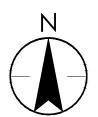


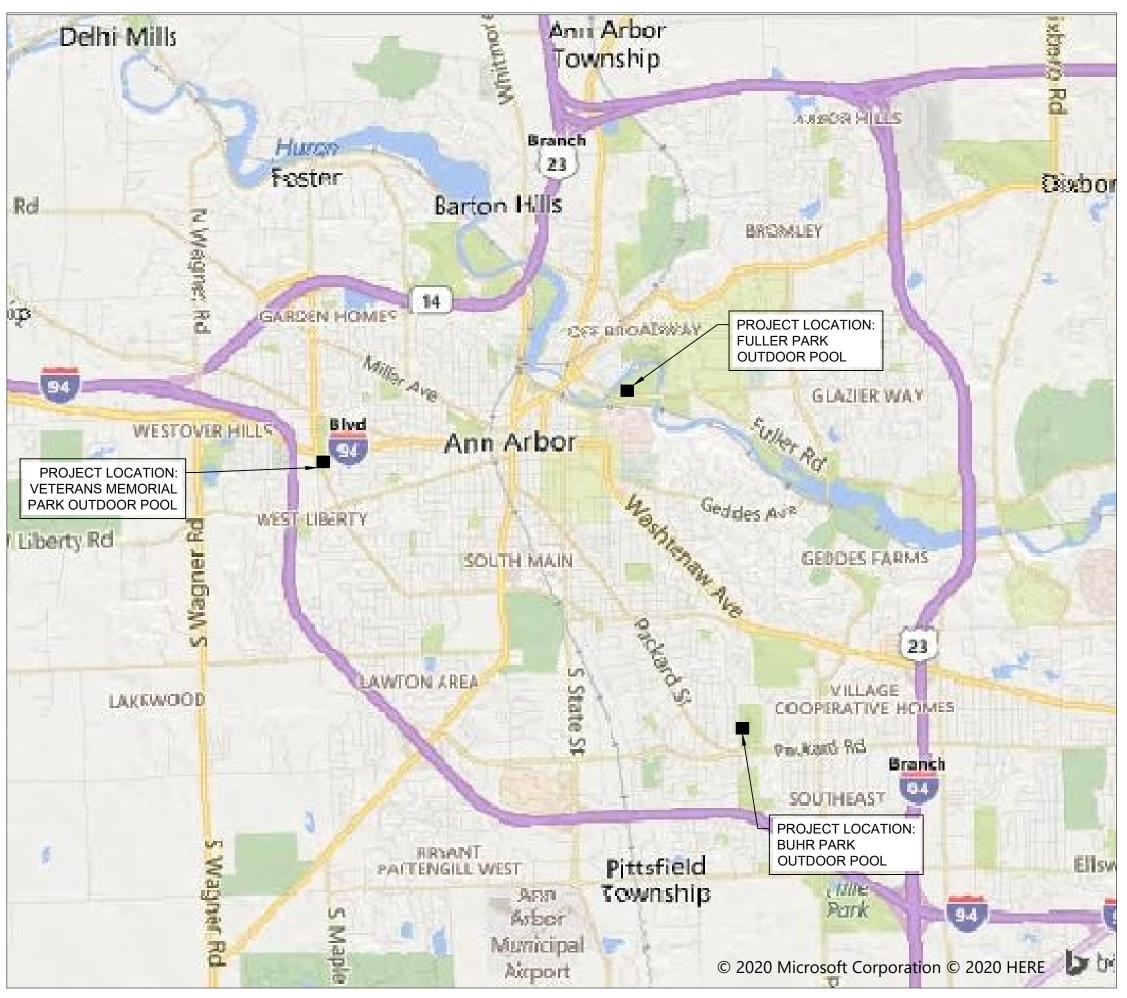
CITY OF ANN ARBOR

OUTDOOR POOL ULTRAVIOLET DISINFECTION IMPROVEMENTS

ITB NO. 4652
BID SET
NOVEMBER, 2020

PROJECT NUMBER: 2075153700





PROJECT LOCATION MAPS

NOT TO SCAL

DRAWING INDEX					
DRAWING	NUMBER	TITLE			
G-001	01	COVER SHEET			
G-002	02	GENERAL NOTES			
P-101	03	VETERANS MEMORIAL PARK UV DISINFECTION PLAN			
P-102	04	BUHR PARK UV DISINFECTION PLAN			
P-103	05	FULLER PARK UV DISINFECTION PLAN			

<u>GENERAL</u>

- 1. ALL WORK SHALL MEET AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CITY, STATE AND FEDERAL CODES.
- 2. IF CONTRACTOR IS UNSURE IF AN ITEM IS TO BE REMOVED OR NOT, VERIFY WITH OWNER AND/OR ENGINEER BEFORE PROCEEDING. EQUIPMENT REMOVED THAT WAS NOT TO BE, WILL BE REINSTALLED BACK TO ITS ORIGINAL WORKING CONDITION AT THE CONTRACTOR'S OWN EXPENSE.
- 3. MAKE ALL TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN OPERATION OF THE FACILITY DURING CONSTRUCTION AND EQUIPMENT REPLACEMENT OR MODIFICATION. SCHEDULE WORK FOR SHUTDOWN, AS REQUIRED, TO REDUCE THE DISRUPTION TO THE REST OF THE CIRCUITRY.
- 4. RELOCATE, MAKE TEMPORARY CONNECTIONS, REINSTALL AND RECONNECT ANY EQUIPMENT AS REQUIRED FOR THE CONSTRUCTION OF NEW PIPING AND SYSTEMS BEING MODIFIED AS PART OF THIS PROJECT.
- 5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE RESULTING FROM OPERATIONS TO EXISTING FACILITIES SUCH AS, BUT NOT LIMITED TO, UNDERGROUND CABLES, HARD SURFACE AREAS, PIPING AND OTHER UTILITIES. CONTRACTOR TO RESTORE, REPLACE OR REPAIR ANY SUCH DAMAGE TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- 6. REFER TO THE SPECIFICATIONS FOR GUIDELINES REGARDING SITE CLEANLINESS.
- 7. ANY ITEM REQUIRED TO BE REMOVED IN THE CONTRACTOR'S JUDGEMENT BUT NOT SHOWN ON DRAWING SHALL BE VERIFIED AND REMOVED/RELOCATED AT NO ADDITIONAL COST.
- 8. EXAMINE THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS AND BECOME FULLY FAMILIAR THE ENTIRE WORK. BEFORE COMMENCING, OBTAIN A RULING FROM THE ENGINEER ON ANY CONFLICTING ISSUES SHOWN ON THE DRAWINGS OR BETWEEN DIVISIONS. NO COMPENSATION WILL BE MADE FOR ANY COSTS ARISING FROM CONFLICT NOT IDENTIFIED BEFORE WORK HAS COMMENCED.
- 9. DRAWINGS INDICATE GENERAL LOCATION AND ROUTING OF CONDUITS, CABLES, PIPING, ELECTRICAL AND MECHANICAL EQUIPMENT ARRANGEMENTS. THEY DO NOT SHOW ALL STRUCTURAL AND ARCHITECTURAL DETAILS. IN SOME CASES, ROUTING IS ONLY SHOWN DIAGRAMMATICALLY ON THE DRAWINGS AND MAY NOT DETAIL EXACT OR COMPLETE
- 10. COORDINATE THE WORK TO BE PERFORMED OF ALL DIVISIONS REMOVING EQUIPMENT TO ENSURE THAT THERE ARE NO CONFLICTS OR DELAYS.
- 11. PROVIDE QUALIFIED PERSONNEL TO DO BOTH THE REMOVAL AND INSTALLATION OF ALL EQUIPMENT AS NOTED ON THE DRAWINGS OR STATED IN THE SPECIFICATIONS.

ELECTRICAL

REQUIREMENTS.

- 1. THE REMOVAL OF EQUIPMENT SHALL INCLUDE ALL ASSOCIATED WIRING, RACEWAYS, ETC. UNLESS OTHERWISE NOTED.
- 2. PATCH ALL HOLES IN EXISTING INTERIOR AND EXTERIOR WALLS, STRUCTURES, BASES, CEILINGS, ETC. RESULTING FROM THE REMOVAL OF RACEWAYS. PATCHING SHALL MATCH EXISTING MATERIALS OF CONSTRUCTION (I.E. BRICK, BLOCK, CONCRETE, ETC.)
- 3. ENSURE SERVICE CONTINUITY TO EXISTING CIRCUITS NOT AFFECTED BY THE CONSTRUCTION WORK. MAKE TEMPORARY CONNECTIONS IF NECESSARY.
- 4. DISCONNECT AND MAKE SAFE ALL EXISTING POWER AND CONTROL WIRING AS NOTED IN SHEETS P-101, P-102 AND P-103 TO BE REMOVED.

<u>MECHANICAL</u>

- 1. PIPING AND EQUIPMENT TO BE REMOVED ARE INDICATED ON. REMOVE ITEMS AS INDICATED AND AS REQUIRED TO ACCOMMODATE THE NEW WORK.
- 2. DEMOLITION WORK SHALL BE PATCHED BY THE CONTRACTOR WITH MATERIALS SO AS TO MATCH EXISTING FINISHES, UNLESS OTHERWISE SHOWN.
- 3. INSULATION ON MATERIALS TO BE REMOVED SHALL BE IDENTIFIED BEFORE ATTEMPTING DEMOLITION AND EPA REGULATION SHALL BE COMPLIED WITH.
- 4. DEMOLITION TO BE CARRIED OUT IN A MANNER TO PREVENT DAMAGE TO ANY EXISTING SERVICE OR STRUCTURE.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE THAT MAY OCCUR.

ELECTRICAL NOTES

<u>GENERAL</u>

- 1. ALL NECESSARY NEW ELECTRICAL EQUIPMENT REQUIRED FOR THE WORK PROPOSED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE AS BEING PROVIDED BY THE OWNER. ALL ELECTRICAL DEVICES, THE INTERCONNECTING WIRING AND RACEWAY TO ALL ELECTRICALLY OPERATED DEVICES AND THE ASSOCIATED TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS NOTED OTHERWISE WITHIN THE PROJECT DOCUMENTS.
- 2. ALL ITEMS INCIDENTAL TO AND/OR REQUIRED TO COMPLETE THE INSTALLATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- 3. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER AND WITH ALL OTHER TRADES. DOWNTIME SHALL BE KEPT TO A MINIMUM.
- 4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTIONS
- 5. ALL CONTROLS SUCH AS LIGHT SWITCHES, AND THERMOSTATS SHALL HAVE ADEQUATE CLEAR FLOOR SPACE FOR ACCESS AND BE MOUNTED AT A HEIGHT OF 48" ABOVE FINISHED FLOOR.
- ALL CONDUIT RUNS SHALL BE IN RIGID GALVANIZED STEEL CONDUIT UNLESS NOTED OTHERWISE.
- 7. WIRE SHALL BE STRANDED COPPER, #12AWG MINIMUM, TYPE THHN OR XHHW. UNLESS NOTED OTHERWISE ON THE PLANS.
- 8. ALL ELECTRICAL EQUIPMENT, INCLUDING CONDUIT AND CONDUCTORS SHALL BE NEW AND UNUSED UNLESS NOTED OTHERWISE. ALL UNITS OF EACH INDIVIDUAL DEVICE OR EQUIPMENT SHALL BE FROM ONE MANUFACTURER. MORE THAN ONE MAKE OF A SINGLE ITEM SHALL NOT BE INSTALLED.
- 9. ALL CIRCUITS SHALL INCLUDE SEPARATE NEUTRAL CONDUCTORS TO THE PANEL OF ORIGIN. GROUND CONDUCTORS MAY BE SHARED WITHIN THE LIMITATIONS OF THE N.E.C. ALL CONDUITS AND RACEWAYS SYSTEMS SHALL BE GROUNDED.
- 10. CONDUITS SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO WALLS AND/OR CEILING WHEREVER POSSIBLE. ROUTE NO CONDUIT DIRECTLY BENEATH AND PARALLEL TO MECHANICAL
- 11. LOCATION OF ELECTRICAL EQUIPMENT IS DIAGRAMMATIC AND SHOWS THE DESIGN INTENT ONLY. CONTRACTOR SHALL COORDINATE WITH THE PLANS OF ALL OTHER DISCIPLINES AND THEIR INSTALLERS FOR THE EXACT LOCATIONS OF ALL EQUIPMENT. PULL BOXES OR JUNCTION BOXES, THOUGH NOT SHOWN ON THE PLANS, SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
- 12. ALL CIRCUIT RUNS SHALL BE IDENTIFIED AT EACH JUNCTION BOX WITH THE PROPER CIRCUIT NUMBER/DESCRIPTION OF EACH CIRCUIT ENTERING THE BOX. PROVIDE CIRCUIT NUMBERS ON THE SURFACE OF ALL RECEPTACLES AND LIGHTING SWITCH COVER PLATES.
- 13. THE CONTRACTOR SHALL RECORD ON AS-BUILT DRAWINGS ALL SIZES, MATERIAL, ELEVATIONS AND/OR LOCATIONS OF ALL ELECTRICAL EQUIPMENT THAT DEVIATE FROM THESE DESIGN
- 14. FINAL CONNECTION TO EQUIPMENT SUBJECT TO VIBRATION SHALL BE FLEXIBLE, LIQUIDTIGHT, STEEL CONDUIT WITH COMPRESSION TYPE CONNECTORS AND GROUNDING DEVICES.
- 15. ALL MATERIAL AND EQUIPMENT SHALL BE STORED IN SUCH A MANNER TO PREVENT BREAKAGE OR PHYSICAL DAMAGE. STORE EQUIPMENT IN THEIR ORIGINAL PACKAGING MATERIALS AND PROVIDE PROTECTIVE COVER TO KEEP OUT RAIN, DIRT, AND FOREIGN OBJECTS.
- 16. THE PROJECT SITE SHALL BE KEPT CLEAN DURING CONSTRUCTION. REMOVE ALL FOREIGN OBJECTS, DIRT, PULLING COMPOUND, WIRE SCRAPS, INSTALLATION STRIPPINGS, ETC. FROM INSIDE RACEWAYS, CONDUITS, OUTLET AND PULL BOXES, EQUIPMENT ENCLOSURES, ETC. AS WORK PROGRESSES. CLEAN ALL ACCESSIBLE PARTS OF EQUIPMENT BEFORE WORK IS TURNED OVER TO THE OWNER.
- 17. TESTS SHALL BE PERFORMED AND THE SYSTEM REVIEWED BY THE ENGINEER FOR ACCEPTABILITY BEFORE ANY WORK IS COVERED UP OR CONCEALED. IF SUCH WORK IS CONCEALED, IT SHALL BE RE-OPENED SO THAT THE TEST MAY BE PERFORMED.

NEW WORK GENERAL NOTES

- 1. ALL NEW WORK SHALL MEET AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CITY, STATE AND FEDERAL CODES.
- 2. ALL NEW MATERIALS INCLUDING FASTENERS, HARDWARE, STRAPS, SUPPORTS, BOLTS, NUTS, INSERTS, HANGERS, ETC. SHALL BE 304 STAINLESS STEEL.
- 3. ALL NEW WALL PENETRATIONS SHALL BE SEALED WATER TIGHT.
- 4. CONTRACTOR SHALL RECORD ON AS-BUILT DRAWINGS ALL SIZES, MATERIALS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT AND DUCTWORK THAT DEVIATES FROM THE DESIGN CONTRACT DRAWINGS.
- 5. ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE BUILDING AND MECHANICAL CODES AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
- 6. ALL EQUIPMENT SHALL BE U.L. LISTED.
- 7. PROVIDE MINIMUM ONE YEAR GUARANTEE ON ALL LABOR AND MATERIALS UNLESS NOTED OTHERWISE ON CONTRACT DOCUMENTS OR SPECIFICATION.
- 8. DRAWINGS ARE SCHEMATIC IN NATURE AND ARE TO CONVEY DESIGN INTENT ONLY. REQUIRED OFFSETS, FITTINGS AND GENERAL INSTALLATION REQUIREMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.



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Consultant

Notes

REVISED BID SE Appd YYYY.MM.DD Issued JDA CJE CJE 2020.09.30 File Name: 153700G-002 Dwn. Dsgn. Chkd. YYYY.MM.DD

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Permit/Seal

Client/Project CITY OF ANN ARBOR

OUTDOOR POOL ULTRAVIOLET DISINFECTION IMPROVEMENTS

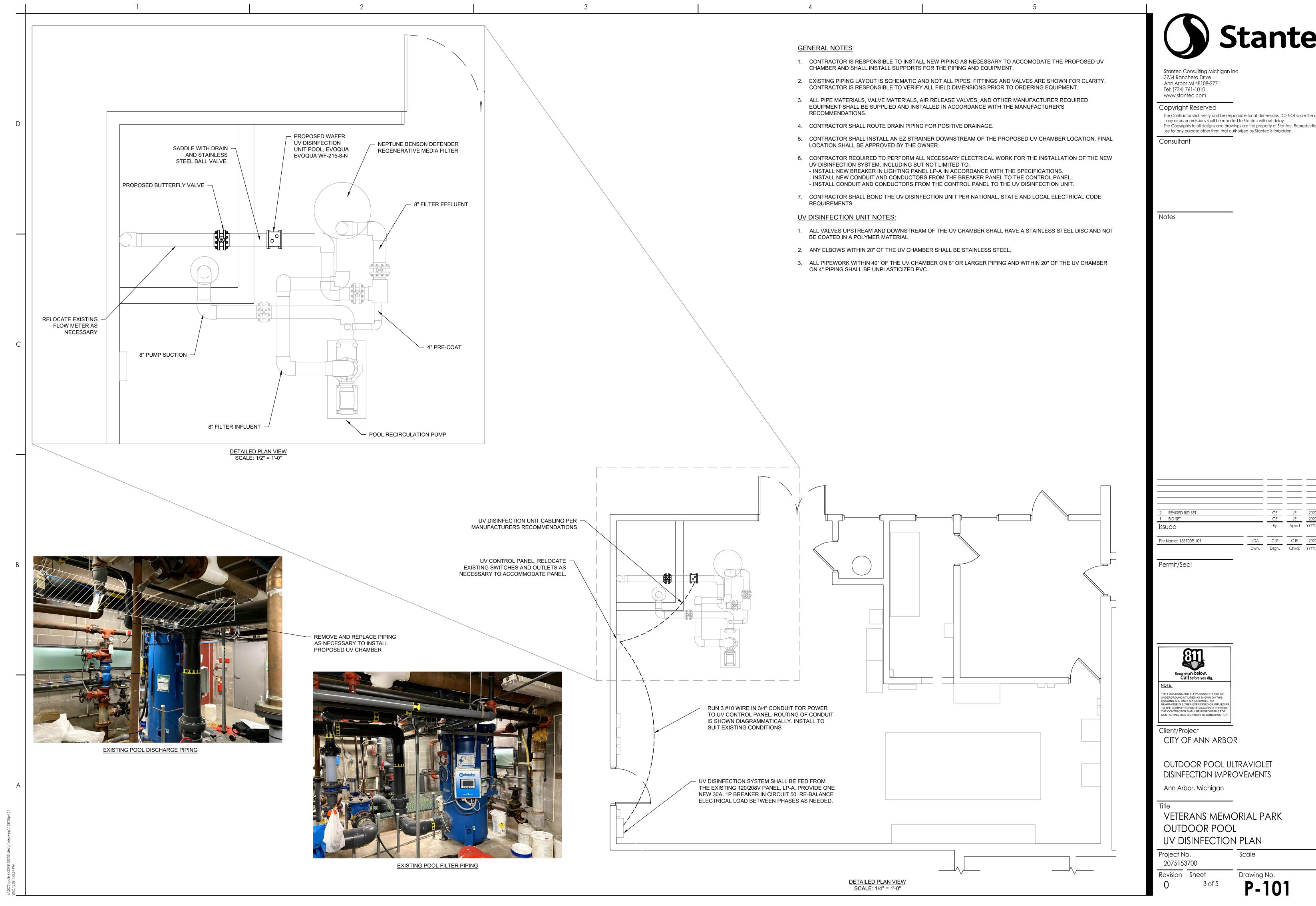
GENERAL NOTES

Ann Arbor, Michigan

Project No. 2075153700 Revision Sheet

Drawing No.

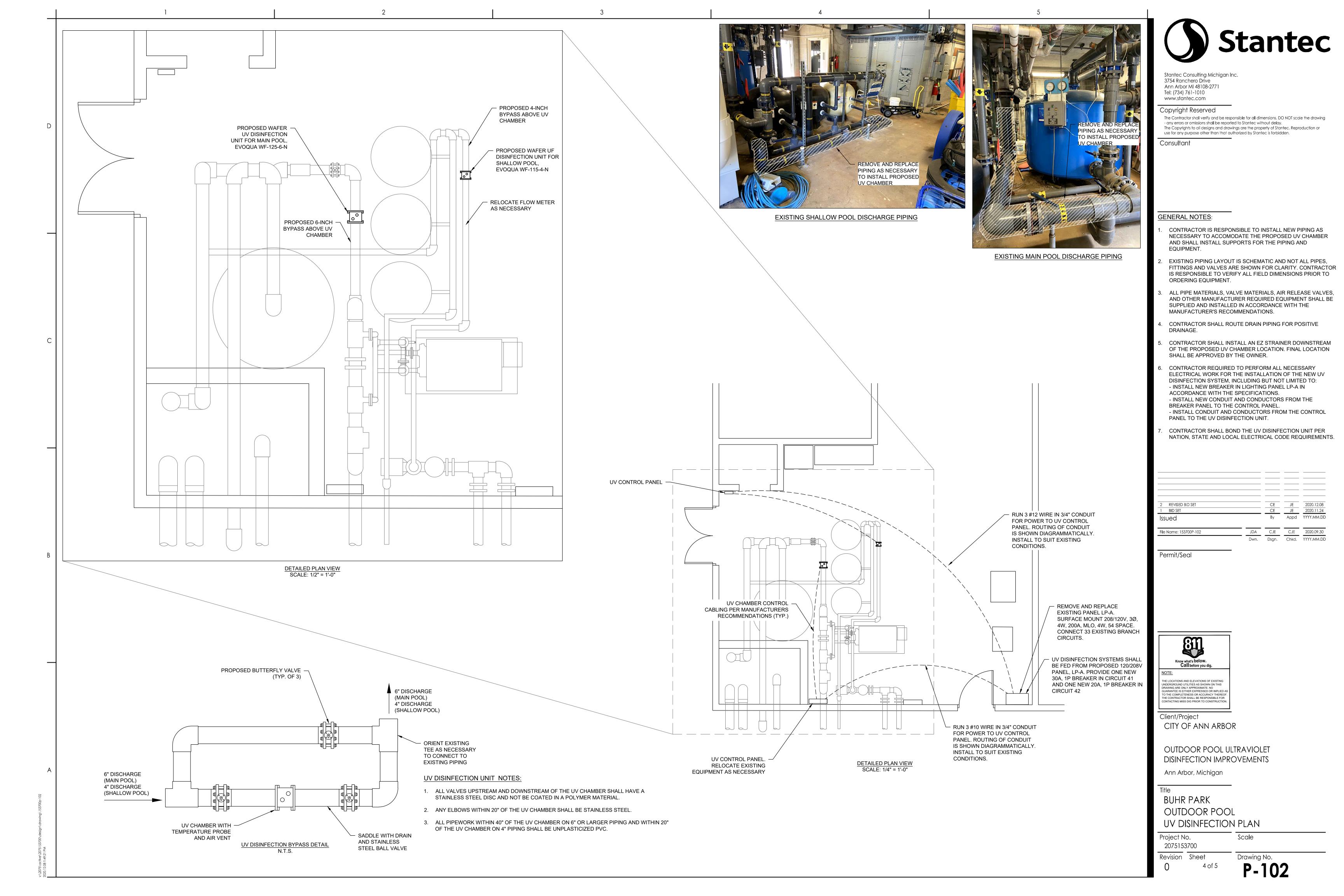
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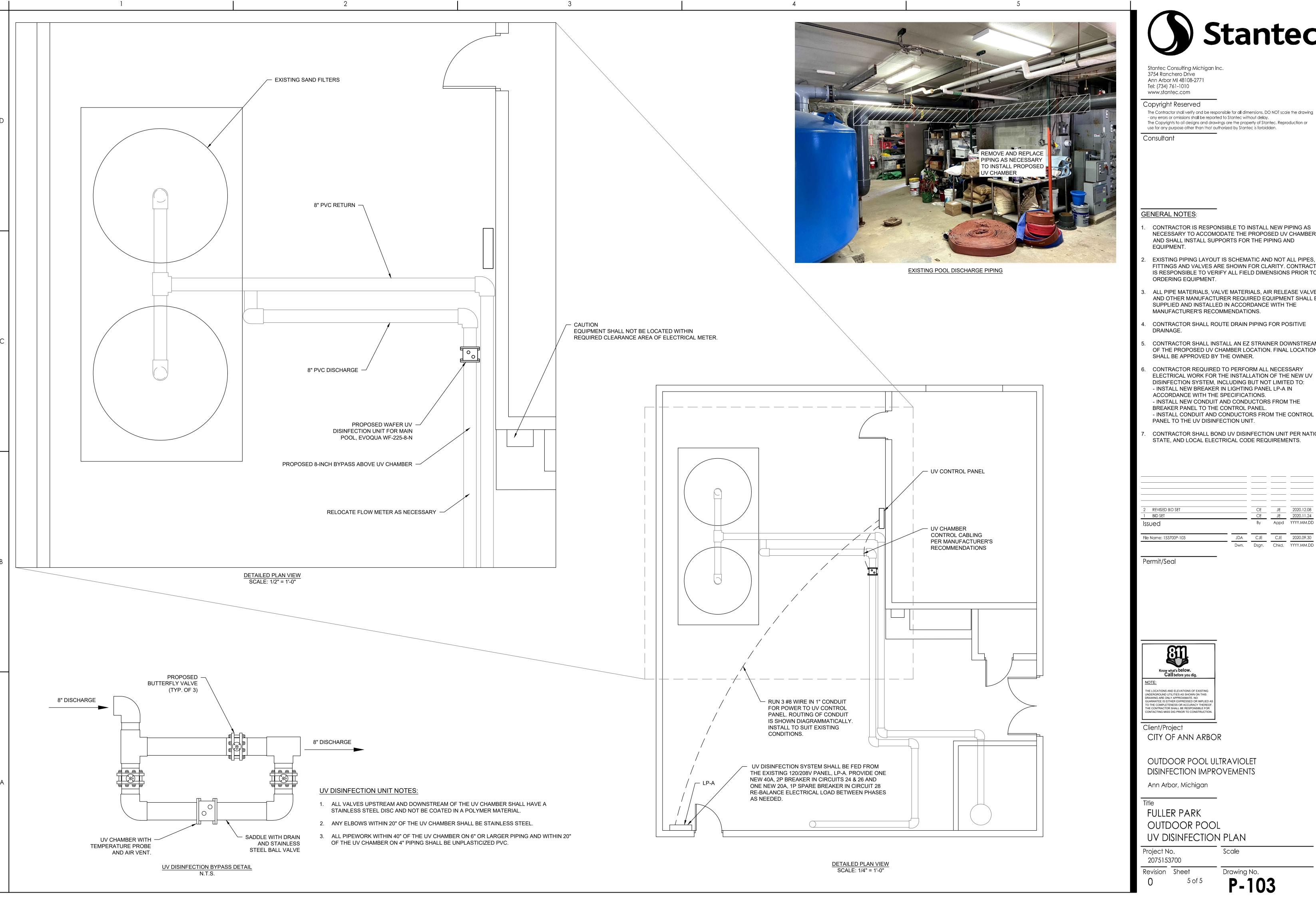


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- CONTRACTOR IS RESPONSIBLE TO INSTALL NEW PIPING AS NECESSARY TO ACCOMODATE THE PROPOSED UV CHAMBER AND SHALL INSTALL SUPPORTS FOR THE PIPING AND
- EXISTING PIPING LAYOUT IS SCHEMATIC AND NOT ALL PIPES, FITTINGS AND VALVES ARE SHOWN FOR CLARITY. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL FIELD DIMENSIONS PRIOR TO
- ALL PIPE MATERIALS, VALVE MATERIALS, AIR RELEASE VALVES, AND OTHER MANUFACTURER REQUIRED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE
- CONTRACTOR SHALL ROUTE DRAIN PIPING FOR POSITIVE
- CONTRACTOR SHALL INSTALL AN EZ STRAINER DOWNSTREAM OF THE PROPOSED UV CHAMBER LOCATION. FINAL LOCATION
- ELECTRICAL WORK FOR THE INSTALLATION OF THE NEW UV DISINFECTION SYSTEM, INCLUDING BUT NOT LIMITED TO: - INSTALL NEW BREAKER IN LIGHTING PANEL LP-A IN ACCORDANCE WITH THE SPECIFICATIONS. - INSTALL NEW CONDUIT AND CONDUCTORS FROM THE BREAKER PANEL TO THE CONTROL PANEL. - INSTALL CONDUIT AND CONDUCTORS FROM THE CONTROL
- CONTRACTOR SHALL BOND UV DISINFECTION UNIT PER NATION, STATE, AND LOCAL ELECTRICAL CODE REQUIREMENTS.

2 REVISED BID SET		CE		2020.12.08
1 BID SET		CE	<u>JE</u>	2020.11.24
Issued		Ву	Appd	JG.MM.YYYY
File Name: 153700P-103	JDA	CJE	CJE	2020.09.30

Drawing No.