

CONTRACT DOCUMENTS - DRAWINGS

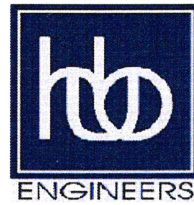
FOR

HAIKEY CREEK OPERATION & MAINTENANCE
CAPITAL EQUIPMENT REPLACEMENTS
RMUA PROJECT NO. WPC 26-2
BAMA PROJECT NO. 2654390

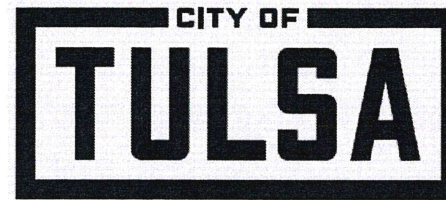
ATTENDANCE AT PRE-BID CONFERENCE IS MANDATORY

PREPARED BY:

Account Number: 2631S0011R.Capital.Sewer.951.9518900-541101



HOLLOWAY, UPDIKE AND BELLEN, INC.
2001 N WILLOW AVENUE
BROKEN ARROW, OK 74012
918-251-0717 OFFICE
918-251-0754 FAX
C.A. No. 219
EXPIRES 6-30-27



Eric Lee
Director, Water & Sewer Department

4.9.2026
Date

Timothy S. Robins, P.E., CWI, CFM
Utilities Director

4/8/26
Date

Stephen Tolar, P.E., S.E. No. OK 20679

4-8-2026
Date

Cindy Cantero
Water Pollution Control Manager

4-8-26
Date

Note: The Drawings attached hereto as part of these Specifications are for information purposes only. The Authority makes no representation or guarantee with respect to the accuracy of any information contained in the Drawings. It is the Contractor's responsibility to verify information on the drawings to ensure the equipment installed or controlled by work performed under this Contract performs as specified herein.

Water and Sewer Department
175 E. 2nd Street, Suite 1300
Tulsa, Oklahoma 74103
(918) 596-9845

INDEX OF SHEETS				
PLAN SHEET NO.	DRAWING NO.	DESCRIPTION	EQUIPMENT NO.	LOCATION
1		COVER		
2		INDEX OF SHEETS, GENERAL NOTES, & LOCATION MAP		
3	203.200.A	RDT BUILDING & SITE PLAN	H070-RDT1-WSP01 & WSP02	HCWWTP
4	203.200.B	RDT BUILDING TWAS PUMPS & PIPING DEMOLITION PLAN		HCWWTP
5	203.200.C	RDT BUILDING TWAS PUMPS & PIPING IMPROVEMENTS PLAN		HCWWTP
6	203.200.D	RDT BUILDING TWAS PUMPS & PIPING IMPROVEMENTS PLAN		HCWWTP
7	203.200.E	RDT BUILDING TWAS PUMPS & PIPING ELECTRICAL PLAN		HCWWTP
8	203.200.F	RDT BUILDING TWAS PUMPS & PIPING PHOTOS		HCWWTP
9	203.200.G	LIFT STATION PUMP REPLACEMENT SEAL WATER SYSTEM		HCWWTP
10		MISCELLANEOUS DETAILS		
11		MISCELLANEOUS DETAILS		
E1		ELECTRICAL DETAILS 1		
E2		ELECTRICAL DETAILS 2		
E3		ELECTRICAL DETAILS 3		

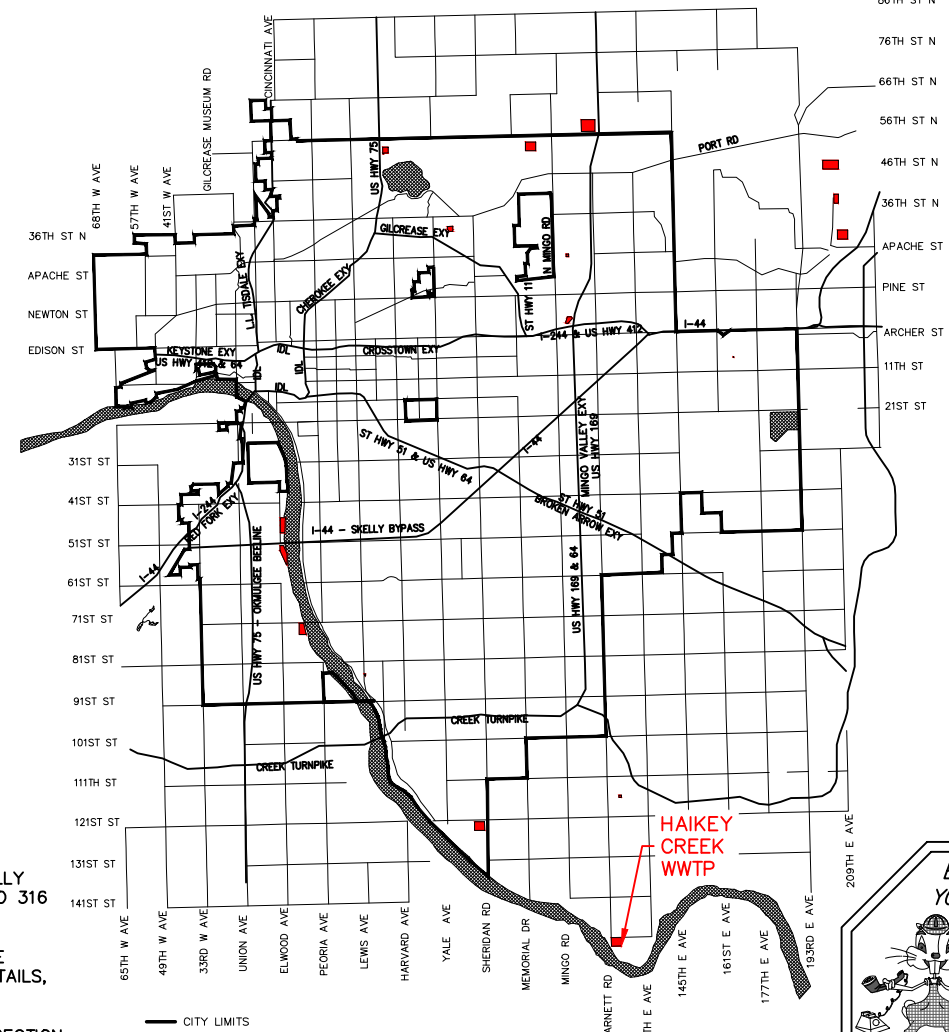
GENERAL NOTES:

- CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF THE CONTRACT DOCUMENTS, SPECIFICATIONS AND DRAWINGS AT THE JOB SITE WHEN WORK IS IN PROGRESS.
- CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AT ALL TIMES. TRASH, SPENT PALLETS, CONTAINER REMNANTS, BINDINGS, ETC. SHALL BE PICKED UP WHEN NO LONGER IN USE AND DEPOSITED IN TRASH CONTAINERS.
- ALL PIPE SUPPORTS, STANDS, BRACKETS, BOLTS, ANCHOR BOLTS, SCREWS, FASTENERS, PANEL STANDS & APPURTENANCES UNLESS OTHERWISE NOTED SHALL BE 316 STAINLESS STEEL MINIMUM SUITABLE FOR SANITARY APPLICATIONS.
- ALL DIMENSIONS SHOWN WITH ± SHALL BE CONFIRMED BY THE CONTRACTOR ACCORDING TO ACTUAL FIELD CONDITIONS OR EQUIPMENT REQUIREMENTS.
- DISSIMILAR METALS SHALL BE SEPARATED BY GASKET OR COATING TO PREVENT GALVANIC CORROSION. ALL ALUMINUM IN CONTACT W/CONCRETE SHALL BE COATED.
- ANY EXISTING ITEMS, EQUIPMENT, STRUCTURES OR SURFACES DISTURBED OR DAMAGED BY CONTRACTOR SHALL BE REPAIRED OR REPLACED TO ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL CONFIRM ALL DIMENSIONS WITH EQUIPMENT SUPPLIERS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF DISCREPANCIES.
- THE IMPROVEMENTS SET FORTH IN THE PLANS SHALL NOT PROHIBIT ON-SITE TRAFFIC AND/OR RELATED TASKS REQUIRED IN THE TREATMENT AND DISCHARGE OF WASTEWATER.
- ALL WORKMANSHIP SHALL BE NEAT, PLUMB, SQUARE AND CONSTRUCTED IN A PROFESSIONAL MANNER.
- HCWWTP CONTACT INFORMATION:

ANDREW LANKFORD HCWWTP SUPERINTENDENT (918) 596-7154	CINDY CANTERO WATER POLLUTION CONTROL MANAGER (918) 596-9870
--	--
- ALL PROJECT POT HOLING OF TIE-IN LOCATIONS SHALL BE PERFORMED WITHIN 30 CONTRACT DAYS OF CONTRACTOR MOBILIZATION. SUBMIT FIELD VERIFIED LOCATIONS AND DEPTHS TO THE ENGINEER.
- CONTRACTOR SHALL PROTECT ALL PIPING, ELECTRICAL AND PLANT SERVICES NOT SHOWN TO BE DEMOLISHED DURING CONSTRUCTION ACTIVITIES.
- DELIVER ALL HAIKEY CREEK WWTP EQUIPMENT TO HAIKEY CREEK WWTP ONLY. DO NOT DELIVER TO OR TEMPORARILY STORE AT OTHER LOCATIONS.
- ALL ELECTRICAL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH ALL N.E.C. AND CITY OF TULSA ELECTRICAL CODES. ELECTRICAL, MECHANICAL, AND PLUMBING INSPECTIONS ARE REQUIRED AT BOTH ROUGH AND FINAL STAGES OF THE PROJECT.
- WHERE RED TEXT AND LINEWORK IS USED IT CONVEYS NEW OR PROPOSED WORK. RECORD DRAWINGS USED AS BASE DRAWINGS MAY SHOW BOLD LINEWORK AND TEXT. THIS SHOULD BE VIEWED AS EXISTING.

SPECIAL WPC PROJECT NOTES & REQUIREMENTS:

- ALL UNISTRUT SUPPORTS, ANCHOR BOLTS, BOLTS, SCREWS, FASTENERS AND OTHER RELATED COMPONENTS WITHIN THE PLANT FACILITY SHALL BE 316 STAINLESS STEEL UNLESS SPECIFICALLY NOTED OTHERWISE. IF A DISCREPANCY IS NOTED, THE MATERIAL SELECTION SHALL DEFAULT TO 316 STAINLESS STEEL IN ALL EXTERIOR, SUBMERGED, H2S AND CLASSIFIED SPACES.
- ALL NEW DISCONNECTS, ELECTRICAL/CONTROL DISPLAY DEVICES AND SMALL PANELS SHALL BE MOUNTED ON THE CUSTOM ALUMINUM PANEL SUPPORT AS SHOWN IN THE MISCELLANEOUS DETAILS, UNLESS SPECIFICALLY NOTED OTHERWISE PER PLAN SHEET NOTES.
- ALL NEW PIPING AND MODIFIED PIPING SHALL BE PAINTED, STANDARD COLOR CODED, WITH DIRECTION ARROWS AND SIGNAGE AS PART OF THE NEW WORK.
- ALL AREAS OF DEMOLITION SHALL INCLUDE REPAIRS TO THE WALLS, CEILING, ROOF, FLOORING, AND CONCRETE. OTHER AREAS OF WORK TO INCLUDE TOUCH UP PAINTING TO MATCH AND CONCRETE REPAIRS AS SHOWN IN THE MISCELLANEOUS DETAILS. SEE SPECIFICATIONS AND SPECIFIC PLAN SHEETS FOR ADDITIONAL DETAILS.
- ALL ELECTRICAL AND CONTROLS DEMOLITION FOR BIDDING PURPOSES, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE REMOVED COMPLETELY BACK TO CLOSEST POINT OF TERMINATION. CONTRACTOR SHALL SUBMIT WRITTEN SKETCHES, DETAILS AND A WORK PLAN TO FURTHER DEFINE EXTENT OF EACH AREA OF DEMOLITION AND NEW WORK FOR PLANT OPERATIONS COORDINATIONS.
- SEE SPECIFICATIONS AND CITY OF TULSA STANDARDS AND DETAILS FOR ADDITIONAL REQUIREMENTS. ALL WWTP FACILITY'S ROADS, PARKING AND PAVED AREAS ARE CONSIDERED CITY OF TULSA ROADS AND CITY OF TULSA STANDARDS APPLY.
- THE CONTRACTOR SHALL SELECT MATERIALS AND INSTALL MATERIALS TO MINIMIZE CORROSION AND DISSIMILAR METALS IN ALL AREAS OF WORK. COAT ALL ALUMINUM IN CONTACT WITH CONCRETE, ISOLATION WASHERS ON BOLTS/FASTENERS AND OTHER MATERIAL SEPARATION METHODS USED.
- ALL COPPER PIPING SHALL BE COATED OR PAINTED PRIOR TO INSTALLATION TO ENSURE COPPER IS COVERED COMPLETELY. ALL HVAC LINES, OTHER COPPER TUBING OR COPPER SERVICE LINES SHALL BE OPTIONED FOR CORROSION RESISTANT COATINGS BY THE MANUFACTURER IF AVAILABLE. IF A FACTORY COATING OPTION IS NOT AVAILABLE, APPLY A SPRAY COATING ONSITE WITH HERESITE COATING OR EQUAL. PROTECTIVE COATINGS SHALL BE APPLIED PRIOR TO ASSEMBLY/INSTALLATION. REQUIREMENTS APPLY TO ALL HVAC MECHANICAL EQUIPMENT AND PLUMBING SYSTEMS WITHIN PLANT FACILITY GROUNDS, EXTERIOR EQUIPMENT, SERVICES AND INSIDE OF BUILDINGS, MANHOLES, VAULTS, SHEDS OR OTHER AREAS, EXCEPT PERSONNEL OCCUPIED SPACES LIKE OPERATIONS BUILDING, OFFICE SPACE OR ADMINISTRATION BUILDINGS. BURIED COPPER WATERLINES ARE ALSO EXEMPT.
- ALL PVC PIPING SIZES BETWEEN 1/2" - 4" SHALL BE SCH. 80 CPVC UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLAN SHEET OR APPLICABLE SPECIFICATION SECTION.
- CONTRACTOR SHALL BE AWARE OF THE WORKSPACE SAFETY REQUIREMENTS IN ALL AREAS OF WORK AND PROVIDE NECESSARY SAFETY EQUIPMENT, WORK PLANS AND METHODS AS REQUIRED TO COMPLETE THE WORK. IT IS THE CONTRACTOR'S OBLIGATION TO PROVIDE ANY CLASSIFIED SPACE AND CONFINED SPACE REQUIREMENTS NECESSARY TO COMPLETE THE WORK.



LOCATION MAP

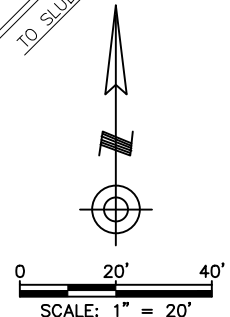
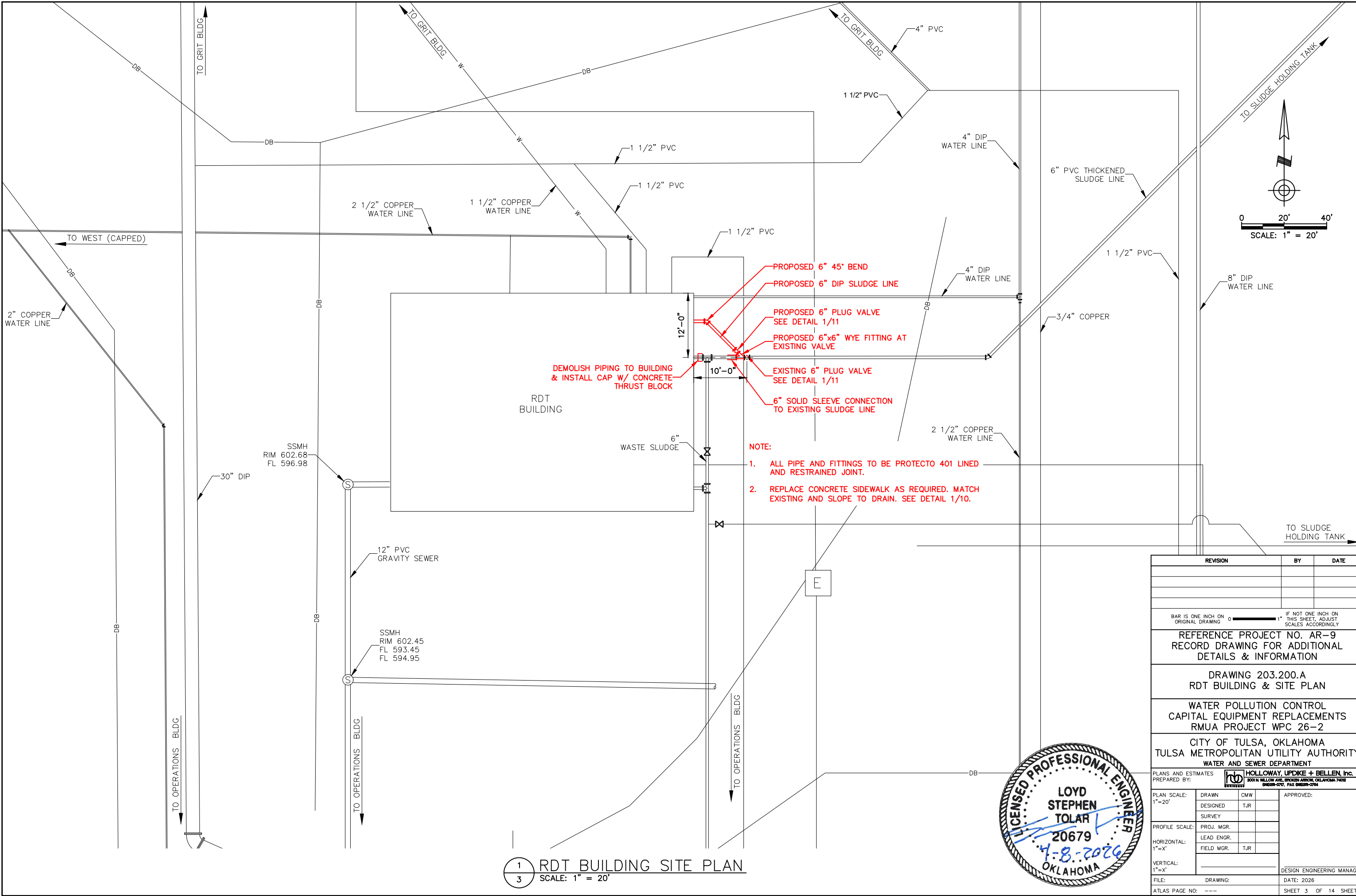


REVISION	BY	DATE
BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		
INDEX OF SHEETS, GENERAL NOTES & LOCATION MAP		
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2		
CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN UTILITY AUTHORITY WATER AND SEWER DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. <small>2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74002 (918) 259-0770, FAX (918) 259-0764</small>		
PLAN SCALE:	DRAWN CMW DESIGNED TJR SURVEY	APPROVED:
PROFILE SCALE:	PROJ. MGR. LEAD ENGR. FIELD MGR. TJR	DESIGN ENGINEERING MANAGER
FILE:	DRAWING:	DATE: 2026
ATLAS PAGE NO: ---		SHEET 2 OF 14 SHEETS



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PROPOSED 6" 45° BEND
 PROPOSED 6" DIP SLUDGE LINE
 PROPOSED 6" PLUG VALVE
 SEE DETAIL 1/11
 PROPOSED 6"x6" WYE FITTING AT
 EXISTING VALVE
 EXISTING 6" PLUG VALVE
 SEE DETAIL 1/11
 6" SOLID SLEEVE CONNECTION
 TO EXISTING SLUDGE LINE
 DEMOLISH PIPING TO BUILDING
 & INSTALL CAP W/ CONCRETE
 THRUST BLOCK

NOTE:

1. ALL PIPE AND FITTINGS TO BE PROTECTO 401 LINED AND RESTRAINED JOINT.
2. REPLACE CONCRETE SIDEWALK AS REQUIRED. MATCH EXISTING AND SLOPE TO DRAIN. SEE DETAIL 1/10.

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REFERENCE PROJECT NO. AR-9
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.200.A
RDT BUILDING & SITE PLAN

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
RMUA PROJECT WPC 26-2

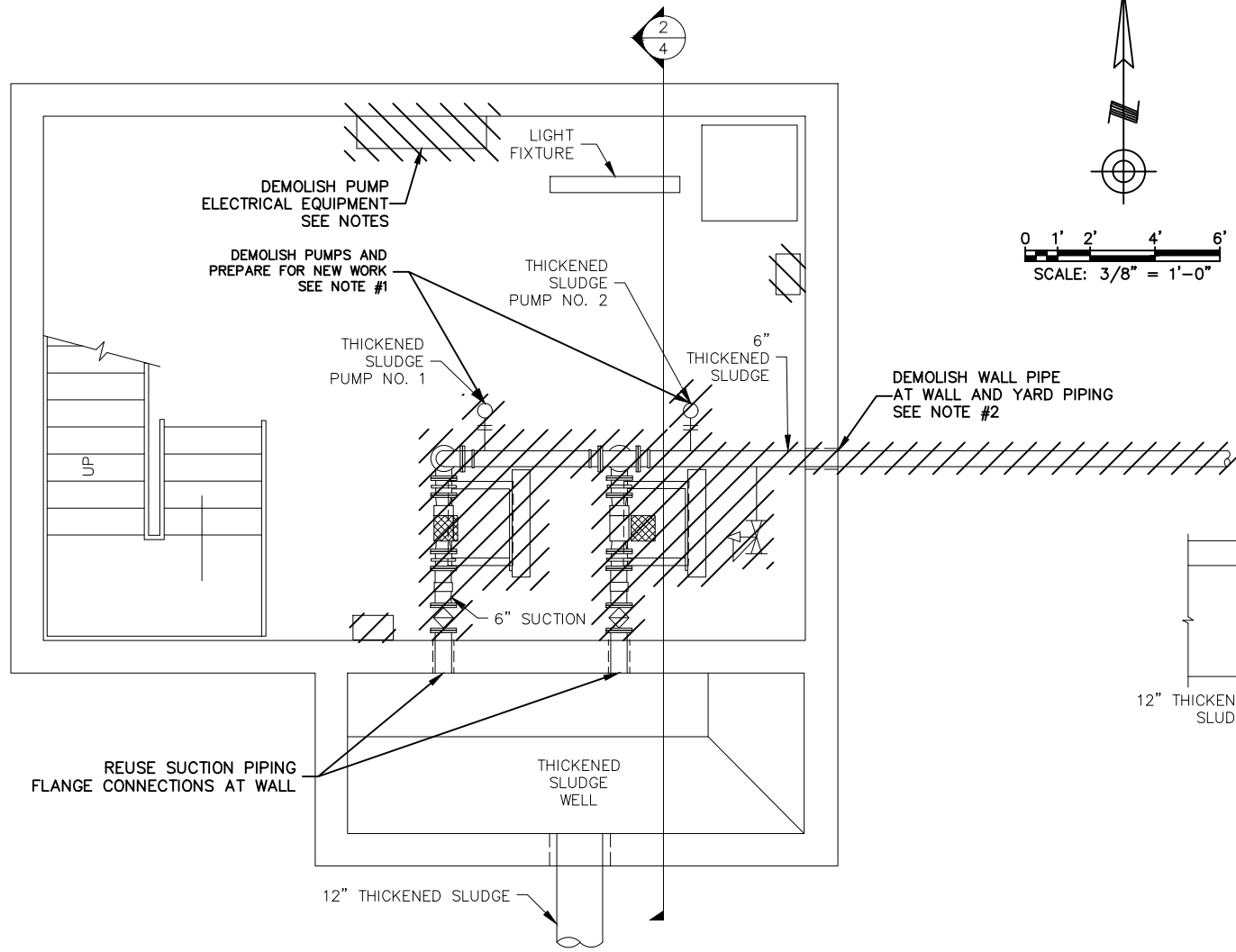
CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: **HOLLOWAY, UPDIKE + BELLEN, Inc.**
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74002
 (918)228-0770, FAX (918)228-0764

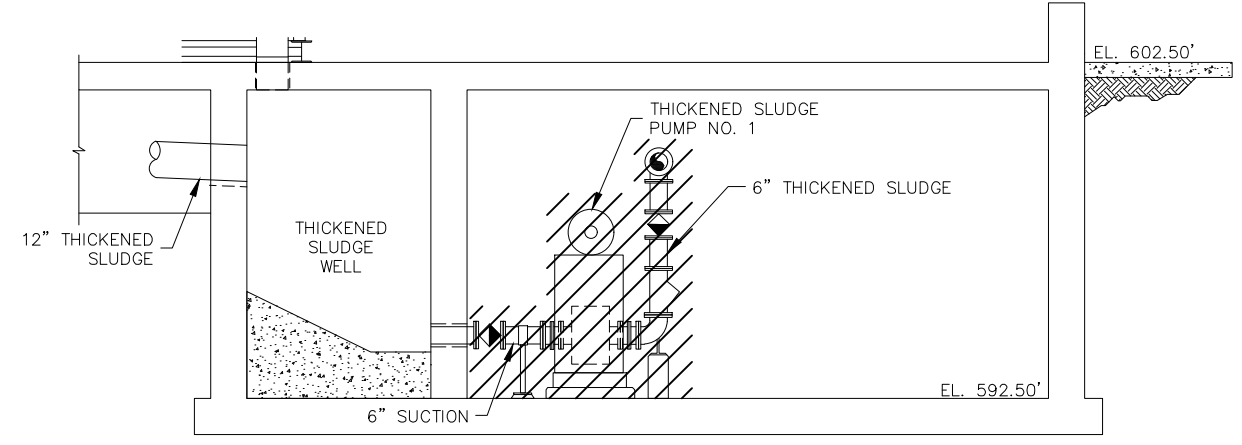
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	DESIGNED TJR	
	SURVEY	
PROFILE SCALE:	PROJ. MGR.	
HORIZONTAL: 1"=X'	LEAD ENGR.	
	FIELD MGR. TJR	
VERTICAL: 1"=X'		DESIGN ENGINEERING MANAGER
FILE:	DRAWING:	DATE: 2026
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1
3 RDT BUILDING SITE PLAN
 SCALE: 1" = 20'



1 RDT BUILDING BASEMENT PLAN
4 SCALE: 3/8" = 1'-0"



2 BASEMENT SECTION
4 SCALE: 3/8" = 1'-0"

NOTES:

- DEMOLISH PUMPS, MOTORS, FRAMES, CONCRETE PADS, PIPING CONCRETE PEDESTALS, SUCTION-DISCHARGE PIPING TO WALLS, TWO HOUSEKEEPING CONCRETE PADS AT WALLS, ELECTRICAL AND RELATED SYSTEM COMPONENTS AS REQUIRED.
- DEMOLISH THE EXISTING DISCHARGE PIPING WALL PENETRATION ON EAST WALL AND REMOVE THE DIP WALL PIPE FROM THE WALL. REPAIR THE WALL WITH TWO ROWS OF SIKA CAULK WATERSTOP, #4 EPOXY REPAIR ON 6" OCEW TWO MATS AND CONCRETE WALL REPAIR (BIRD MOUTH STYLE FROM OUTSIDE). FINISH THE REPAIR TO MATCH THE EXISTING WALL FINISH LOOK.
- REUSE THE EXISTING ELECTRICAL AND CONTROL WIRING TO EXTENT POSSIBLE. PROVIDE NEW WIRING AND CONTROLS AS REQUIRED FOR NEWLY SELECTED PUMPS.
- COORDINATE THE PUMP REPLACEMENT(S) WITH PLANT OPERATIONS AND DURING LOW FLOW CONDITIONS. MAINTAIN ONE PUMP IN SERVICE AT ALL TIMES.
- PROTECT AREA ELECTRICAL EQUIPMENT AND OTHER EXISTING CITY EQUIPMENT DURING CONSTRUCTION.
- CITY SALVAGE ITEMS - REVIEW SALVAGE ITEMS WITH THE PLANT STAFF, PROTECT, PALLETIZE AND DELIVER ALL CITY SALVAGED ITEMS TO PLANT MAINTENANCE BUILDING. PROVIDE A TRANSMITTAL SHEET TO THE OWNER AND ENGINEER LISTING ITEMS DELIVERED AND WHEN.
- SEE DETAIL 3/10 FOR CONCRETE REPAIR.

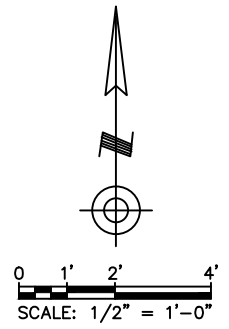
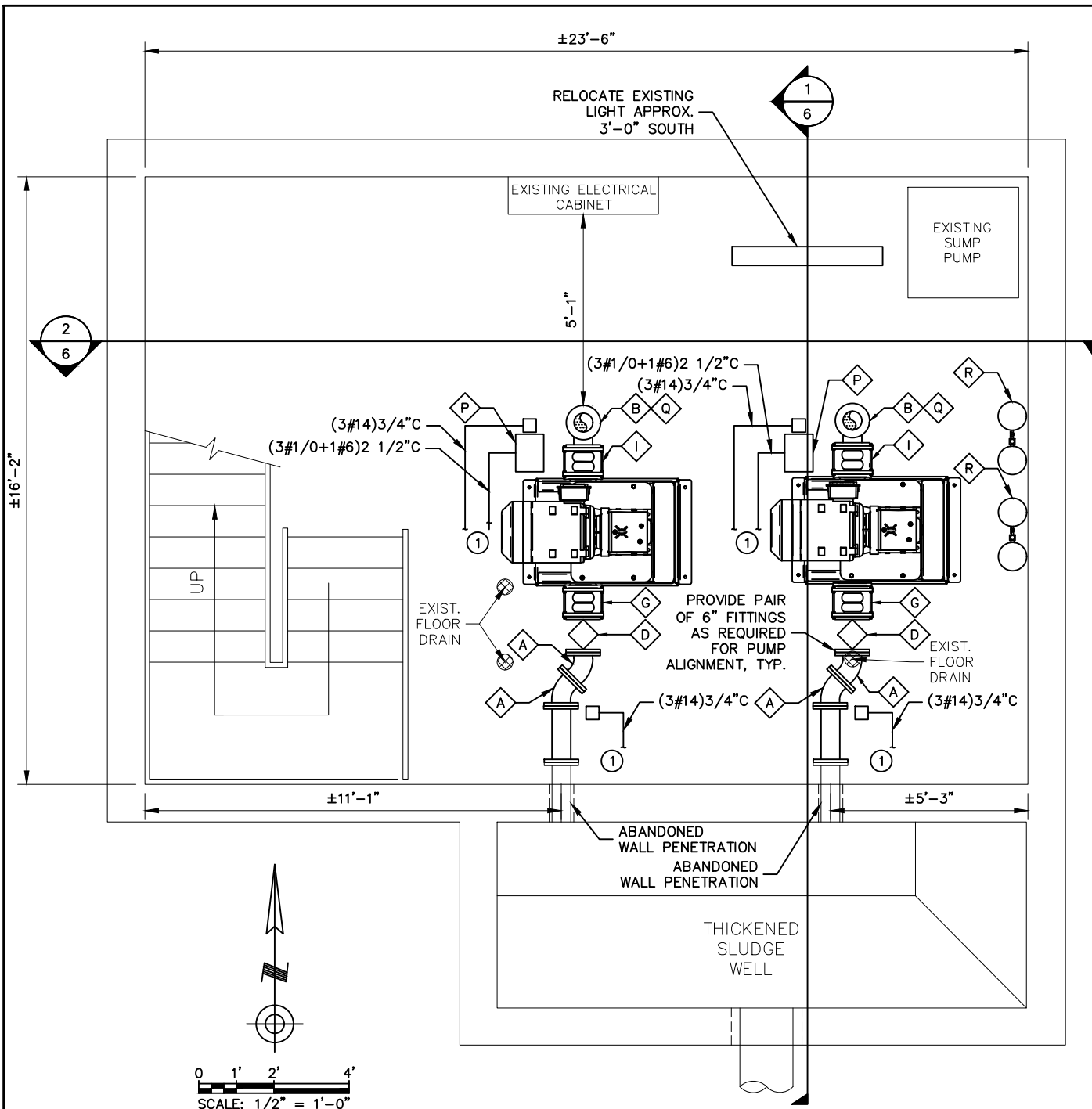


A EXISTING TWAS PUMPS PHOTO
4 NTS



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REFERENCE PROJECT NO. AR-9 RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION		
DRAWING 203.200.B RDT BUILDING TWAS PUMPS & PIPING DEMOLITION PLAN		
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2		
CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN UTILITY AUTHORITY WATER AND SEWER DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY:		
PLAN SCALE: AS SHOWN	DRAWN DESIGNED SURVEY	CMW TJR
PROFILE SCALE:	PROJ. MGR.	APPROVED:
HORIZONTAL: 1"=X'	LEAD ENGR. FIELD MGR.	TJR
VERTICAL: 1"=X'		
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1 RDT BUILDING BASEMENT PLAN (LOWER)
5 SCALE: 1/2" = 1'-0"

NOTES:

1. PAINT ALL NEW, EXSTING AND REUSED SLUDGE PIPING IN THE TWAS PUMP BASEMENT AREA. PAINT DIRECTION ARROWS & SIGNAGE AT SUCTION, DISCHARGE & BY-PASS DRAIN PIPING AS REQUIRED.
2. PROVIDE 316 SST DISCONNECT AT EACH PUMP. COORDINATE FINAL LOCATION WITH OWNER'S REPRESENTATIVE. ALL CONDUIT SHALL BE THREADED ALUMINUM RIDGED CONDUIT SYSTEM PER MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL INSTALL A BEAM CRANE TROLLEY AND HOIST IN THE RDT BUILDING BASEMENT STAIR WELL. CITY WILL PROVIDE TROLLEY AND HOIST. SEE DETAIL B/8.
4. DEMOLISH ALL ABANDONED ELECTRICAL EQUIPMENT, WIRING, AND CONDUIT AS REQUIRED. PROVIDE SALVAGE EQUIPMENT TO THE CITY.

KEYED NOTE:

- 1** ROUTE TO VFD ABOVE, FURNISH & INSTALL CONDUIT SEALS ON ALL CONDUIT ENTERING/LEAVING SPACE.

EQUIPMENT SCHEDULE					
ID	DESCRIPTION	MANUFACTURER	MODEL/STYLE	SIZE	DETAILS
A	45 BEND	SEE SPECIFICATIONS		6"	
B	90 BEND	SEE SPECIFICATIONS		6"	
C	CHECK VALVE	SEE SPECIFICATIONS		6"	
D	PLUG VALVE	SEE SPECIFICATIONS		6"	
E	PRESSURE GAUGE	ASHCROFT	LIQUID FILLED	4"	FULL PUMP PRESSURE RANGE(S) WITH 316 STAINLESS STEEL ISOLATION BALL VALVE, 316 STAINLESS HANDLE AND 3/4" THREADED 316 SST PIPING TEE WITH SAMPLE DRAIN. COORDINATE LAYOUT WITH PRESSURE SWITCH AS REQUIRED.
F	PRESSURE SWITCH AND PIPE SPOOL	SEE SPECIFICATIONS		6"	PRESSURE MONITORING SWITCH, SET AT 70 PSI, DIP FLANGE BY FLANGE SPOOL. WITH 316 STAINLESS STEEL ISOLATION BALL VALVE, 316 STAINLESS HANDLE AND 3/4" THREADED 316 SST PIPING TEE WITH SAMPLE DRAIN.
G	RJ FLANGED RUBBER EXPANSION JT	SEE SPECIFICATIONS	PUMP SUCTION SIDE APPLICATION	6"	GALVANIZED RESTRAINT RODS AND BOLTS, TYP.
H	TEE FITTING	SEE SPECIFICATIONS		6"	
I	RJ FLANGED RUBBER EXPANSION JT	SEE SPECIFICATIONS	PUMP DISCHARGE SIDE APPLICATION	6"	GALVANIZED RESTRAINT RODS AND BOLTS, TYP.
J	BLIND FLANGE WITH FLUSH CONN.			6"	2" TAP, 2" 316 STAINLESS STEEL BALL VALVE INCL. HANDLE, 2" 90 BEND FITTING, 2" QUICK DISCONNECT CONNECTION POINT. ALL COMPONENTS SHALL BE 316 SST AND QUICK DISCONNECT SHALL BE ALUMINUM.
K	BALL VALVE			2"	SCHEDULE 80 CPVC, TRUE UNION
L	BYPASS DRAIN AND BURST DISC	SEE SPECIFICATIONS	6 INCH - 90 PSI BURST (RUPTURE) DISC		PUMP DISCHARGE PRESSURE BY-PASS DRAIN WITH BURST (RUPTURE) DISC. INSTALL A 6" FLANGED REDUCER AT THE TEE REDUCING TO A 2" OUTLET AND 2 INCH 316SST ISOLATION BALL VALVE AT EACH PUMPS DISCHARGE PIPING. ROUTE THE 2 INCH SCHEDULE 80 CPVC BY PASS DRAIN PIPING TO THE CEILING AT APPROXIMATELY 6'-9" OFF THE FINISHED FLOOR AND ROUTE TO THE WET WELL WALL PIPE CONNECTION AS INDICATED.
M	BYPASS DRAIN "SIGHT GLASS" DRAIN			2"	2" FLANGED CPVC SIGHT GLASS (RESTRAINED SIGHT GLASS RATED AT 200PSI MIN). COORINATER FINAL PLACEMENT WITH OWNER REPRESENTATIVE WITH A LAYOUT SKETCH IN THE MATERIAL SUBMITTAL.
N	SADDLE HANGER SUPPORTS		HDG	PIPE SIZE	316 SST ANCHOR BOLTS.
O	HOIST MOUNTING RING SUPPORT	ACTEK	SEE PLAN SHEET DETAIL 316SST		CUSTOM SUPPORT, SEE PLAN SHEET DETAIL. INSTALL ABOVE PUMP AS DIRECTED. https://actekmfg.com/
P	DISONNECT SWITCH AND E-STOP	SEE SPECIFICATIONS	CLASS 1, DIV 2		SEE CUSTOM ALUMINUM PANEL SUPPORT PER PLAN SHEET DETAIL 6/10
Q	CONCRETE PIPE SUPPORT				14"x14" , SEE CONCRETE DETAIL 2/10
R	SEAL WATER SYSTEM AND PIPING	AESSEAL	SEE PLAN SHEET DETAIL		https://www.gesseal.com/

PUMP SCHEDULE											
PUMP ID	SERVICE	DRIVE	CAPACITY (GPM)	PSI	HP	VOLTAGE (V)	PHASE	HERTZ (Hz)	SPEED (RPM)	SUCTION PIPE (IN)	DISCHARGE PIPE (IN)
#1	RAW SEWAGE/SLUDGE	VARIABLE	400	90	40	460	3	60	247	6	6
#2	RAW SEWAGE/SLUDGE	VARIABLE	400	90	40	460	3	60	247	6	6

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REFERENCE PROJECT NO. AR-9
 RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.200.C
 RDT TWAS PUMPS & PIPING IMPROVEMENTS PLAN

WATER POLLUTION CONTROL
 CAPITAL EQUIPMENT REPLACEMENTS
 RMUA PROJECT WPC 26-2

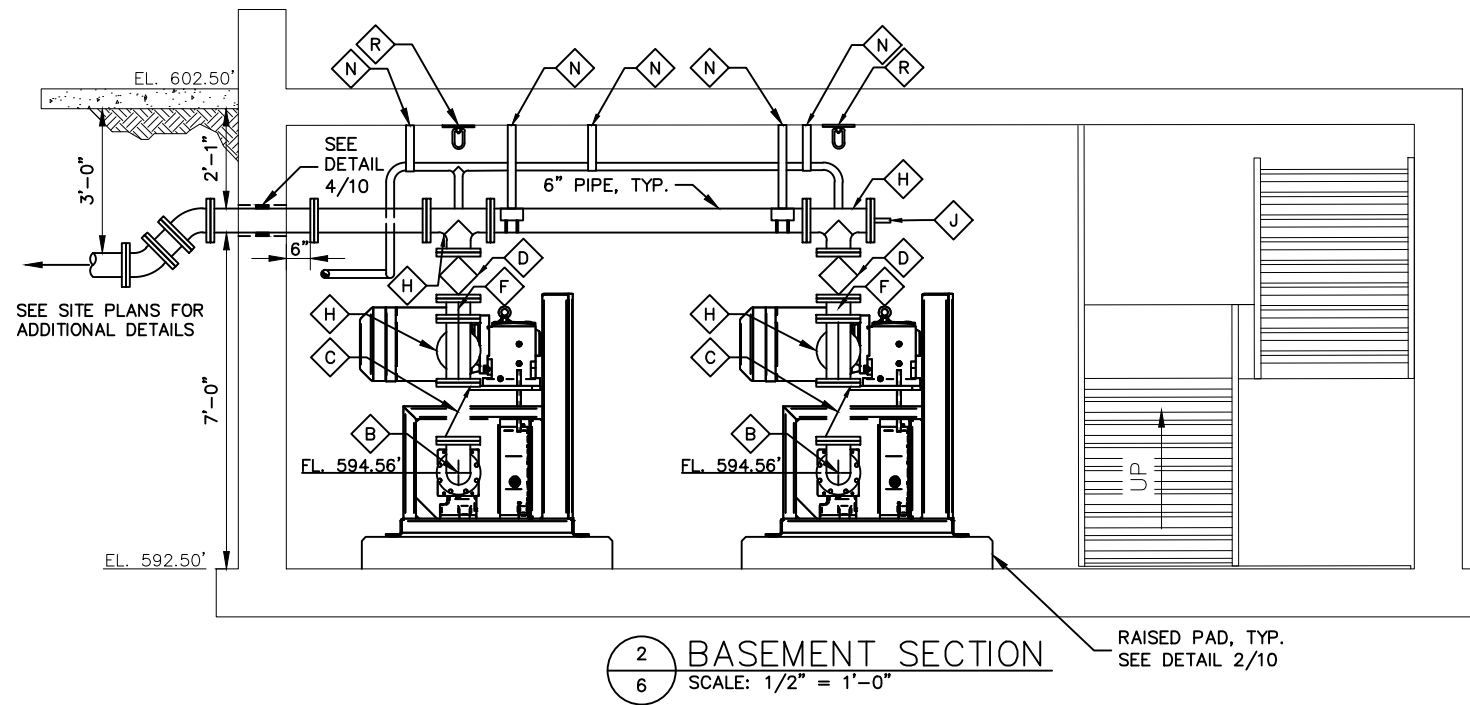
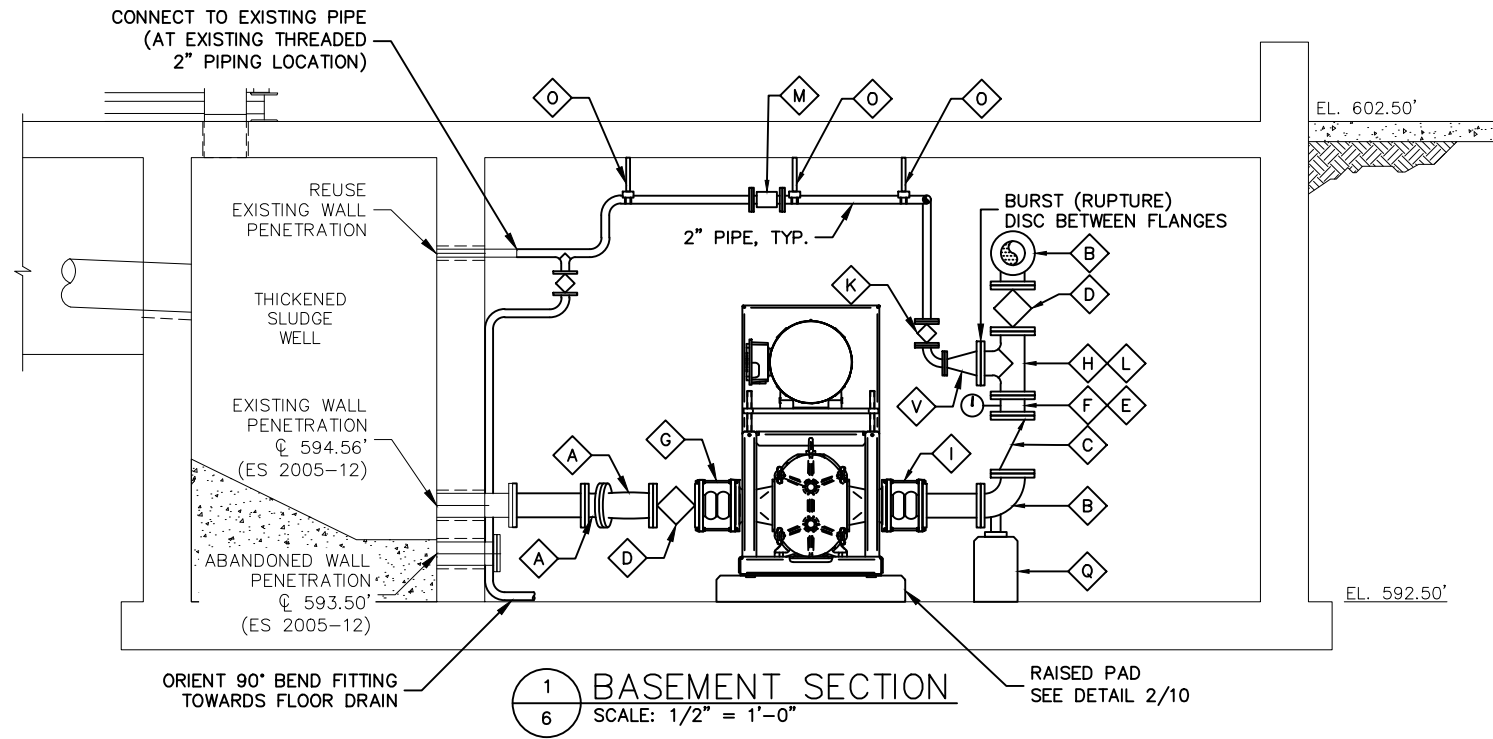
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2001 N WILLOW AVE, BROKEN ARROW, OKLAHOMA 74002
 (918)258-0707, FAX (918)258-0764

PLAN SCALE: 1/2"=1'-0"	DRAWN CMW	APPROVED:
	DESIGNED TJR	
	SURVEY	
PROFILE SCALE:	PROJ. MGR.	
HORIZONTAL: 1"=X'	LEAD ENGR.	
	FIELD MGR. TJR	
VERTICAL: 1"=X'		
FILE:	DRAWING:	DATE: 2026
ATLAS PAGE NO: ---		SHEET 5 OF 14 SHEETS



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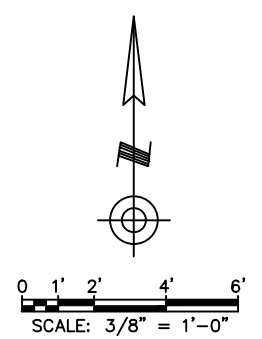
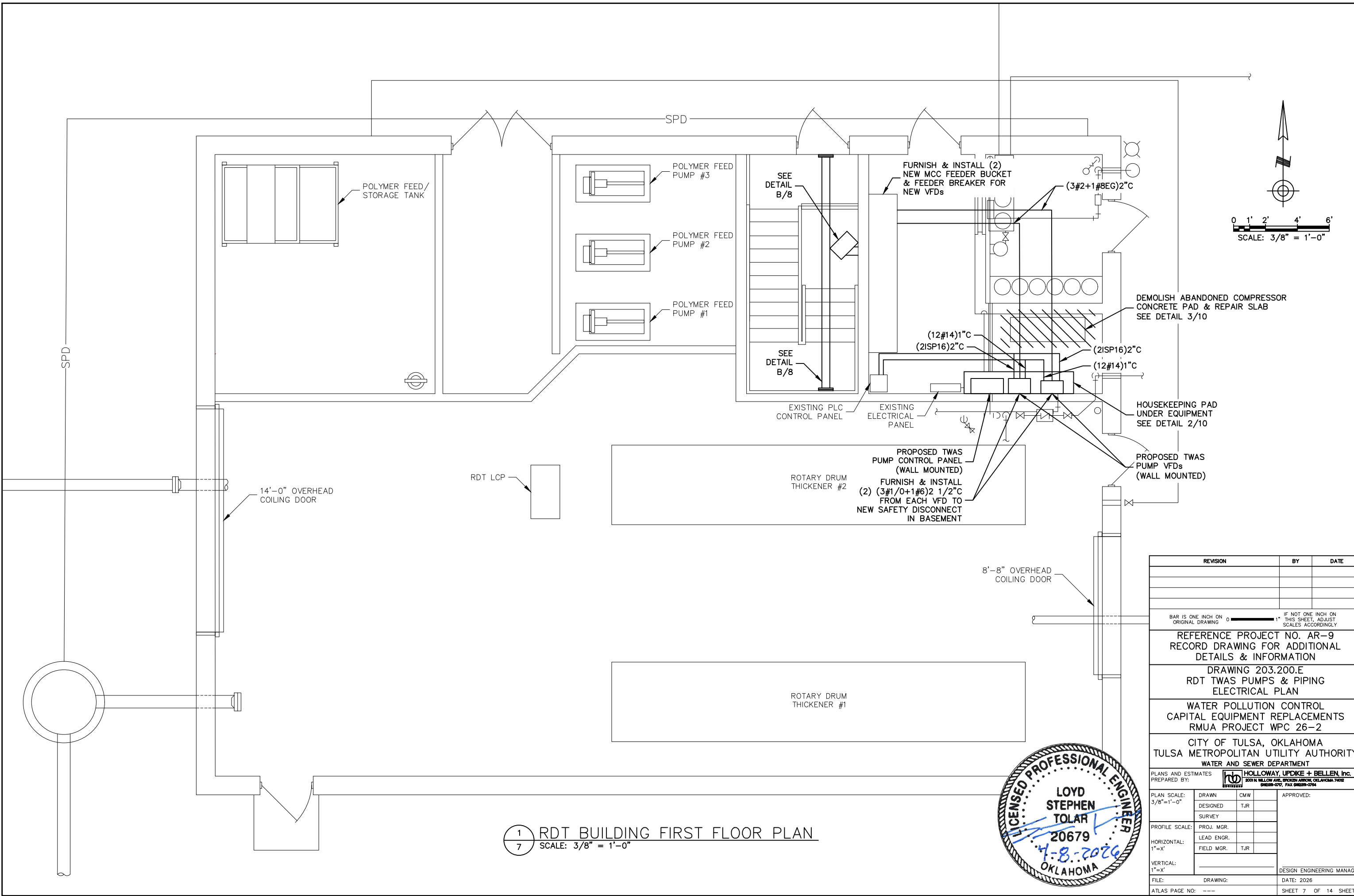


NOTES:

- SEE PLAN SHEET 203.200.D EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION AND KEY NOTE DETAILS.

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<p>DRAWING 203.200.D RDT TWAS PUMPS & PIPING IMPROVEMENTS PLAN</p>		
<p>WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2</p>		
<p>CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN UTILITY AUTHORITY WATER AND SEWER DEPARTMENT</p>		
<p>PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. 2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012 (918)258-0770, FAX (918)258-0764</p>		
PLAN SCALE: 1/2"=1'-0"	DRAWN DESIGNED SURVEY	CMW TJR
PROFILE SCALE:	PROJ. MGR.	APPROVED:
HORIZONTAL: 1"=X'	LEAD ENGR. FIELD MGR.	TJR
VERTICAL: 1"=X'		DESIGN ENGINEERING MANAGER
FILE:	DRAWING:	DATE: 2026
ATLAS PAGE NO: ---		SHEET 6 OF 14 SHEETS





1 RDT BUILDING FIRST FLOOR PLAN
7 SCALE: 3/8" = 1'-0"



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REFERENCE PROJECT NO. AR-9 RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION DRAWING 203.200.E RDT TWAS PUMPS & PIPING ELECTRICAL PLAN		
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2		
CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN UTILITY AUTHORITY WATER AND SEWER DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. 2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012 (918)258-0770, FAX (918)258-0764		
PLAN SCALE: 3/8" = 1'-0"	DRAWN DESIGNED SURVEY	CMW TJR
PROFILE SCALE: 1" = X'	PROJ. MGR. LEAD ENGR. FIELD MGR.	APPROVED: TJR
HORIZONTAL: 1" = X'	TJR	DESIGN ENGINEERING MANAGER
VERTICAL: 1" = X'	DATE: 2026	SHEET 7 OF 14 SHEETS
FILE: ATLAS PAGE NO: ---	DRAWING:	DATE: 2026

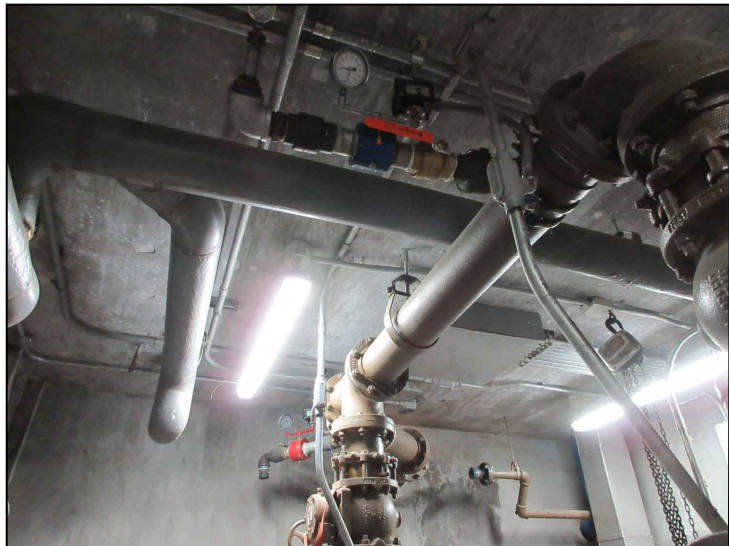


A
8 NTS PRESSURE VALVE & PIPING PHOTO

DEMOLISH EXISTING HEATER SUPPORT CONDUIT TO THE CONDUIT THREADS AND REMOVE WIRE BACK TO SOURCE



B
8 NTS TROLLEY STOP PHOTO



NOTE:

1. INSTALL & COORDINATE EXISTING CONDUIT AND WIRE OR PROVIDE NEW AT NEW MANIFOLD.

C
8 NTS PUMP DISCHARGE PIPING PHOTO

ADJUST TO GRADE THE EXISTING 6" SLUDGE PIPING YARD VALVE AND NEW CONCRETE COLLAR SEE DETAIL 1/11



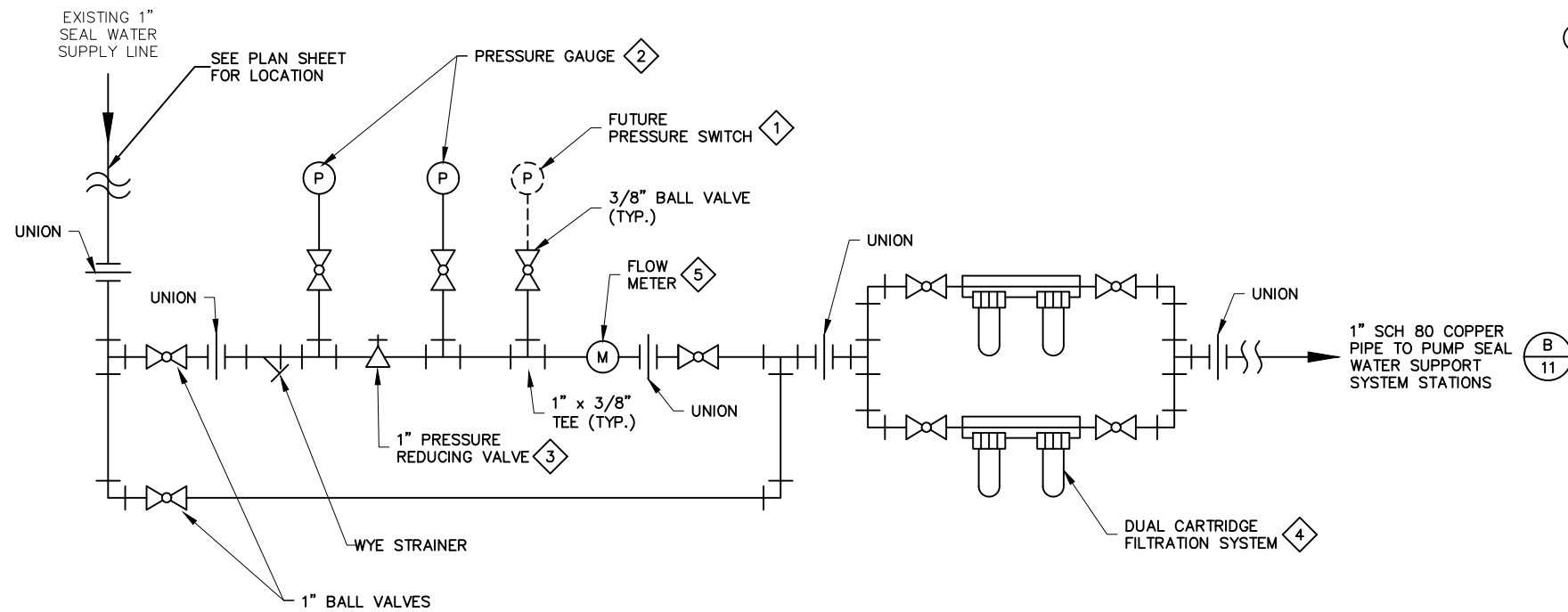
NOTE:

1. SEE SITE PLAN FOR NEW WORK & PROPOSED VALVE.

D
8 NTS YARD PIPING AREA PHOTO



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BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		
REFERENCE PROJECT NO. AR-9 RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION DRAWING 203.200.F RDT BUILDING TWAS PUMPS & PIPING PHOTOS		
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2		
CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN UTILITY AUTHORITY WATER AND SEWER DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY:		
PLAN SCALE: NTS	DRAWN DESIGNED SURVEY	CMW TJR
PROFILE SCALE: HORIZONTAL: 1"=X' VERTICAL: 1"=X'	PROJ. MGR. LEAD ENGR. FIELD MGR.	TJR
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SHEET 8 OF 14 SHEETS		DATE: 2026



NOTE:

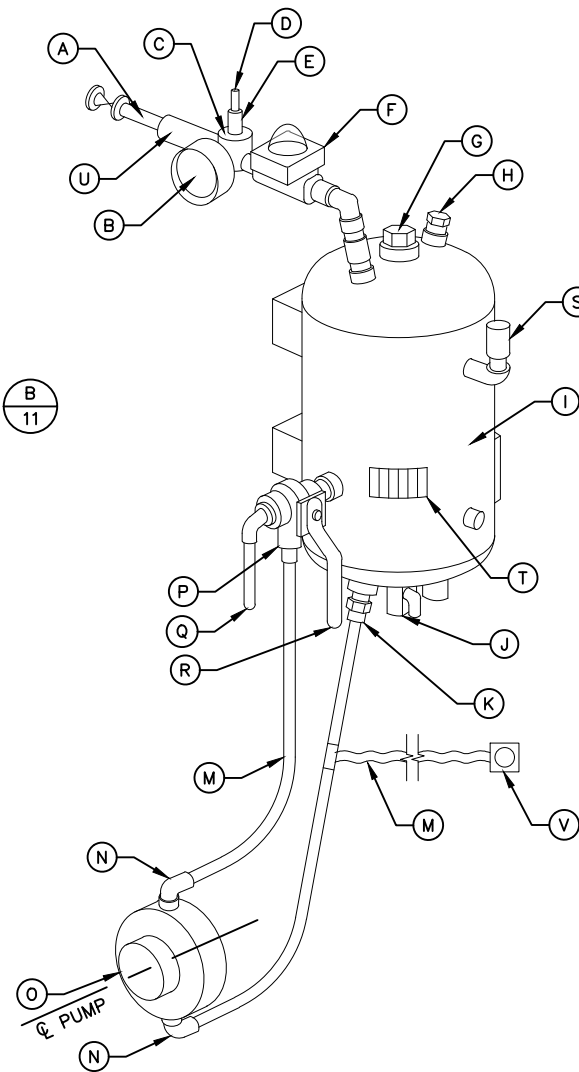
1. WALL MOUNT IN PUMP ROOM AS DIRECTED.

1 SEAL WATER CONDITIONING STATION
9 NTS

NOTES:

1. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING SEAL WATER SYSTEM ENTIRELY FOR BOTH PUMP TRAINS AND INCLUDE COSTS FOR BOTH TRAINS IN THE BID ITEM.
2. EXISTING SEAL WATER COMPONENTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
3. UTILIZE EXISTING SUPPORT WHERE POSSIBLE. PROVIDE ADDITIONAL SUPPORTS AS NECESSARY TO ADEQUATELY SUPPORT PIPING AND FLEXIBLE PEX TUBING. PEX TUBING SHALL BE LIMITED TO PIPING SHOWN IN DETAIL 2/9. ALL OTHERS SHALL BE PAINTED COLOR CODED COPPER.
4. REUSE EXISTING CONDUIT AND WIRING FOR PRESSURE SWITCHES. RECONNECT WIRING AND TEST FUNCTIONALITY OF NEW ELECTRICAL COMPONENTS INSTALLED.
5. CONTRACTOR SHALL COORDINATE WITH PUMP SUPPLIER FOR SEAL WATER REQUIREMENTS. SIZES OF PIPE AND VALVES SHOWN ARE APPROXIMATE.
6. UNLESS OTHERWISE NOTED PIPE AND FITTINGS SHALL BE 1" SCH 80 COPPER. VALVES SHALL BE BRONZE.
7. PAINT ALL EXPOSED COPPER PIPE AND FITTINGS. COPPER PIPING SHALL BE PAINTED COMPLETELY PRIOR TO FINAL ASSEMBLY AT WALL PIPE CLAMPS, SUPPORTS AND HANGERS SO THAT ALL COPPER PIPING IS COMPLETELY SEALED WITH PAINT. PLASTIC SPACERS OR OTHER INDUSTRY STANDARD MEANS SHALL BE USED TO SEPARATE DISSIMILAR METAL ISSUES AT COPPER PIPING AND CONNECTIONS.
8. ALL NEW PIPE SUPPORTS, UNISTRUT, BRACKETS, BOLTS FASTENER AND RELATED COMPONENTS SHALL BE 304 OR 316 SS UNLESS SPECIFICALLY NOTED OTHERWISE.
9. CONNECTION TIE-IN TO THE WATERLINE COULD BE UP TO 20 LF AWAY FROM PUMP AND/OR MOUNTED ON NEARBY WALL. FINAL LAYOUT TO BE APPROVED BY OWNER'S REPRESENTATIVES.

KEYED NOTES	
ID	DESCRIPTION
1	FUTURE PRESSURE SWITCH
2	INSTALL 0 TO 150 PSI PRESSURE GAUGES AS SHOWN. PRESSURE GAUGES SHALL BE ASHCROFT SERIES 1259 OR APPROVED EQUAL.
3	PRESSURE REDUCING VALVE 25-75 PSI RANGE WATTS LFN250 OR EQUAL.
4	INSTALL TWO PARALLEL DUAL CARTRIDGE FILTRATION SYSTEMS. US WATER BIG BLUE BBF2-20 OR EQUAL. PROVIDE 5 MICRON PRE-FILTER A 1 MICRON SECONDARY FILTER.
5	INSTALL 1" DLJ MULTI JET WATER METER.



2 PUMP SEAL WATER SUPPORT SYSTEM
9 NTS

NOTES:

1. PROVIDE AND INSTALL A PUMP SEAL WATER SUPPORT SYSTEM (PSWSS) FOR EACH PUMP TRAIN. (2) AT NEW PUMPS, TOTAL OF (2).
2. PSWSS SHALL BE AES SEALS MODEL SW RANGE OR APPROVED EQUAL.
3. PROVIDE 316 SS UNISTRUT FRAME TO SUPPORT PSWSS AT APPROPRIATE HEIGHT ABOVE PUMP CENTER LINE.
4. COORDINATE LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
5. THE CITY SHALL RETAIN SALVAGE RIGHTS TO THE EQUIPMENT BEING REMOVED FOR THE NEW SYSTEMS.
6. INSTALL INLET (COOL) WATER "N" SUPPLY AT BOTTOM. "N" RETURN AT TOP PER MANUFACTURER'S RECOMMENDATIONS.

KEYED NOTES:	
(A)	WATER SUPPLY CONNECTION
(B)	PRESSURE GAUGE
(C)	PRESSURE REGULATOR
(D)	PRESSURE REGULATOR SCREW
(E)	REGULATOR LOCK NUT
(F)	FLOW INDICATOR
(G)	SPARE CONNECTION
(H)	EXPANSION VESSEL CONNECTION
(I)	PRESSURE VESSEL
(J)	DRAIN VALVE
(K)	SEAL SUPPLY CONNECTION
(L)	FINNED TUBE (NOT SHOWN)
(M)	SUPPLY / RETURN PIPE (1/2" PEX)
(N)	SEAL FITTINGS
(O)	MECHANICAL SEAL, AES SEALS CDSA OR EQUAL
(P)	SEAL RETURN CONNECTION
(Q)	DRAIN CONNECTION
(R)	3-WAY VALVE
(S)	AIR VENT VALVE 316 SS
(T)	TEMPERATURE INDICATOR
(U)	NON-RETURN VALVE
(V)	PRESSURE SWITCH

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. AR-9
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION
DRAWING 203.200.G
LIFT STATION PUMP REPLACEMENT SEAL WATER SYSTEM

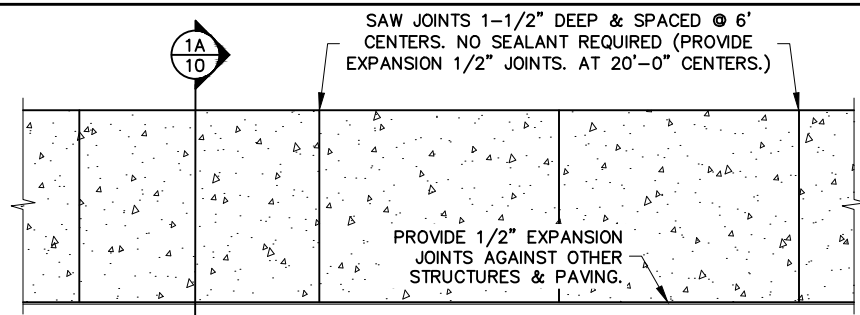
WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
RMUA PROJECT WPC 26-2

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

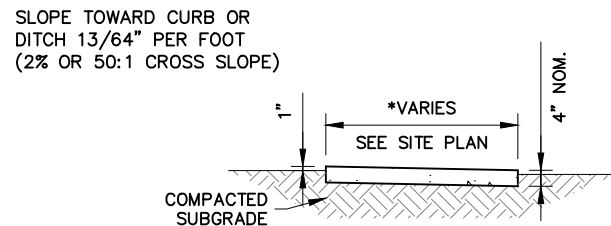
PLANS AND ESTIMATES PREPARED BY: **HOLLOWAY, UPDIKE + BELLEN, Inc.**
2001 N WILLOW AVE, BROKEN ARROW, OKLAHOMA 74012
918-258-0770, FAX 918-258-0764

PLAN SCALE: NTS	DRAWN: CMW	DESIGNED: TJR	SURVEY:	APPROVED:
PROFILE SCALE:	PROJ. MGR.	LEAD ENGR.	FIELD MGR. TJR	DESIGN ENGINEERING MANAGER
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VERTICAL: 1"=X'				
FILE:	DRAWING:	DATE: 2026		
ATLAS PAGE NO: ---	SHEET 9 OF 14 SHEETS			

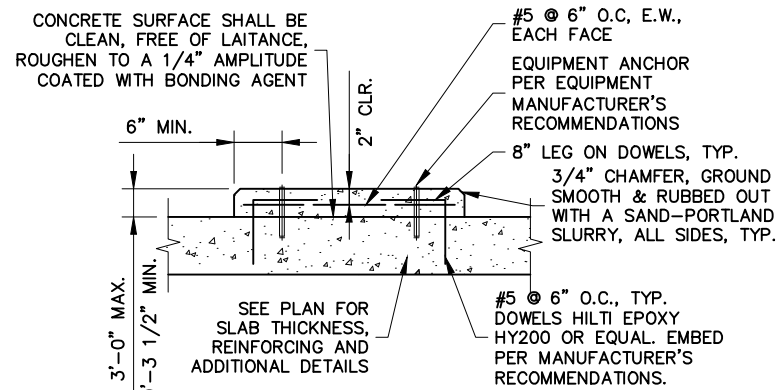




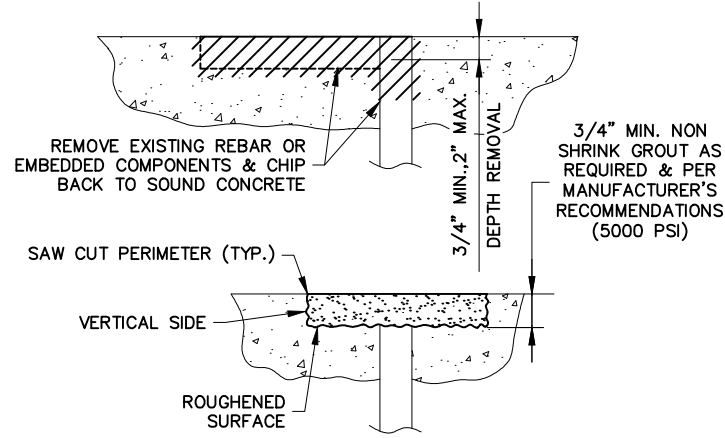
1 PLAN @ SIDEWALK/MOW STRIP
SCALE: 1/2" = 1'-0"



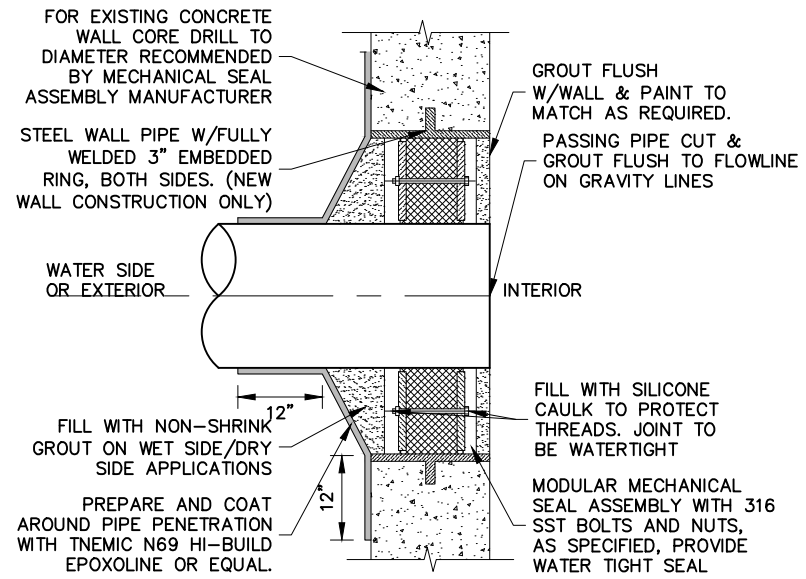
1A SECTION @ SIDEWALK/MOW STRIP
SCALE: 1/2" = 1'-0"



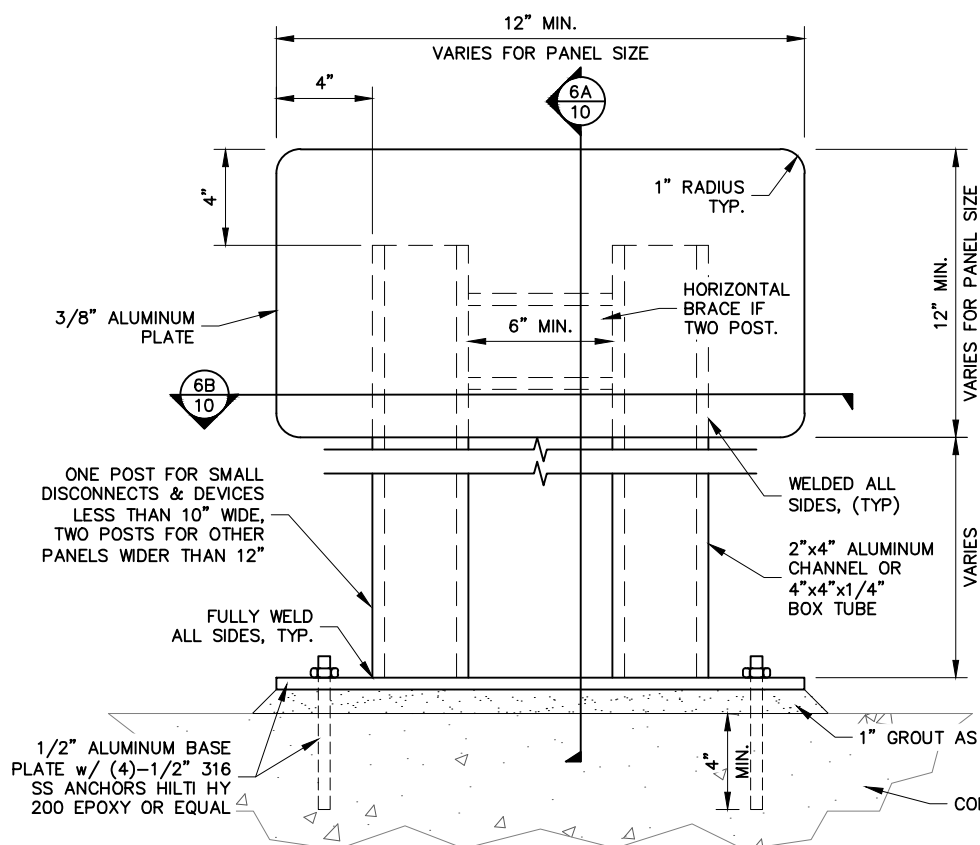
2 RAISED PAD DETAIL
SCALE: 1" = 1'-0"



3 REBAR & EMBEDDED ITEM CONCRETE REPAIR DETAIL
SCALE: NTS

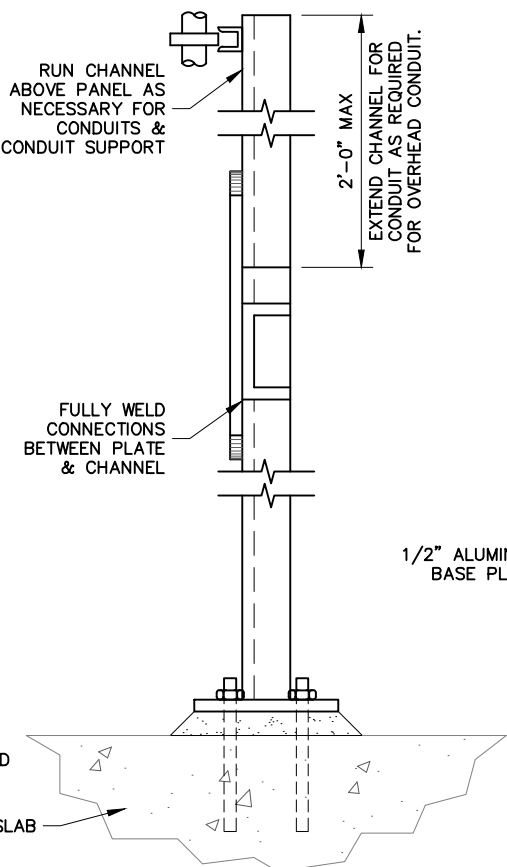


4 WALL PENETRATION SEAL
SCALE: NTS

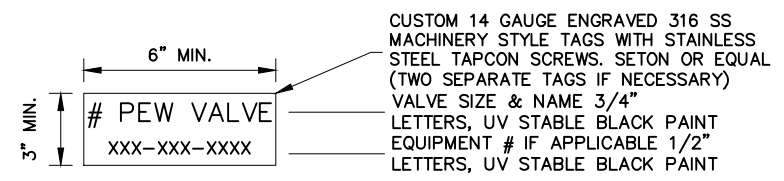


6 CUSTOM ALUMINUM PANEL SUPPORT
SCALE: 3" = 1'-0"

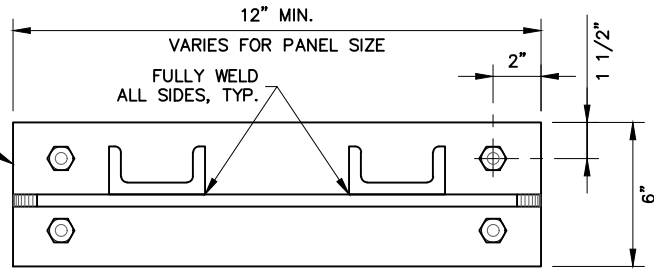
DETAIL NOTE:
SUBMIT DRAWING FOR APPLICATION FOR APPROVAL. PANEL(S) NOT SHOWN FOR CLARITY



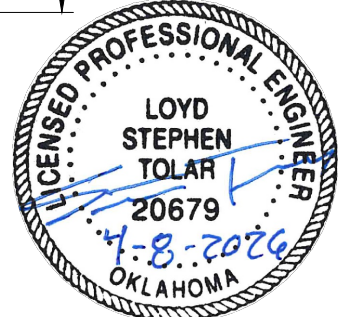
6A SUPPORT SECTION
SCALE: 3" = 1'-0"



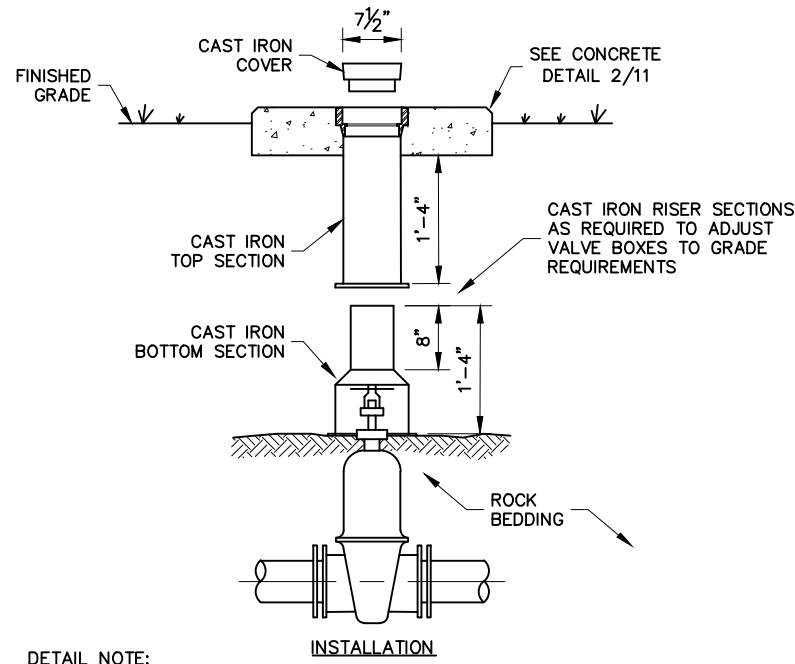
5 CUSTOM EQUIPMENT TAG
SCALE: 3" = 1'-0"



6B BASE PLATE DETAIL
SCALE: 3" = 1'-0"



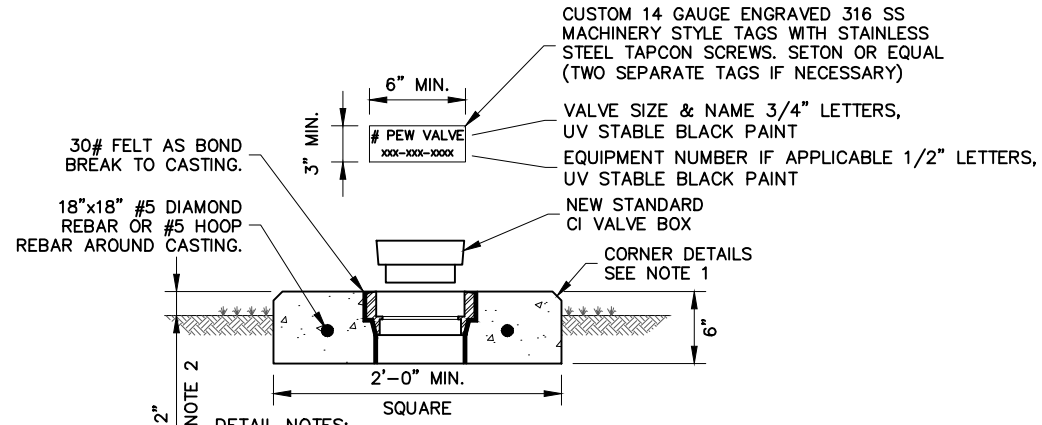
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<p>BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>		
<p>MISCELLANEOUS DETAILS</p>		
<p>WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2</p>		
<p>CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN AUTHORITY WATER AND SEWER DEPARTMENT</p>		
<p>PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE & BELLEN, Inc. 2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012 (918) 258-0770, FAX (918) 258-0764</p>		
PLAN SCALE: AS SHOWN	DRAWN: CMW DESIGNED: TJR SURVEY: TJR	APPROVED:
PROFILE SCALE:	PROJ. MGR.:	<p>DESIGN ENGINEERING MANAGER</p>
HORIZONTAL:	LEAD ENGR.:	
VERTICAL:	FIELD MGR.:	DATE: 2026
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		SHEET 10 OF 14 SHEETS



DETAIL NOTE:

1. EXTENSION PIECE CAN BE CUT TO LENGTH REQUIRED WITH HANDSAW
2. DETAIL USED FOR BOTH NEW VALVE INSTALLATION & VALVE BOX ADJUSTMENTS TO GRADE. PROVIDE NEW CASTING AND/OR BIGGER SECTIONS AS REQUIRED.

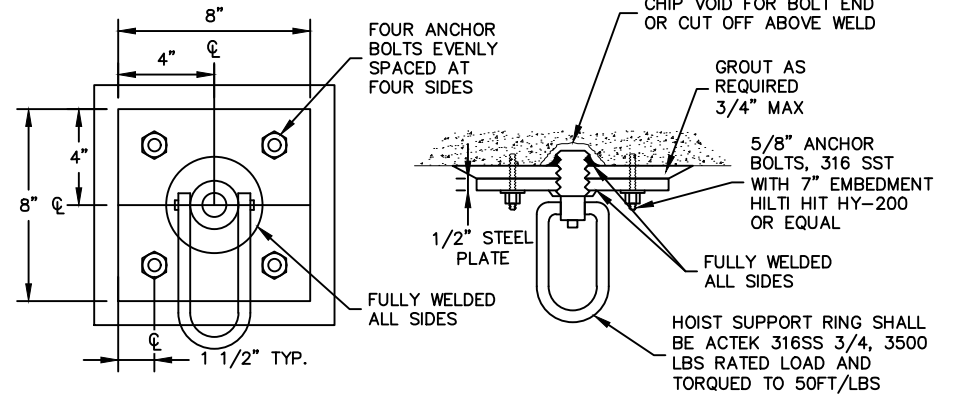
1 CONCRETE COLLAR & VALVE BOX INSTALLATION
SCALE: 1" = 1'-0"



DETAIL NOTES:

1. CHAMFER EXPOSED CORNERS IF INSTALLED IN GRASS AREA. TOOLED TOP PERIMETER EDGE IF IN PAVING. CONCRETE COLLARS SHALL BE CAST IN PLACE. PRE-CAST COLLARS WILL NOT BE ACCEPTABLE.
2. CONCRETE COLLARS IN GRASS SHALL BE 2" HIGHER IN ELEVATION THAN THE SURROUNDING GROUND. CONCRETE COLLARS IN PAVING OR HARD SURFACE SHALL BE FLUSH WITH THE SURFACE PAVING.
3. REFER TO CITY OF TULSA STANDARD SPECIFICATIONS FOR VALVE BOX REQUIREMENTS.

2 VALVE BOX CONCRETE COLLAR
SCALE: 1 1/2" = 1'-0"



3 HOIST MOUNTING RING SUPPORT DETAIL
SCALE: 3" = 1'-0"

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MISCELLANEOUS DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
RMUA PROJECT WPC 26-2

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: **HOLLOWAY, UPDIKE + BELLEN, Inc.**
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74002
918-259-0707, FAX 918-259-0764

PLAN SCALE: AS SHOWN	DRAWN: CMW	DESIGNED: TJR	SURVEY: TJR	APPROVED:
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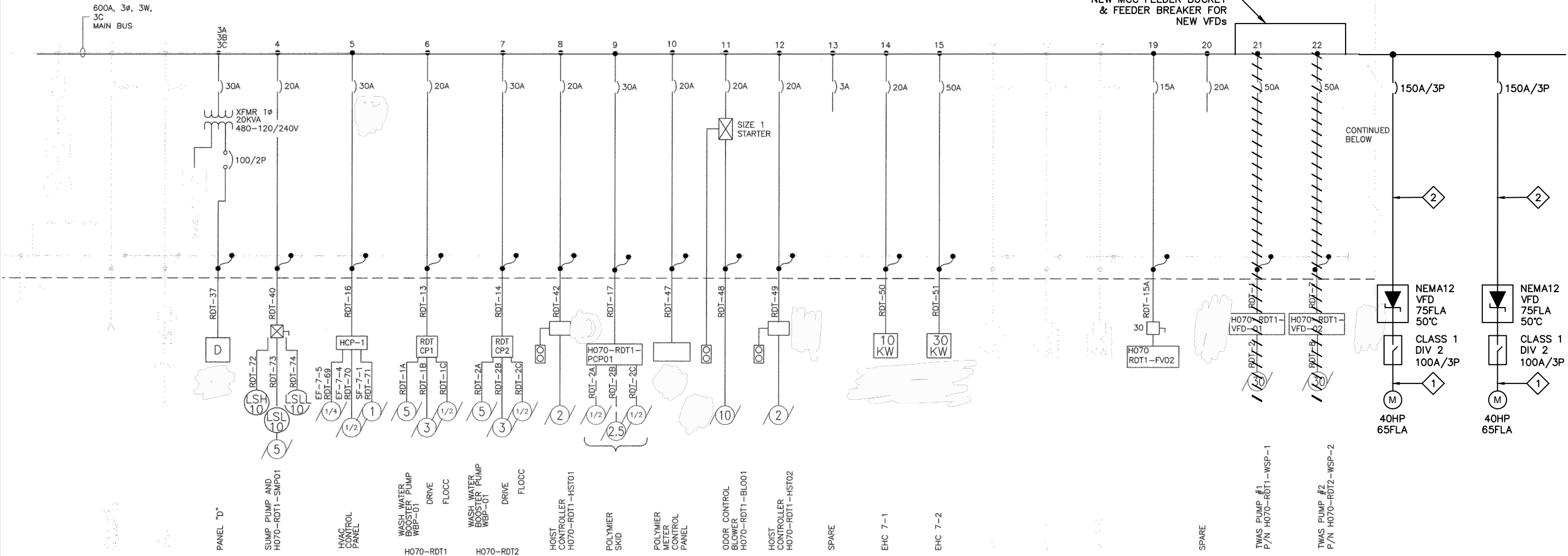


PRELIMINARY NOT FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

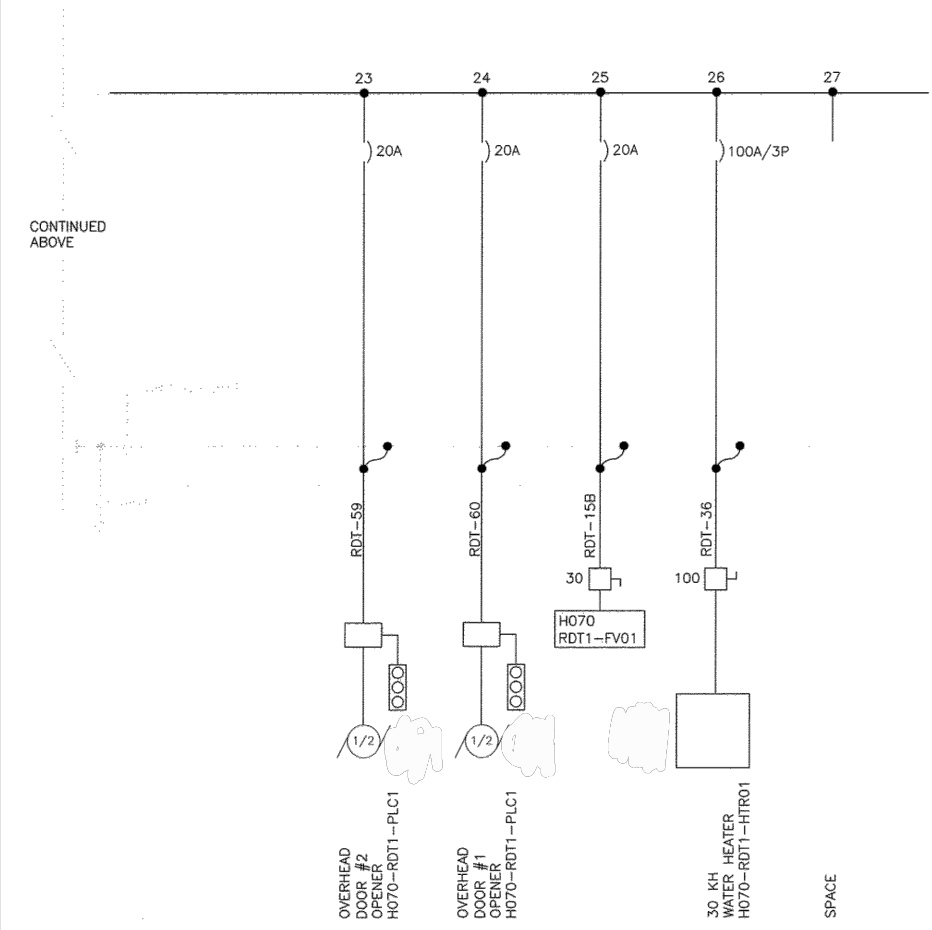
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MOTOR CONTROL CENTER MCC-P3 (REVISED)

REMOVE EXISTING BUCKETS
FURNISH & INSTALL (2)
NEW MCC FEEDER BUCKET
& FEEDER BREAKER FOR
NEW VFDs



MOTOR CONTROL CENTER MCC-P3 (REVISED)



CABLE LEGEND	
NO.	DESCRIPTION
①	(3#2+1#8EG)2" C
②	(3#1/0+1#6)2 1/2" C

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ELECTRICAL DETAILS 1

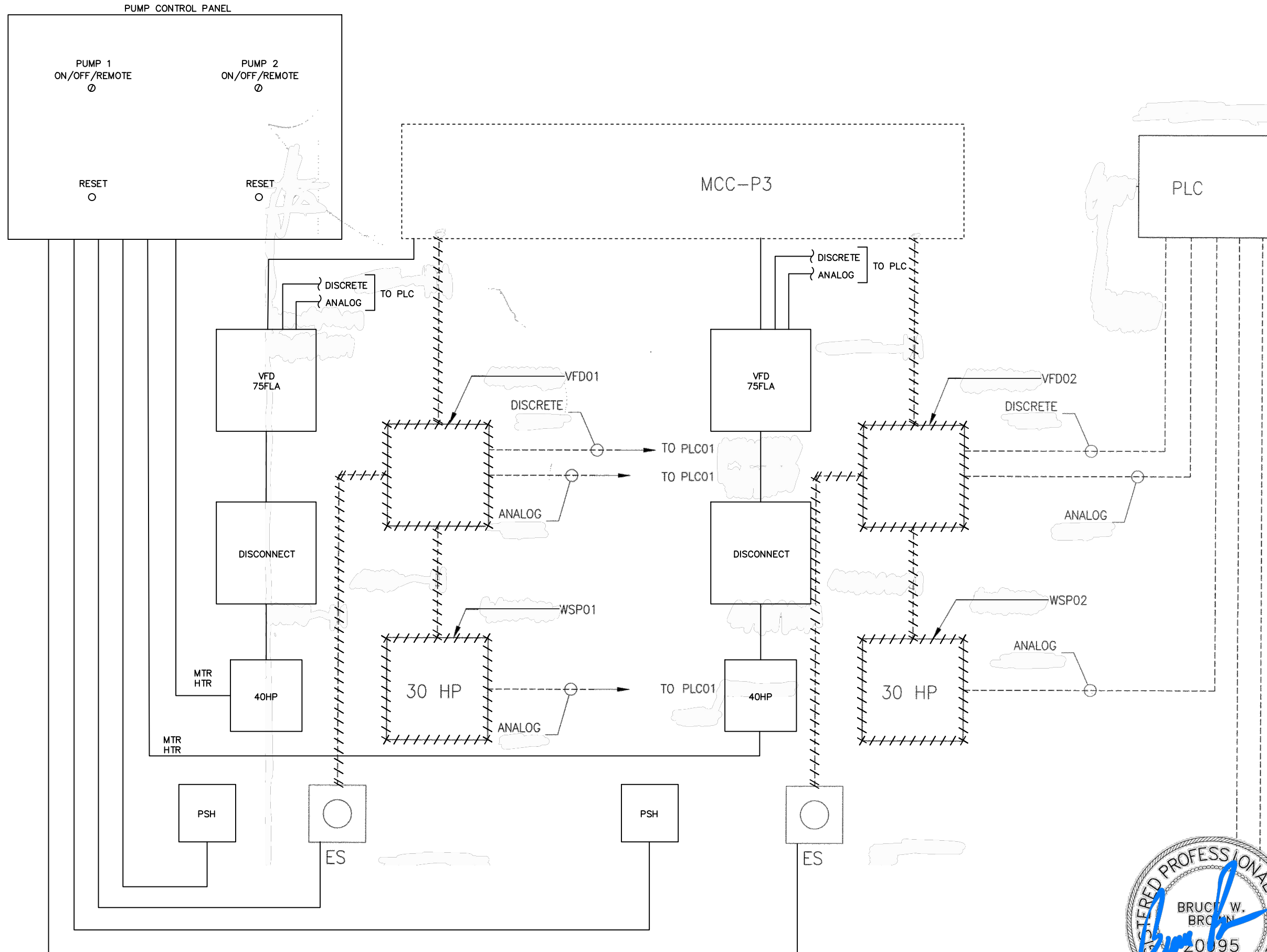
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2



CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

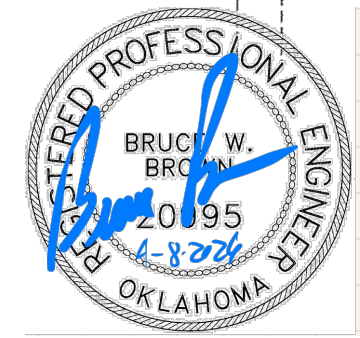
PLANS AND ESTIMATES PREPARED BY: **HOLLOWAY, UPDIKE + BELLEN, Inc.**
200 N WILLOW AVE, BROCKTON AVE, OKLAHOMA 74102
918-258-0707, FAX 918-258-0764

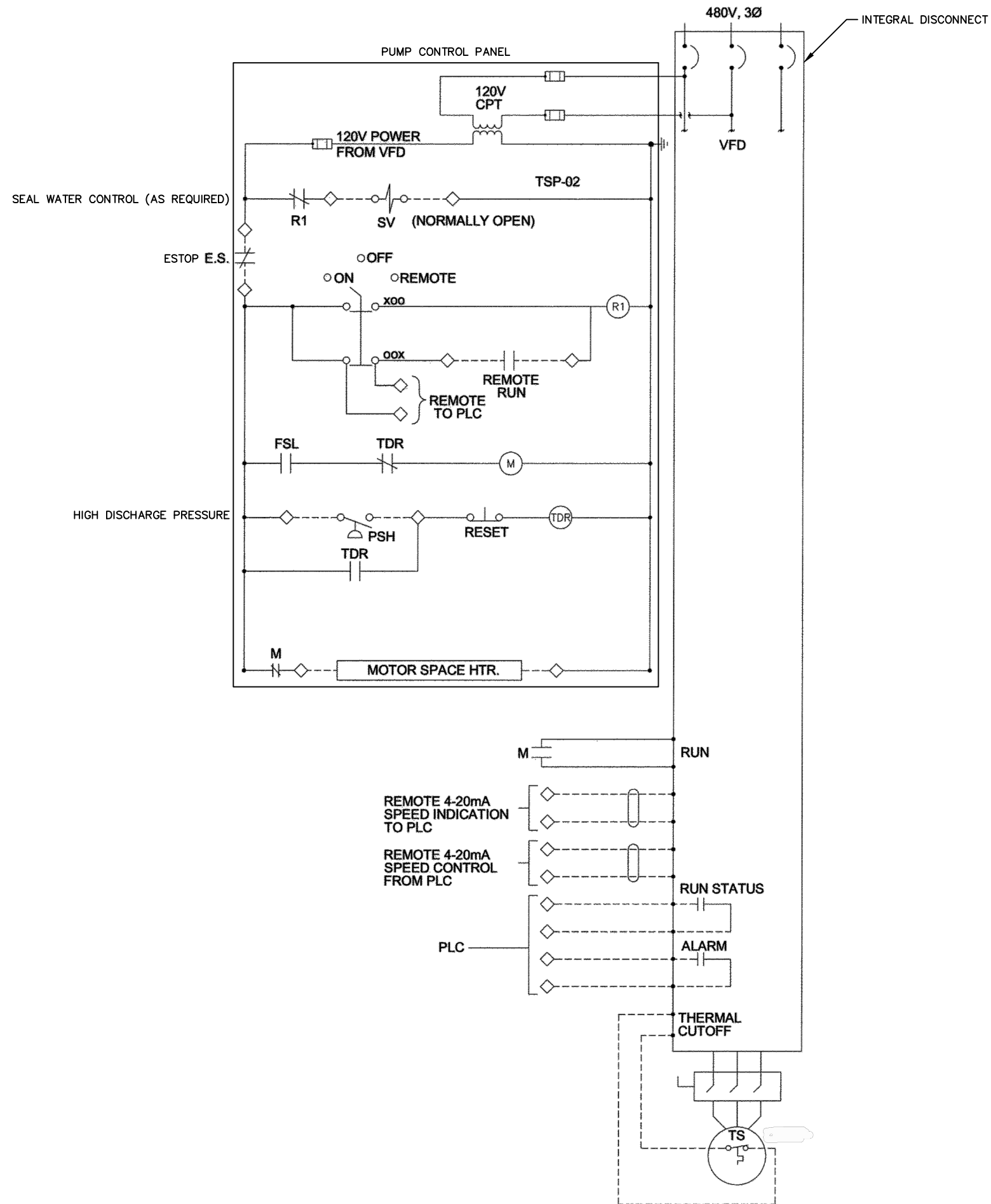
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ELECTRICAL DETAILS 2		
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2		
CITY OF TULSA, OKLAHOMA TULSA METROPOLITAN UTILITY AUTHORITY WATER AND SEWER DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY:  HOLLOWAY, UPDIKE + BELLEN, Inc. <small>2001 N. WILLOW AVE., BROCKTON AVEENUE, OKLAHOMA 74102 918-258-0707, FAX 918-258-0764</small>		
PLAN SCALE:	DRAWN DESIGNED SURVEY	CMW TJR
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ELECTRICAL DETAILS 3		
WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS RMUA PROJECT WPC 26-2		
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PLAN SCALE:	DRAWN CMW	APPROVED:
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ATLAS PAGE NO: ---		SHEET E3 OF 14 SHEETS