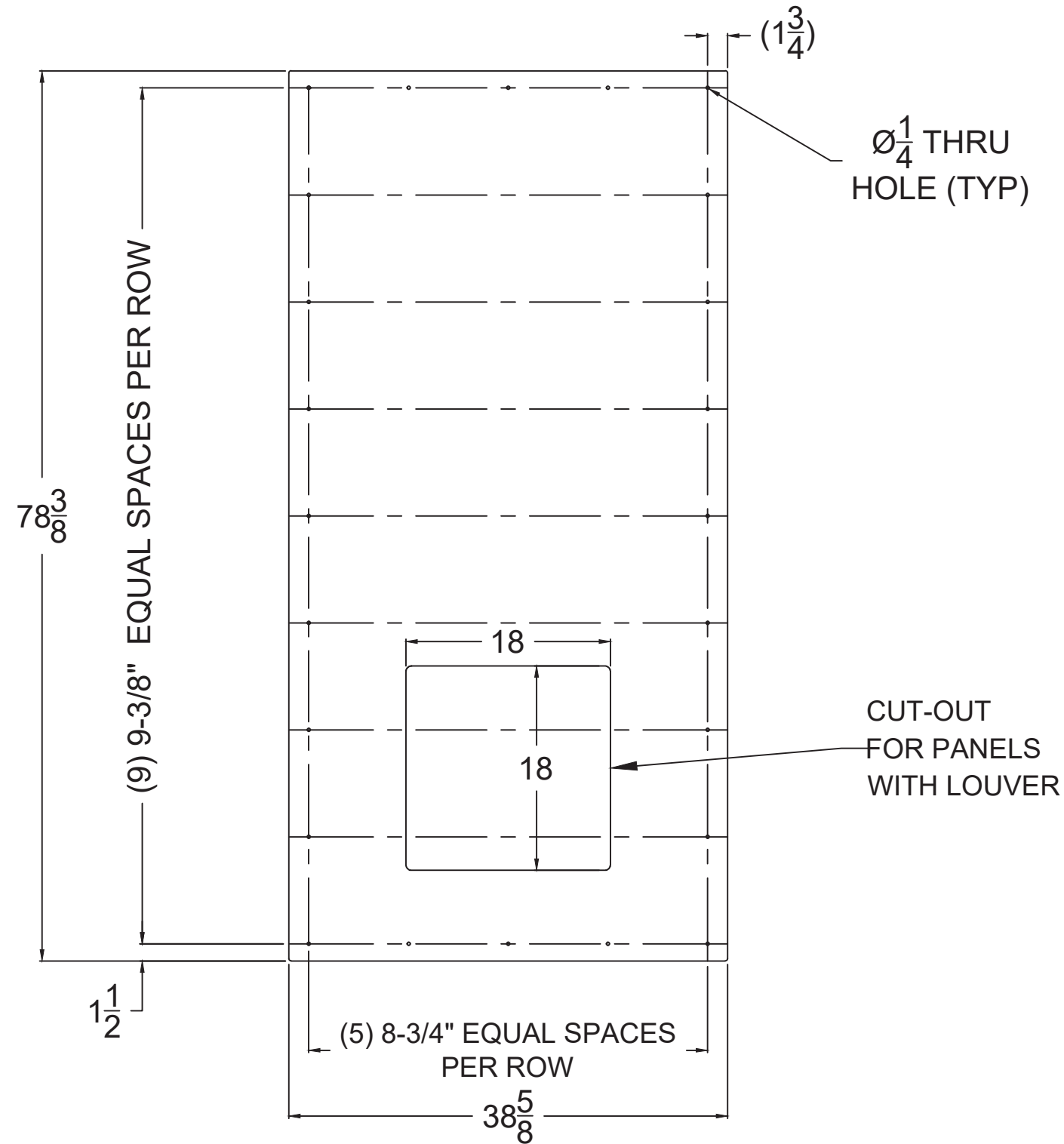
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1	05/27/2020	WTS	1/2" TO 5/8" BASE CONNECTION UPDATE
NO.	DATE	BY	DESCRIPTION

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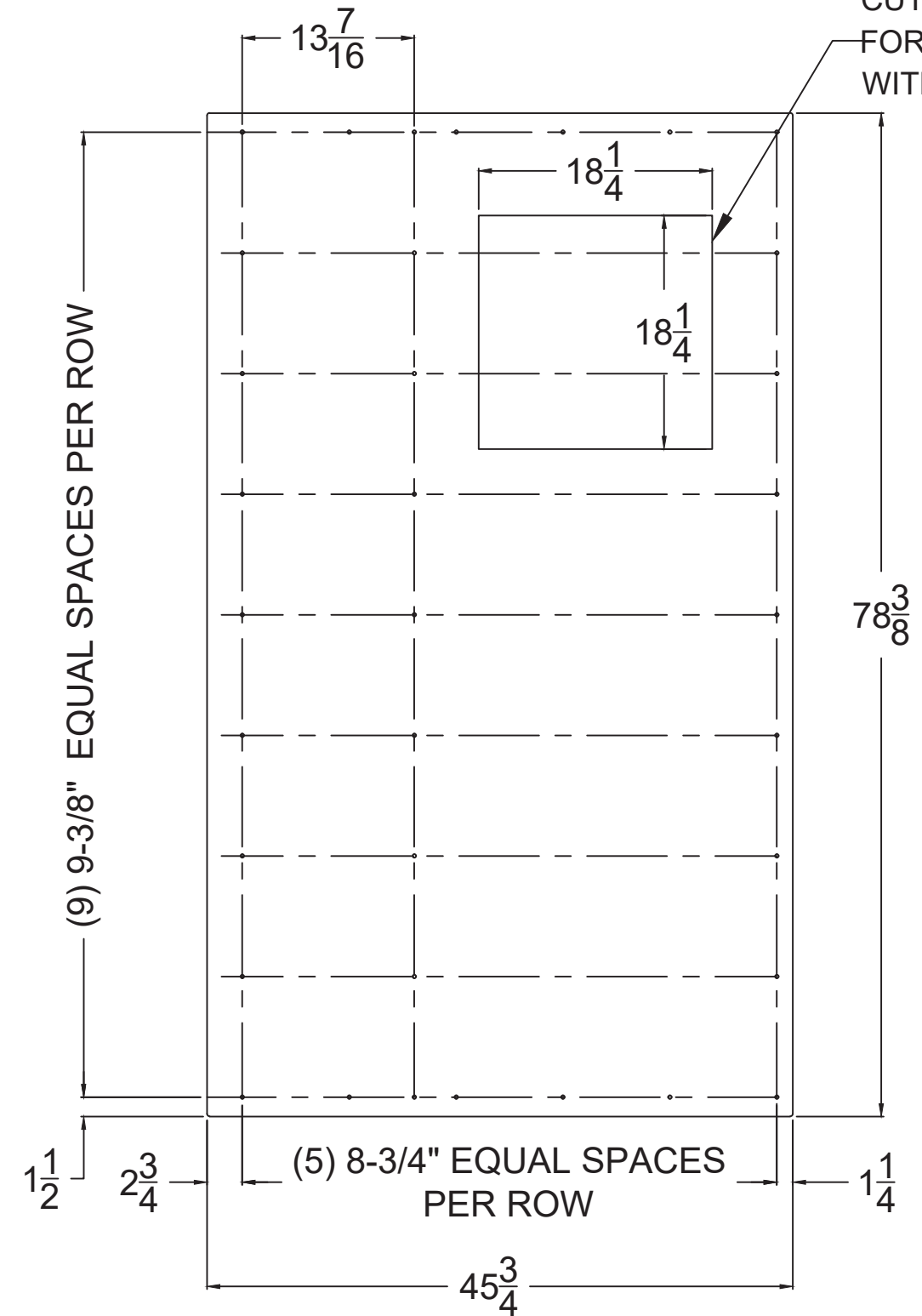
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FRACTION	REF: ---	DRAWING NO. HC10472-ENC	REV 1
± N/A	JOB NUMBER:		



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		6					DECIMAL	PAPER SIZE B		
		5					± N/A	DATE:		
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		1					± N/A	REF:	SHEET 7 OF 11 SHEETS	REV
		NO.	DATE	BY	DESCRIPTION			JOB NUMBER:	DRAWING NO. HC10472-ENC	0



GENERAL PANEL HOLE PATTERN



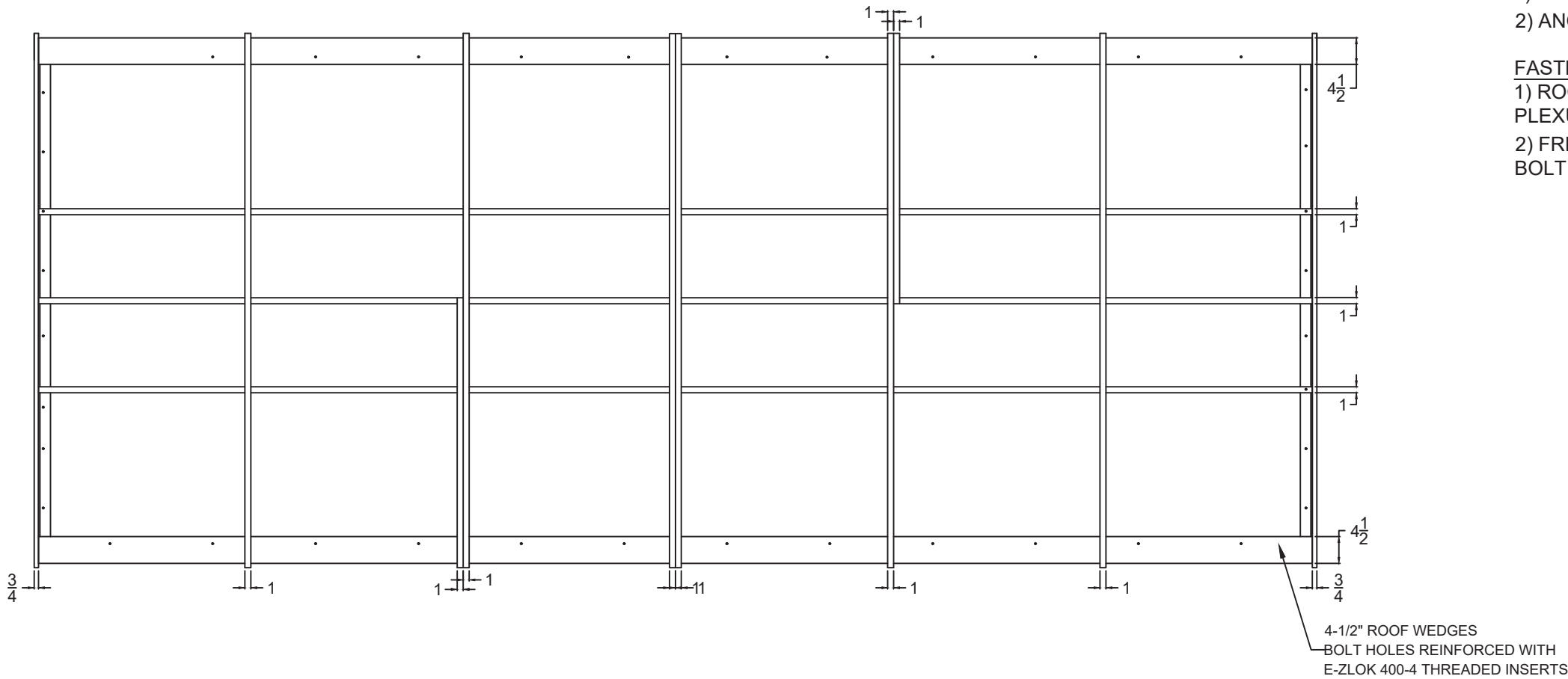
PANEL LENGTHS

FASTENERS: 1/4"-20 X 1-1/2" LG BUTTON HEAD SCREW,
(2) FLAT WASHERS, NUT

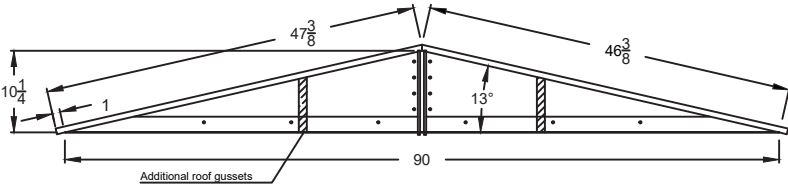
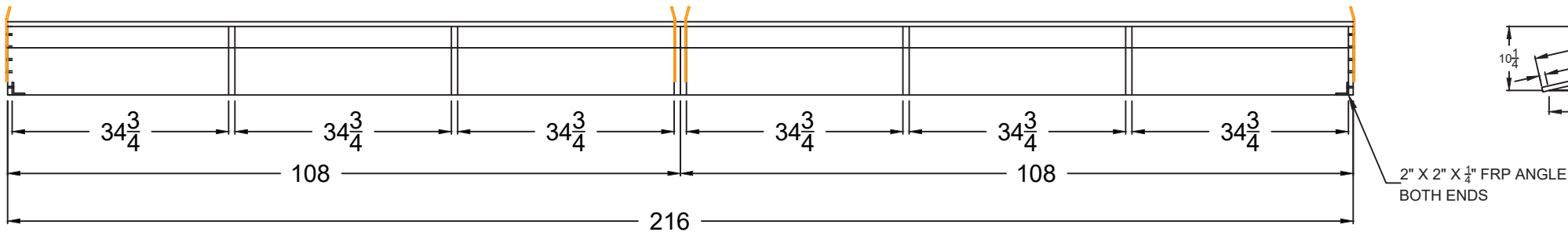
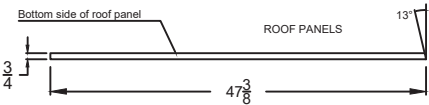
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1	05/27/2020	WTS	REF DIMS, STD DRAWING
NO.	DATE	BY	DESCRIPTION

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TOLERANCES EXCEPT AS NOTED	SCALE: 1:20	TITLE:	
	PAPER SIZE B		
DECIMAL	DATE:	 WATERTRONICS	
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ANGULAR	REF: ---	SHEET 8 OF 11 SHEETS	REV
± N/A	JOB NUMBER:	DRAWING NO. HC10472-ENC	1



- MATERIAL**
1) ROOF FRAME MEMBERS AND ROOF PANELS: SA THERMOBOARD
2) ANGLE: 2"X2"X $\frac{1}{4}$ " FRP (TGC #2884)
- FASTENING**
1) ROOF FRAME IS STRUCTURALLY BONDED TOGETHER WITH PLEXUS AO420
2) FRP ANGLE TO ROOF FRAME ARE FASTENED WITH (16) $\frac{1}{4}$ "-20 BOLT,(2) FLAT WASHERS, & NUT AND BONDED WITH PLEXUS AO420



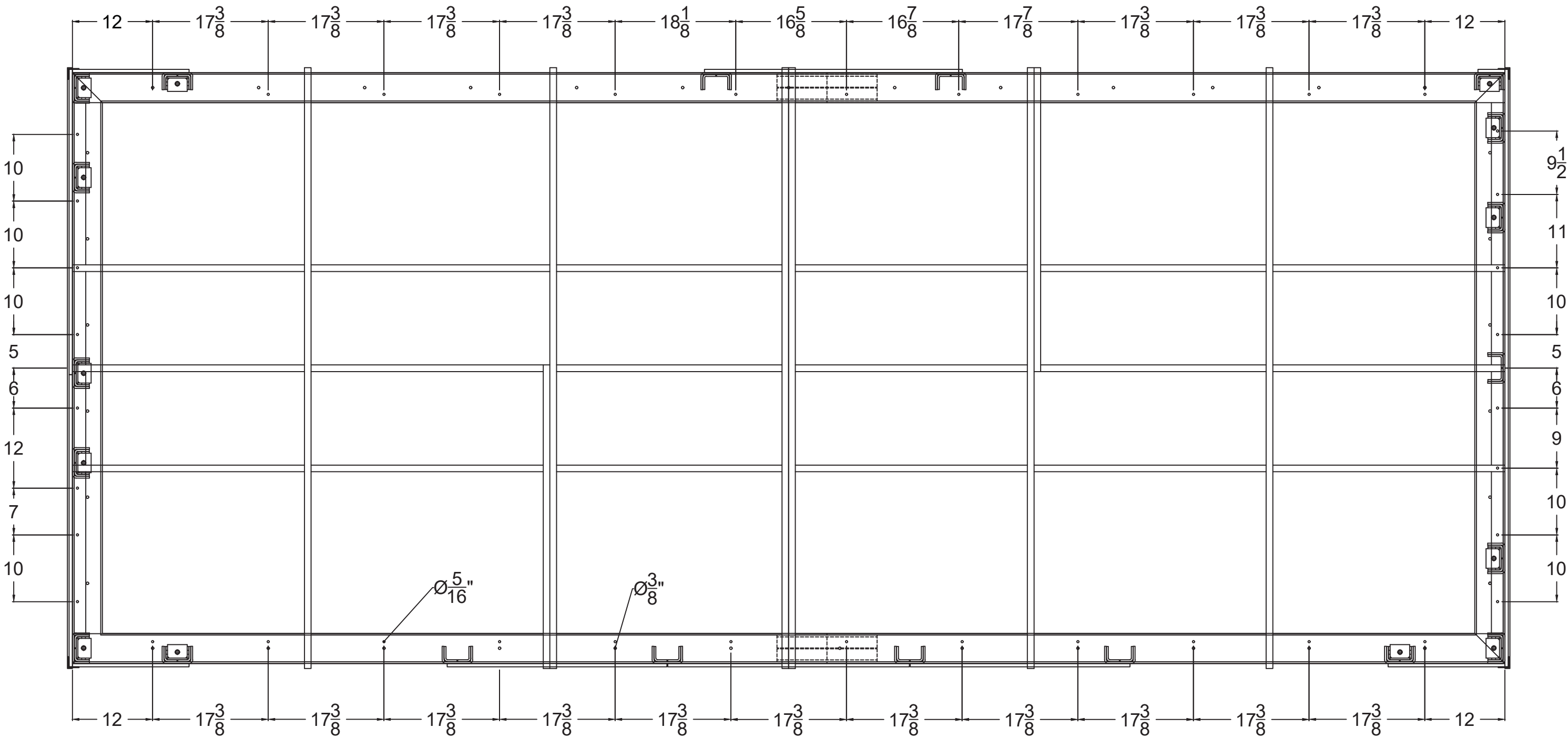
ROOF LAYOUT

90" x 216" ENCLOSURE ROOF ASSEMBLY

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NO.	DATE	BY	DESCRIPTION

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TOLERANCES EXCEPT AS NOTED	SCALE: N/S	TITLE:	
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DECIMAL	CHCK'D: ---	SHEET 9 OF 11 SHEETS	
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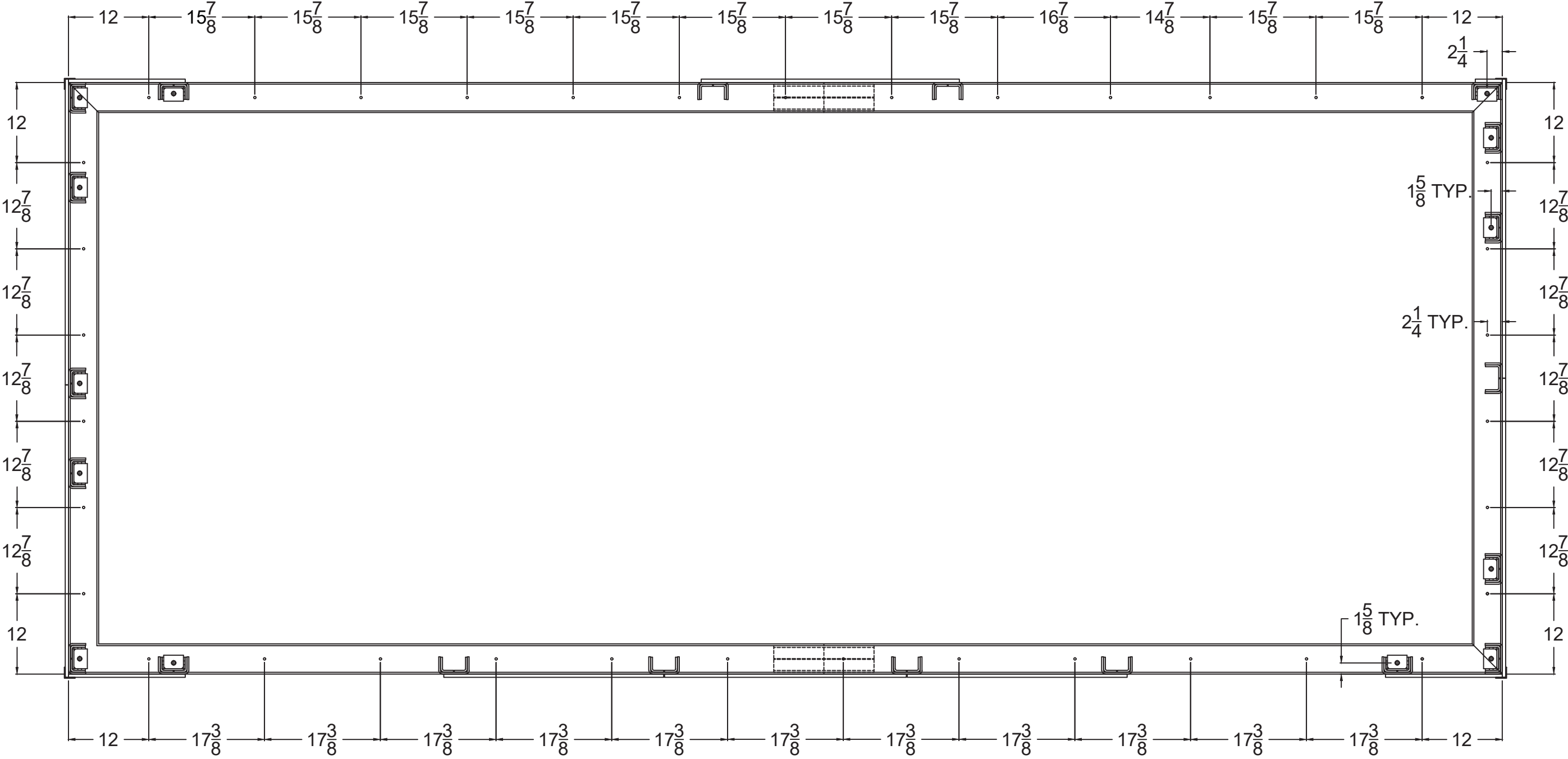
ROOF TO ENCLOSURE FRAME FASTENER PATTERN

NOTE:
FASTENERS: 1/4"-20 BOLT,NUT, LOCK WASHER,FLAT WASHER

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TOLERANCES EXCEPT AS NOTED	SCALE: N/S	TITLE:		
	PAPER SIZE B			
DECIMAL	DATE:	 WATERTRONICS		
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ANGULAR	REF:	SHEET 10 OF 11 SHEETS	REV	
± N/A	JOB NUMBER:	DRAWING NO. HC10472-ENC	0	



ENCLOSURE FRAME TO BASE BOLT PATTERN

FASTENERS: 3/8"-16 HEX HD STEEL BOLT WITH FLAT WASHER
AT FASTENER LOCATIONS, STEEL BASE TO GET Ø³/₈"-16 TAP HOLES,
ENCLOSURE FRAME TO GET Ø¹/₈" THRU HOLES

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ANY PURPOSE OTHER THAN
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DEMAND

TOLERANCES EXCEPT AS NOTED	SCALE: N/S	TITLE:	
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DECIMAL ± N/A	CHCK'D: ---	SHEET 11 OF 11 SHEETS	
	APP'D: ---		
FRACTION ± N/A	REF:	JOB NUMBER:	REV
ANGULAR ± N/A			0
		DRAWING NO. HC10472-ENC	